

## **Countryside Recreation Research Advisory Group**

# **COUNTRYSIDE RECREATION RESEARCH 1989/90: THE PROGRAMMES OF THE CRRAG AGENCIES**

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## **The Countryside Recreation Research Advisory Group (CRRAG)**

CRRAG was formed in 1968 by the government agencies concerned with countryside recreation to help them co-ordinate their research and monitoring efforts.

CRRAG takes a broad rather than narrow definition of countryside recreation research, and has an interest in the interface between leisure and the conservation and social and economic well-being of the countryside. The emphasis is on research leading to the development of policy and practice, rather than on research for its own sake.

### **CRRAG aims:**

To identify and help to meet the needs for advice, information and research of policymakers in the agencies concerned with countryside recreation.

To promote co-operation between member agencies in formulating and executing research on countryside recreation.

To encourage and assist in disseminating the results of countryside recreation research.

The **Sponsors** of CRRAG are Countryside Commission, Nature Conservancy Council, Sports Council, Countryside Commission for Scotland, English Tourist Board, Forestry Commission. They are responsible for the financing and direction of CRRAG. They are also member agencies.

**Member Agencies** are statutory agencies and central government departments with responsibility for countryside recreation research broadly defined, and the local authority associations. Each member agency sends a representative to the CRRAG agency meetings. During 1989, the Rural Development Commission, the Department of the Environment for Northern Ireland, the Economic and Social Research Council and the Sports Council for Wales became member agencies.

**Associates** are individuals or organisations who are interested in the activities of CRRAG, from the public, private or voluntary sectors. They are entitled to take part in all CRRAG activities, except the agency meetings. Membership is free, and associates are kept informed on a regular basis of the events organised by CRRAG.

### **CRRAG activities include:**

**Agency Meetings**, where representatives of the member agencies meet three or four times a year to discuss common themes relating to countryside recreation research. Once a year each agency presents its research programme for the following year. Issues of collaboration or the sharing of information are then discussed between individual agencies. Subgroups are created to plan particular activities or to discuss specific issues.

**Workshops**, which generally take the form of one day events, concentrating on detailed current issues, relevant to a limited audience. The focus is upon the interface between research, experiment and practice. Recent workshops have included: Researching the Market for Countryside Recreation; Trees, Woods and Forests in the Landscape; and Countryside Recreation and People with Disabilities.

An annual countryside recreation **Conference** held in September, organised by CRRAG. This is normally a two day conference for about 150 delegates, on a topical theme. Delegates come from a range of backgrounds. The proceedings of each conference are published. Recent conferences have been: Countryside Leisure and Jobs; New Approaches to Access in the Countryside; Recreation and Wildlife: Working in Partnership, and Changing Land Use and Recreation.

A **Research Market**, introduced for the 1988 Conference. This is now a feature of the annual Conference. The CRRAG agencies set up displays about their research programmes, and are available to discuss details with delegates at the conference. Organisations that are contracted to undertake countryside recreation research provide display material, and give information about their areas of interest and expertise.

Each year CRRAG publishes **Countryside Recreation Research: The Programmes of the CRRAG Agencies**. This provides information in tabular form on each agency's research programme for current and future years.

### **Countryside Recreation Research 1989/90: The Programmes of the CRRAG Agencies**

Since 1982, the Countryside Recreation Research Advisory Group (CRRAG) has annually published the research programmes of its member agencies, so that information about this work could be disseminated more widely. For each agency, the research included is a list of those projects relevant to countryside recreation research rather than the full research programme. Agencies are encouraged to include details of future proposed work, relevant publications and databases. As much of this information is subject to change, a contact point is identified and listed at the end of each agency section.

There were no submissions for this edition from the Association of District Councils, the Convention of Scottish Local Authorities, English Heritage, Water Authorities Association or the new member agencies. It is planned to include details of local authority research biennially.

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# GLOSSARY

ACC	Association of County Councils	ITE	Institute of Terrestrial Ecology
ADC	Association of District Councils	IFE	Institute of Freshwater Ecology
AMA	Association of Metropolitan Authorities	IH	Institute of Hydrology
AONB	Area of Outstanding Natural Beauty		
BTA	British Tourist Authority	MAFF	Ministry of Agriculture, Fisheries and Food
BW	British Waterways	MSC	Manpower Services Commission
CAP	Common Agricultural Policy	NCC	Nature Conservancy Council
CC	Countryside Commission	NERC	Natural Environment Research Council
CCS	Countryside Commission for Scotland	NNR	National Nature Reserve
CEGB	Central Electricity Generating Board		
COSLA	Convention of Scottish Local Authorities	OS	Ordnance Survey
CRRAG	Countryside Recreation Research Advisory Group		
DAFS	Department of Agriculture and Fisheries for Scotland	RDC	Rural Development Commission
DE	Department of Employment	RSPB	Royal Society for the Protection of Birds
DEn	Department of Energy	SC	Sports Council
DOE	Department of the Environment	SCW	Sports Council for Wales
DOE(NI)	Department of the Environment for Northern Ireland	SDA	Scottish Development Agency
DTp	Department of Transport	SDD	Scottish Development Department
EH	English Heritage	SSC	Scottish Sports Council
ESRC	Economic and Social Research Council	SSSI	Site of Special Scientific Interest
ETB	English Tourist Board	STB	Scottish Tourist Board
ESA	Environmentally Sensitive Area		
FBA	Freshwater Biological Association (now IFE)	TB	Tourist Board
FC	Forestry Commission	WA	Water Authority
		WAA	Water Authorities Association
		WTB	Wales Tourist Board
HIDB	Highlands and Islands Development Board	YHA	Youth Hostels Association

# ASSOCIATION OF COUNTY COUNCILS

## Research of Member Councils 1989/90

	<i>Authority</i>	<i>Project Title and Summary of Objectives</i>	<i>Timescale</i>	<i>Contact Name</i>
<b>Ecology/Nature Conservation</b>				
ACC1	Cleveland CC	County Wildlife Strategy. Survey of County's wildlife habitats followed by preparation of a wildlife strategy.	Feb 1987 start	D Counsell
ACC2	Cleveland CC	Billingham Beck Valley. Survey of flora and fauna of wet-land habitat and preparation of a management plan (includes Ecology Pack).	Spr 1989/ Aut 1989	T Sutcliffe
ACC3	Cleveland CC	Lazenby Bank Management Plan. Survey of flora and fauna of and industrial archaeology of a woodland site and preparation of management plan.	Spr 1989/ Aut 1989	B Spink
ACC4	Cleveland CC	Rosecroft and Whitecliffe Woods Management Plan. Survey of flora and fauna of ancient woodland habitat and preparation of a management plan.	Spr 1989/ Aut 1989	B Spink
ACC5	Leicestershire CC	Leicestershire Ecological Sites Index. To complete a computerised database from County wildlife habitat survey.	On-going	I Evans
ACC6	Mid Glamorgan CC	Kenfig National Nature Reserve. Hydrological and habitat-type survey of coastal dune area, related to vegetation management.	1987/90	J Wykes
ACC7	Exmoor National Park	Remote Sensing Applications in National Parks. To monitor changes in landscape, vegetation, etc.	On-going	L Curtis
ACC8	North York Moors National Park	Moorland Research and Management. Improvement of moorland, management for economic, ecological and recreational purposes; with national applicability.	1986/90 (1st phase) 1990 start (2nd phase)	R Brown
ACC9	North York Moors National Park	Farm Conservation Plans. Development of farms for conservation and amenity purposes.	1986/89	P Barfoot
ACC10	Yorkshire Dales National Park	Phase I Botanical Survey. To provide information on natural and semi-natural habitats in the Yorkshire Dales National Park.	1985/89	National Park Officer
ACC11	Yorkshire Dales National Park	Survey of Coppicing of Ancient Woodlands. Survey of the ecological effects of coppicing to provide background information on which to base management plans.	1986 start	National Park Officer

ACC12	Yorkshire Dales National Park	Three Peaks Project — Reports by ITE for Yorkshire Dales National Park. Footpath surveys — surveys of the extent and nature of erosion on 65 km of upland paths. Reinstatement trials — first phase of trials to reinstate native vegetation on damaged ground adjacent to upland footpaths.	1986	National Park Officer
ACC13	Yorkshire Dales National Park	Survey of botanical interest and management needs of road verges in the Yorkshire Dales National Park.	1989/90 and 1990/91	
ACC14	Broads Authority	Deterioration and Restoration of Freshwater Ecosystems. To investigate further the causes of the deterioration of the Broads and their associated rivers and propose remedies.	1986/88	D Brewster
ACC15	Broads Authority	Hydrological and Hydrogeological Mechanisms of Wetlands. Classification and modelling of wetlands in order to assess impact of water abstraction and irrigation proposals.	1986/89	D Brewster
ACC16	Broads Authority	Experimental Phosphorus Reduction at Sewage Works. In conjunction with Anglian WA, an experimental programme of removing phosphorus from the effluent of sewage treatment works on the rivers Bure and Ant in order to restore the Broads and rivers.	1986/91	D Brewster

### Information

ACC17	Hereford and Worcester CC	Project to provide information on 'Great Escapes' to the Hereford countryside in the form of monthly calendars of events and activities distributed throughout the county, supplemented by 'Great Escapes' reference handbooks.	Oct 1987/ Jan 1990	P Thomson
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### Interpretation/Education

ACC18	Berkshire CC	Learning Through Landscapes.	1986/89	M Melton
ACC19	Cleveland CC	Castle Eden Walkway Interpretive Plan. Preparation of plan for the interpretation of a Country Park along a disused railway line.	1988/89	M Pratt

### Plans and Studies

ACC20	Cleveland CC and Borough Councils	Countryside Recreation Strategy. Assessment of current provision and preparation of countryside recreation strategy as proposed in Recreation 2000, to include an interpretive strategy.	Aut 1988/ Sum 1989	D Counsell
ACC21	Leicestershire CC	'Countryside 2000'. Planning for change in the Leicestershire countryside — a strategy for education.	1986/89	P Williams
ACC22	Norfolk CC	Norfolk Countryside Access Strategy. A study of existing facilities for informal countryside recreation in the county, leading to the preparation of a strategy to improve and increase such provision in the future.	1989/90	R Walby

ACC23	Norfolk CC	Norfolk Countryside Strategy. A series of topic papers which together will establish a strategy for the Norfolk Countryside. Completed: River Valleys, Woodlands, Historic Landscapes and Archaeology. Current: Heathland, Roadside Verges, Historic Parklands. Committed: Trees, Hedges, Banks and Boundaries, Ponds and Marl Pits, Buildings in the Landscape, Disused and Derelict Land, Commons and Village Greens.	1988	G King
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### Recreation

ACC24	Northamptonshire CC	Pocket Parks Advisory Officer. 3 year joint project between the CC and Northamptonshire County Council Leisure and Libraries Dept. To promote the concept and encourage the establishment of 'Pocket Parks'.	April 1987/ April 1990	A Teulon
ACC25	West Glamorgan CC	Neath Local Access Project.	1985/90	R Crawshaw

### Rights of Way

ACC26	Cambridgeshire CC	To explore the willingness and ability of Parish Councils to take responsibility for routine maintenance.	April 1988/ March 1990	C Brown
ACC27	Kent CC	North Downs Way. To assess condition of this National Trail with a view to devising a maintenance programme.	March 1989	M King
ACC28	Kent CC	Sample Squares. To assess condition of rights of way network.	Spring 1989	R Lambert
ACC29	Leicestershire CC	Rights of Way as a Teaching Resource. Developing teaching aids to encourage educational use of the right of way network.	1987/89	R Mills
ACC30	Yorkshire Dales National Park	Charging for Public Path Orders. Questionnaire survey among County Highways Authorities to determine the generality of policies on charging applicants for public path orders.	1987/88 Published March 1989	S Arnott C Collins

### Rural Environment/Heritage

ACC31	Essex CC	Social Fund Training Scheme 'New Technology and Arboricultural Management'. Objective is to set up a complete database to provide inventory for tree management system, covering county owned amenity trees throughout Essex.	1986/88 and 1989/90	M Wortley C Neilan
ACC32	Leicestershire CC	North West Leicestershire Countryside Management Project. Developing a programme for landscape enhancement.	1989/91	D Wightman
ACC33	Lincolnshire CC	Lincolnshire Green Lanes Project. To define, protect, reclaim, maintain and promote green lanes throughout Lincolnshire and assess their historical, landscape, wildlife and recreational value.	1988/91	R Taylor

ACC34	Warwickshire CC/ Countryside Commission	Joint study to develop a 'pro-forma' approach to landscape assessment in lowland counties.	Feb 1988/ Feb 1991	S Evans S Warnock
ACC35	Yorkshire Dales National Park	Survey of Green Lanes in Yorkshire Dales National Park. Development and application of a method of surveying physical condi- tion of green lanes and of monitor- ing further deterioration.	May 1988 start	S Arnott
ACC36	Yorkshire Dales National Park	Barns and walls conservation scheme to restore and protect the manmade landscape.	April 1989/ April 1994	W McIntyre
ACC37	Yorkshire Dales National Park	Interpreting Landscape Change. Experimenting with innovative interpretation such as travelling displays, games and community events to generate awareness of landscape change in the National Park and to encourage wider parti- cipation in policy development.	Oct 1987/ March 1990	A Shadrake
ACC38	Yorkshire Dales National Park	Yorkshire Dales Project. Systematic record from aerial photographs and documentary sources of features of archaeological and historic interest in the North Yorkshire Pennines.	1988/91	
<b>Surveys</b>				
ACC39	Cleveland CC	Countryside Visitor Survey. Survey of visitors to various country- side sites in Cleveland.	Sum 1989	D Counsell
ACC40	Brecon Beacons National Park	Pressure Area Visitor Survey. Count and questionnaire survey of visitors to sites under recreation pressure to show winter and summer, weekday and weekend use.	Feb 1989/ Sept 1989 and probably continuing in 1990	R Brown
ACC41	Lake District National Park	Visitor Surveys. Summer 1987 — an interview survey across 12 varied sites to determine the nature, activities and opinions of visitors to the Lake District. Winter 1988 — an interview survey to enable winter visitors to be compared . Summer 1988 — an interview survey across 6 atypical Lake District sites to assess the degree of variation between sites in the nature of visitors, their activities and opinions.	1987  1988/89  1988/89	J Nash
ACC42	Lake District National Park	Traffic and Pedestrian Monitoring Project. To set up a series of continuous monitoring points on recreational routes.	1989 start	J Nash
ACC43	Pembrokeshire Coast National Park	Coast Path User Survey. Survey of users of the Coast Path long distance route with particular reference to YHA.	1989/90	National Parks Officer
ACC44	Yorkshire Dales National Park	Questionnaire Survey on Value of Special Interest Guided Walks in Yorkshire Dales National Park 1988. Questionnaire surveys for self completion, to ascertain interpretive, understanding and management value of walks and aspirations of clients, to assist in further development of walks programmes.	July 1988/ Oct 1988; Report March 1989	J Lonsdale

# ASSOCIATION OF METROPOLITAN AUTHORITIES

## Research of Member Councils 1989/90

	<i>Authority</i>	<i>Project Title and Summary Objectives</i>	<i>Timescale</i>	<i>Contact Name</i>
AMA1	Solihull MBC	Recreation and Leisure in Solihull. MORI poll into residents' opinions of recreation and leisure facilities in the borough.	Jan 1989/ April 1989	J Sammons
AMA2	Dudley MBC	Recreation and Open Space Subject Plan: Discussion Documents.	Jan 1987	S Winterflood
AMA3	Dudley MBC	Dudley Unitary Development Plan Issues Paper: Environment.	May 1989	C Green
AMA4	Dudley MBC	Recreation and Open Space Subject Plan: Key Open Space.	Jan 1987	S Winterflood
AMA5	Dudley MBC	Recreation and Open Space Plan: Nature Conservation.	Completed	S Winterflood
AMA6	Dudley MBC	Dudley Phase I Field Survey. Dudley Phase II Field Survey.	1986/ 1988	S Timms
AMA7	Manchester City Council	Environmental Education Directory. Brief description, summary and contact list of local authority's involvement.	March 1989 start; Annual	C Gunby
AMA8	Manchester City Council	Manchester and European Year of the Environment. Review of schemes during European Year of the Environment and contact list for further involvement.	March 1989	C Gunby
AMA9	Manchester City Council	Community Landscapes Pack. Information pack available to residents on how to improve their surroundings, form a group, implement schemes. Contains local and national contact list.	1986	C Gunby
AMA10	Manchester City Council	Rochdale Canal: The Way Forward. Publicity report on future restoration of Rochdale Canal. With Rochdale, Oldham and Calderdale MBCs.	1988	I Hazlitt
AMA11	Bolton MBC	Landscape Study. Examination of the aesthetic values and problems of open land in Bolton.	April 1988 start	R Spillside
AMA12	Calderdale MBC	Revegetation of Eroded Moorland.	On-going	Countryside Service
AMA13	Calderdale MBC	Repair and Remaking of Eroded Paths in Peaty Terrain.	On-going	Countryside Service
AMA14	London Borough of Ealing	Survey of Green Belt and Metropolitan Open Land in the Borough. To identify existing uses, structures and potential for change.	1988/89	J Harris
AMA15	London Borough of Hounslow	Green Strategy Plan. To create a setting for the Borough's leisure activities within a structured green space; initial emphasis will be to select and improve natural landscape, rich in flora and fauna and bringing elements of the countryside into the city.	Current	B Page

AMA16	London Borough of Hounslow	West London Waterways Walks Project. Joint project with London Boroughs of Hounslow, Ealing, Hillingdon, Brent and Richmond. It recognises the potential of 110 miles of canals and rivers as walking routes and green corridors throughout west London. It aims to survey the waterways system with a view towards an integration of access improvement, with strategies for informal recreation, nature and landscape conservation and education and interpretation.	1988 start	E Lansdell (Hounslow) A McCord (Ealing)
AMA17	London Borough of Hounslow	Hounslow Urban Forestry Study. To assess financial benefits of forestry in urban areas.	Feb 1989/ July 1989	G Hunt
AMA18	London Borough of Hounslow	London Planning Advisory Committee Urban Fringe Working Party. Assessment of extent and nature of derelict and damaged land within green belts of Hounslow, Hillingdon, Bexley and Havering as a microcosm of London as a whole.	1988/89	G Hunt
AMA19	London Borough of Harrow	Environmental Assessment of Residential Areas. A survey of all residential areas in the borough, including those within the green belt, carried out by consultants to assist the Council in preparing Unitary Development Plan policies and to allow the assessment of the cumulative impact of housing development proposals.	Jan 1989/ June 1989	W Munro
AMA20	Liverpool City Council	Mersey Coast Landscape Plan. Consultants' study identifying opportunities for integrated development and management of open land/urban fringe on the Mersey coast.	1988/89	I Wray
AMA21	Liverpool City Council	Liverpool's Countryside. Consultants' study providing comprehensive audit of resources and opportunities for countryside recreation and management in Liverpool's countryside and urban fringe.	1988/89	I Wray
AMA22	Liverpool City Council	Sefton Park Grasslands. Ecological study of mature victorian park with recommendations on future landscape management strategy and diversification of nascent natural landscapes.	1988/89	C Unsworth
AMA23	Black Country Authorities (Dudley, Sandwell, Walsall, Wolverhampton) and Black Country Development Corporation	Nature Conservation Strategy.	Current	P Hurley
AMA24	Sandwell MBC	Habitat Survey II. Detailed survey of important wildlife habitats identified in initial survey.	Current	P Hurley
AMA25	Sandwell MBC	Urban Fringe Agriculture.	Current	T Jukes
AMA26	Sandwell MBC	Sheepwash Urban Park.	Current	C Blakeley
AMA27	Sandwell MBC	Galton Valley Canals Study.	Current	T Jones

AMA28	Sandwell MBC	Review of Public Rights of Way.	Current	W King
AMA29	Sandwell MBC	Environmental Strategy.	Current	M Barker
AMA30	Sandwell MBC	Sandwell Valley Development Plan.	Current	R Lee
AMA31	Sandwell MBC	Derelict Land Strategy.	Current	M Barker
AMA32	London Borough of Richmond and London Wildlife Trust	Sites of Nature Conservation Interest. An ecological survey of the borough. Includes site reports and reference sheets.	1987	H Cornforth
AMA33	London Borough of Richmond	Ham Lands: a Guide to Nature Conservation.	1988	H Cornforth
AMA34	London Borough of Sutton	Guide for Nature Conservation.	Current	G Dean
AMA35	North Tyneside Council	Tyne and Wear Nature Conservation Strategy. With NCC, Newcastle, Gateshead, South Shields and Sunderland Councils.	Completed	G Beauchamp
AMA36	North Tyneside Council	Rising Sun Country Park Policy Framework.	Completed	K Wilson
AMA37	North Tyneside Council	Countryside and Open Space Strategy.	Completed	G Beauchamp
AMA38	North Tyneside Council	Greening North Tyneside. A planning statement for trees.	Current	G Beauchamp
AMA39	North Tyneside Council	Public Rights of Way and Network. A planning statement for access in North Tyneside.	Current	G Beauchamp
AMA40	North Tyneside/ Blyth Valley Council	Holywell Dene Management Plan. Integrated woodland management plan.	Current	J Cowan
AMA41	North Tyneside Council	Development of Educational Links with Urban Fringe Farms.	Future	J Cowan
AMA42	Greater Manchester Countryside Unit	Greater Manchester Survey of Sites of Biological Importance. To identify, describe and grade key sites as aid to development and consideration for access/education issues. Published 1984 by Greater Manchester Council and now reviewed annually by Greater Manchester Countryside Unit.	On-going	R Tomlinson
AMA43	Greater Manchester Countryside Unit	Remnant Lowland Mosslands. Development of a strategy to conserve remnant mosslands in Wigan and Salford through detailed survey of habitat and physical, economic and political constraints on their survival. In conjunction with Wigan MBC, Salford City Council, government agencies and voluntary sector groups.	1986/89	A Greatrex
AMA44	Greater Manchester Countryside Unit	Oldham Upland Plantation Establishment. To examine and overcome factors militating against successful establishment of trees on exposed areas of the borough. With Oldham MBC,	1989 start	A Powell

AMA45	Greater Manchester Countryside Unit	Greater Manchester Countryside Information Project. To identify and test innovative methods of communicating information to an urban population, and test feasibility of compiling a central countryside databank. Sponsored by CC.	1989/92	M Mohan/M Raines
AMA46	Greater Manchester Countryside Unit	Local Rights of Way Networks. To identify, upgrade and market local right of way networks in the urban fringe. Being carried out by a number of Greater Manchester districts, including a CC sponsored project of Stockport MBC, which will examine new ways of upgrading the rights of way network.	1988 start	I Brown
AMA47	Greater Manchester Countryside Unit	Countywide Network of Recreation Routes. To identify and, with all Greater Manchester districts, to promote a key network of strategic routes across the county for walkers, horse-riders and cyclists.	1988 start	I Brown
AMA48	Greater Manchester Countryside Unit	Countryside for the Disabled. Survey of key countryside recreation sites to establish physical and administrative changes required to facilitate countryside access and participation by the disabled.	1987/88	H Smith
AMA49	Greater Manchester Countryside Unit	Urban Fringe Forestry. Following a submission to the CC on behalf of the Association of Greater Manchester Authorities, the Unit is hopeful of attracting an Urban Fringe Forestry project to Greater Manchester, which would test mechanisms for assembling land and co-ordinating and attracting resources to achieve a major increase in woodland and trees in the county.	Future	J Jones/A Powell
AMA50	Greater Manchester Countryside Unit	Timber Marketing. To collate information on small commercial users of wood in and around Greater Manchester, and to match this with information on potential suppliers, with a view to promoting a local market for commercial timber.	On-going	A Powell
AMA51	Greater Manchester Countryside Unit	Greater Manchester Arboretum. To establish comprehensive collections of trees in each district in the county which together will form the Greater Manchester Arboretum, enabling longterm success of different species and varieties of tree to be recorded.	On-going	A Powell
AMA52	Sefton MBC	Environmental Education on the Sefton Coast. Study of existing educational use and potential for further development. Completed.	Jan 1988/ Sept 1988	C Jones
AMA53	Sefton MBC	Ainsdale Beach Barrier Monitoring. Analysis of effect of physical barrier on regeneration of foredunes. Completed.	May 1986/ Jan 1989	I Deans
AMA54	Sefton MBC	Coast Woodlands Working Plan. Development of a co-ordinated strategy for the management of all woodlands on the Sefton coast.	April 1987/ May 1989	I Richardson

* AMA55	Sefton MBC	Southport Seafront Study. To examine the potential for further development of leisure and recreation at Southport and prepare a development strategy.	March 1988/ May 1989	S Weber
AMA56	Sefton MBC	Sefton Coast Database. To develop and implement a database for the Sefton coast. Provisional.	June 1988/ Sept 1990	C Bennett
AMA57	Sefton MBC	Sefton Habitat Survey. To commence a survey of sites of wildlife importance. Provisional.	May 1989/ Sept 1990	C Bennett
AMA58	Knowsley MBC	Agriculture and Landscape Change in South Knowsley. Case study of past and potential future trends. Completed.	Sept 1988/ Feb 1989	R Skilling
AMA59	Knowsley MBC	Acornfield Plantation. Development of a management strategy for an urban woodland needing restoration. Completed.	April 1986/ Aug 1986	I Richardson
AMA60	Knowsley MBC	New Uses for Vacant Industrial Land. To identify and test the feasibility of new uses for vacant land zoned for industrial use.	May 1987 start	R Skilling
AMA61	Knowsley MBC	Knowsley Woodland Survey. To identify and record woodlands onto a computerised database and assess the woodland resource of the Borough.	Sept 1987 start	I Richardson
AMA62	Knowsley MBC	Knowsley Habitat Survey. To carry out detailed surveys of sites known to be of importance to wildlife.	June 1987/ Sept 1989	C Bennett
AMA63	Knowsley MBC	Conservation Management of Urban Grasslands. To experiment on and test out alternative methods for the management of urban greenspace.	May 1987/ Sum 1990	R Skilling
AMA64	Knowsley MBC	Pex Hill Country Park Visitor Survey. Market appraisal exercise using on site, personally administered questionnaire.	April 1988/ Sept 1988	D Joy
AMA65	St Helens MBC	Winter Sports Pitch Strategy. Strategy for the enhancement of sports pitches for winter use. Completed.	Sept 1987/ Jan 1989	S Phillips
AMA66	St Helens MBC	Open Space Study. Identification of open spaces requirements in terms of user demand.	Feb 1989/ Feb 1990	S Dando
AMA67	St Helens MBC	Southern Corridor Landscape Study. Evaluation of potential enhancement by means of urban forestry, especially on derelict land.	Jan 1989/ June 1989	T Ferguson
AMA68	Birmingham City Council	Habitat Survey: Phase I and II. To update and extend comprehensive ecological database for city.	1987/89	D Ward

## Introduction

The British Tourist Authority (BTA) and English Tourist Board (ETB) are statutory bodies created by the Development of Tourism Act in 1969, together with the Tourist Boards for Scotland and Wales. The BTA is responsible primarily for encouraging overseas visitors to Britain. The ETB encourages British tourism within England by the provision of facilities and services for all tourists in England. BTA and ETB maintain some functions in common, including research. The programme described below relates to research undertaken by the joint research department. Research is also commissioned from time to time by BTA and ETB operating departments. The Secretary of State for Employment announced in July 1988 a review of the Government's support for BTA and ETB. The outcome, expected in 1989, could affect the Boards' research activity.

## Research Programme 1989/90

A broad theme of current BTA/ETB research is substantial improvement to the collection of basic statistics about tourism, instanced by the commissioning of the United Kingdom Tourism Survey, jointly with the national tourist boards for Northern Ireland, Scotland and Wales. Research into leisure day trips extends basic statistical measurement to a numerous and valuable sector of leisure activity.

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
<b>Continuous/Annual Research</b>				
BTA/ETB1	United Kingdom Tourism Survey	Comprehensive survey of all overnight trips taken by UK residents, plus an annual survey of Britons' holiday taking at home and abroad.	Continuous/annual	Jointly sponsored by BTA and the National TBs for England, Northern Ireland, Scotland and Wales. Commissioned from NOP Market Research Ltd.
BTA/ETB2	Holiday Intentions Survey	To survey Britain's residents' intentions to take a holiday of 4 nights or more during the forthcoming season.	Annual	Commissioned from NOP Market Research Ltd.
BTA/ETB3	English Heritage Monitor	To analyse England's historic attractions in terms of their number, type, presentation, and visitor trends.	Annual	In-house.
BTA/ETB4	Sightseeing in England	To analyse the use and capacity of all kinds of visitor attractions in England.	Annual	Compiled in-house on basis of survey of visits to attractions throughout England.
BTA/ETB5	International Passenger Survey (Secondary Analysis)	To examine the volume, value, and characteristics of overseas visitors to Britain.	Annual	The survey is sponsored by DE. BTA and the TBs pay for extra data collection and analysis on specified topics, for instance the regional distribution of overseas tourism throughout Britain.
BTA/ETB6	Overseas Visitor Survey	To investigate the profile and opinions of overseas visitors to Britain.	Continuous	Some regular and some occasional topics are included in this survey whose findings supplement data from the International Passenger Survey.
BTA/ETB7	Overseas Visitors to London	To examine the characteristics, behaviour, and opinions of overseas visitors in London during the Summer.	Annual	Sponsored in collaboration with London TB and London Regional Transport.
<b>Current Research</b>				
BTA/ETB8	Regional 'How's Business?' Surveys	To measure opinions on current tourism business and prospects among members of regional TBs.	1989	Regional TBs administer their own surveys. BTA/ETB arranges data processing and analysis.

BTA/ETB9	Market/Product Profiles	To design and prepare a series of monographs on particular tourism markets or products, presenting key facts, and marketing implications.	1989	To be progressed in conjunction with ETB's marketing advisory service.
BTA/ETB10	Windsor Tourism Survey	To survey visitors to the town during a twelve month period and evaluate the economic effect of their spending.	1989/90	Commissioned from Harris Research Centre/ David McEwen. Sponsors include Windsor and Maidenhead Council, Thames and Chilterns TB and private sector.
BTA/ETB11	Leisure Day Trips	To measure the volume, value and characteristics of leisure day trips.	1988/89	BTA and DE provide substantial funding for a trailer on the General Household Survey.
BTA/ETB12	Evaluation of Regional Print	To assess the effectiveness of brochures jointly funded by BTA and the regional TBs, a three part study will be made by surveying brochure recipients in selected overseas countries; an audit of brochure distribution; survey of information staff in BTA overseas offices.	1989	The survey of recipients of brochures will be made by a market research agency.
BTA/ETB13	West Country Tourism Study	A programme of research to contribute to the preparation of a regional tourism study by the West Country TB. Topics for special research include farm tourism; attitudes of current, lapsed and non-visitors to the region; visitor attractions and the regional implications of tourism trends.	1989	

### Proposed Research

New research projects, for implementation in 1989/90, may include:

Studies/surveys for regional tourist boards. Candidate projects are put forward by the regions and selected in April. Recent research has covered four main themes: evaluation of regional tourist board marketing and other operations; provision of estimates of jobs in tourism; improvements to regional information on tourism markets; and research to support tourism strategies for individual regions.

Tourism studies for resorts or towns, funded by the local authority, with BTA/ETB acting as commissioning agent.

Surveys to evaluate the effectiveness of marketing operations by ETB of BTA or both bodies. Research of this type is usually considered in the Spring of each year, with some topics arising at short notice throughout the year.

### Research Publications 1988/89

- British Tourist Authority, English Tourist Board, Wales Tourist Board (1988), *The British Tourism Market 1987*.
- English Tourist Board (1988), *English Hotel Occupancy Survey* (monthly reports and annual summary).
- English Tourist Board (1988), *English Heritage Monitor 1988*.
- English Tourist Board (1988), *Sightseeing in 1987*.
- British Tourist Authority (1988), *Visits to Tourist Attractions 1987*.
- English Tourist Board (1988), *Holiday Intentions Survey 1988*.
- British Tourist Authority (1988), *Overseas Visitor Survey 1987*.
- English Tourist Board (1988), *The British Tourism Market 1973 - 1987 - An Overview*.
- British Tourist Authority (1988), *Digest of Tourist Statistics No 12*.
- English Tourist Board (1988) *A Response to the Visiting Friends and Relatives Market*.
- English Tourist Board (1988) *Retired People and Holidays*.
- British Tourist Authority/English Tourist Board (1988), *The Short Break Market*.
- British Tourist Authority (1988), *Tourism and Productivity*.
- British Tourist Authority (quarterly), *Tourism Intelligence Quarterly*.
- English Tourist Board (1988), *Regional Tourism Fact Sheets* (12 regional versions).
- London Tourist Board et al (1988), *London Tourism Impact Study*.
- British Tourist Authority/English Tourist Board (1988), *Blackpool Visitor Survey 1987*.

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# BRITISH WATERWAYS

## Introduction

British Waterways is the statutory authority responsible for the maintenance and control of much of the inland waterway network of Great Britain. Within British Waterways, research is controlled, undertaken and co-ordinated by a central Planning and Research Unit. The remit of this Unit incorporates research into all aspects of British Waterways' revenue-earning activities, including property management and freight transport, as well as leisure, recreation and tourism-related uses of the waterways. With increasing emphasis being placed upon revenue generation, market research and information provision is becoming an increasingly important element within the overall research programme. Also, a new regional structure is being introduced within British Waterways, leading to an increased devolvement of responsibilities to local management. This process will result in increased information needs at a local level and the current research programme reflects these requirements.

## Research Programme 1989/90

The medium term objectives of the research programme are as follows:

1. To develop a simple system of monitoring usage of the waterways for use in business planning and performance monitoring.
2. To increase knowledge of British Waterways' markets and competitive position in order to improve marketing and revenue earning strategies.
3. To measure the social benefits, environmental values and other non-quantified benefits provided by the waterway system.
4. To improve understanding of the interaction between user groups and natural resources in order to improve management of the canal system.
5. To collect and analyse information to meet specific requests.

The above objectives are closely interrelated in many cases, and there are a number of threads which may be common to other CRRAG Agencies. These include the determination of visitor numbers, especially at remote sites; conflicts between user groups and natural resources; and the assessment of indirect and non-quantified benefits associated with waterways.

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
<b>Recently Completed Research</b>				
BW1	Survey of Trip and Restaurant Boat Passengers	To gather information on trip and restaurant boat facilities and on the market characteristics of users.	Completed	Carried out in-house. Report available.
BW2	Angling in BW Managed Fisheries	To investigate types of usage by anglers on 2 canals in the Midlands, and the implications for future fisheries management.	Completed	Carried out in-house. Report available.
BW3	Boating and Angling Relationships	To investigate the relationship between boat traffic, waterway ecology and fisheries on canals.	Completed	Carried out through 3 year postgraduate studentship. Summary report available.
BW4	Crinan Canal Survey of Boaters	To establish market characteristics and user reactions, in order to guide the provision of facilities and information on the Crinan Canal.	Completed	Carried out in-house. Report available.
BW5	Crinan Canal Market Study	To draw up a marketing action plan for boating on the Crinan Canal.	Completed	Carried out by consultants. Jointly sponsored with HADB and SDA. Report available.
BW6	Survey and Management Recommendations for Redundant Sites	To evaluate a number of backwaters and redundant land sites to assess their conservational value and produce recommendations on their possible amenity value.	Completed	Carried out by RSPB. Report available from RSPB.
BW7	Ecological Studies on the Kennet and Avon and Montgomery Canals	Two resource evaluation exercises carried out with a view to catering for recreational development on these waterways.	Completed	Kennet and Avon study funded by BW, MSC, Kennet & Avon Canal Trust, Berkshire CC and Newbury DC. Montgomery study funded by BW and MSC. Reports available.

BW8	Lancaster Canal Survey of Informal Users	To assess current usage, future user requirements and marketing needs in relation to informal users on the Lancaster Canal.	Completed	Carried out in-house. Report available.
BW9	Lancaster Canal Private Moorings Survey	To establish the demand for moorings on the Lancaster Canal, together with facilities required and usage patterns.	Completed	Carried out in-house. Report available.
BW10	Leeds and Liverpool Canal Towing Path Users Survey	To investigate usage and user attitudes before and after the implementation of a cycling experiment on the canal towing path.	Completed	Carried out by consultants. Funded jointly by BW, Transport and Road Research Laboratory and CC. Report available.
BW11	Montgomery Canal Visitor Survey	To establish levels of use and market characteristics of the Montgomery Canal, as part of the Recreation and Amenities Strategy (see BW12).	Completed	Carried out in-house. Report available.
BW12	Montgomery Canal Recreation and Amenities Strategy	A recreation and amenity plan for the Montgomery Canal.	Completed	Prepared by the Recreation and Amenities Group of the Montgomery Canal Steering Group, with representatives from BW, local authorities, statutory bodies and voluntary organisations. Draft report available.
BW13	Gloucester Museum Visitor Survey	To investigate types of visitors and assess the success of marketing and publicity subsequent to the opening of the museum.	Completed	Carried out in-house. Report available.
BW14	Caledonian Canal User Survey	To assess public reaction to a new license fee system and revised lock operating hours introduced in 1987.	Completed	Carried out in-house. Report available.
BW15	Canal Recreation and Access Experiment	To test the potential for leisure use, particularly informal recreation, on the Leeds and Liverpool and Monmouthshire and Brecon canals.	Completed	3 year experiment, co-sponsored by BW and CC. Report available.

### Continuous/Annual Research

BW16	Waterways Levels of Use	To establish the levels of use of individual waterways and waterway lengths by boaters, anglers and informal users by means of a series of one day counts and by mechanical boat and 'people' counters.	Annual	Carried out in-house. Report available for 1988.
BW17	Waterway and Reservoir Plans	Work is continuing on the development and updating of waterway plans to help the allocation of resources, clarify user requirements and potential, and produce a framework for the involvement of outside organisations.	On-going	Carried out in-house.

### Current Research

BW18	'People' Counter	To develop a reliable mechanical pedestrian counter suitable for use at remote sites.	1989/90	Development of prototype carried out in-house.
BW19	Waterway Corridor Study	To identify the basic demographic characteristics of the population living close to the waterway system.	1988/89	Carried out by consultants.
BW20	Boating and Angling Relationships	Following on from BW3, a further studentship is being sponsored, concerned with ecosystem management in navigated waters.	1988/91	Carried out through 3 year postgraduate studentship (University of Liverpool).

BW21	Angling in BW Managed Fisheries	This is a follow on from BW2, to investigate types of usage by anglers on 3 further canals, together with implications for future waterway management. The canals involved are the Ashton/Lower Peak Forest, the Leicester Arm of the Grand Union Canal, and the Gloucester and Sharpness Canal.	1988/89	Carried out in-house.
BW22	Third Party Insurance for Pleasure Boats	To ascertain customer reaction to the possible introduction of compulsory third party insurance, and to determine possible ways of carrying this out.	1989	Carried out in-house.
BW23	Valuation of Informal Usage on Inland Waterways	To quantify the social benefits derived from the informal use of inland waterways.	1989/90	Carried out by consultants.
<b>Committed New Research</b>				
BW24	Market Survey of Privately Owned Powered Boats	To investigate and target the market for privately owned powered boats on BW inland waterways, including an investigation of competitors.	1989/90	Carried out partly in-house, partly by consultants. Follow on from work carried out on behalf on British Marine Industries Federation.
BW25	BW Waterways — Usage and Perception	To provide information by means of an omnibus survey of the overall usage and perception of BW waterways.	1989	Carried out by consultants.
BW26	Employment Generation by Inland Waterways	To estimate the number of jobs generated at a local level, both directly and indirectly, by BW inland waterways.	1989/90	Carried out in-house.
BW27	Interpretive Signs — Regent's Canal	To evaluate the use of interpretive signs on the Regent's Canal in London.	1989	Carried out in-house.
BW28	Grand Union/Regent's Canal Private Moorings Survey	To establish the demand for moorings on the lower Grand Union and Regent's Canals, together with facilities required and usage patterns.	1989	Carried out in-house.
BW29	Caledonian Canal Survey of Boaters	To establish market characteristics and user reactions, in order to guide the provision of facilities and information on the Caledonian Canal.	1989	Carried out in-house.
BW30	Trent Navigation Survey of Boaters	To establish market characteristics and user reactions, in order to guide the provision of facilities and information on the Trent Navigation.	1989	Carried out in-house.
BW31	Rudyard Lake — Visitor Numbers	To develop an on-going system for counting user numbers at Rudyard Lake reservoir, using 'people' counters and calibration surveys. This technique will subsequently be extended to other reservoirs.	1990	Carried out in-house.
BW32	Drive Time Analysis	Following on from BW19, to analyse the population within specific drive times of development sites.	1989/90	Carried out by consultants.
<b>Tentative New Proposals</b>				
BW33	Gloucester and Sharpness Canal/River Severn User Surveys	To determine the requirements of users on the Gloucester and Sharpness Canal and River Severn for waterway management and marketing purposes.	1989/90	Carried out in-house.

BW34	Customer Research — Midlands Waterways	To identify user requirements and opinions of BW level of service on waterways in Midlands region.	1989/90	Carried out in-house.
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### Databases 1989/90

It is proposed that a Waterway Information Database will be developed to hold information concerning facilities on and alongside BW waterways, together with user information. This may be GIS based, and incorporate demographic data from the Waterway Corridor Study (BW19). Work on developing this Database is scheduled to commence during 1989/90.

Data collected during in-house surveys is held on a database format, and further analysis of the data can be undertaken upon request.

### Research Publication 1988/89

Report No 25, (1988), *Angling Survey on Two Canals in the Birmingham Area.*  
Report No 26, (1988), *Passenger Boat Survey — Summer 1987.*  
Report No 27, (1989), *Lancaster Canal — Survey of Informal Users.*  
Report No 28, (1989), *The Project Officer Experiment. Three Reports on the British Waterways/Countryside Commission Canal Recreation and Access Experiment.*  
Report No 29, (1989), *Montgomery Canal Visitor Survey.*  
Report No 30, (1989), *Crinan Canal Survey of Boaters.*  
*National Count 1988*, (1988).

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# COUNTRYSIDE COMMISSION

## Introduction

The Countryside Commission cares for the countryside of England and Wales and helps people enjoy it. They undertake a wide range of activities to conserve the natural beauty of the countryside and to make it more accessible for the public enjoyment.

They act as the government's adviser on countryside matters. In addition they have special responsibility for designating National Parks and Areas of Outstanding Natural Beauty, defining Heritage Coasts and establishing National Trails.

## Research Programme 1989/90

The purpose of the Research and Experimental programme is to inform and support the development of the Commission's national policies and regional practice. There are three main types of research and experimental work:

1. Monitoring of social and environmental changes in the countryside as they affect the Commission's work, the main areas being in relation to public attitudes to the countryside, patterns of countryside recreation and changes in the rural landscape.
2. Evaluation of specific proposals or projects, both the projects of other agencies as they impact on the Commission's interests, and the effectiveness of the Commission's own programmes.
3. Developing and promoting new ideas and spreading good practice by means of experiment and demonstrations.

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
<b>Recently Completed Research</b>				
CC1	Sponsorship of National Trails	Feasibility study of scope for commercial sponsorship especially of the Thames Path.	1988/89	Pennant-Williams Associates.
CC2	Local Authority Expenditure on Rights of Way	To assess the financial and staff resources devoted by local authorities to public rights of way, and prepare report for publication.	1987/89	Dillon Computing Ltd and Peter Scott Planning Services.
CC3	London Weekend Television Promotion: Evaluation	Market research study to identify the effects of the TV advertising and the booklet upon those responding to the promotion.	1989	Research Bureau Ltd.
CC4	Recreation and the Disadvantaged — 'Operation Gateway'	To devise policies to enable the disadvantaged to enjoy recreation provision, and an evaluation of the project.	1986/89	Nottinghamshire County Council (who also co-sponsored this project).
CC5	Ploughing and Rights of Way Survey	Survey of farmers' knowledge and attitudes to the ploughing code and rights of way.	1988/89	Produce Studies Ltd.
CC6	Wales Countryside Access Forum	Project in Neath to demonstrate how access arrangements might be improved and disputes resolved.	1985/89	West Glamorgan County Council.
CC7	Commons Management Project	To bring together the existing dispersed experience of balancing wildlife and other interests on common land, as an input to the proposed legislation.	1987/89	Royal Society for Nature Conservation.
CC8	Integrated Rural Development in the Peak District National Park	To evaluate by experimental trials the application of an integrated programme of rural development in the Peak District National Park.	1981/88	Jointly sponsored with DOE, Peak Park Joint Planning Board, MAFF, NCC.
CC9	Potential Effects of Forestry Tax Changes and New Woodland Grant Scheme	Study to assess the likely effect of tax changes and new grants on future locations of forestry in Great Britain and on the management of existing woodlands.	1988/89	Co-sponsored by NCC and CCS.
CC10	Hereford Workers' Educational Association	To test the vehicle of adult further education tuned to community initiatives in rural areas.	1986/88	Workers' Educational Association (West Mercia District).

CC11	Enjoying the Countryside	Rights of way staff training needs assessment.	1988	Isle of Wight County Council.
CC12	Job Study Phase II	Assessment of the effects of Employment Training programme and collation of vocational and other relevant countryside staff training.	1988/89	Gloucestershire College of Art and Technology.
CC13	'Leap Initiative'	To develop, with media support, a sustainable national information service on the management of local community groups.	1987/88	Television South.
CC14	Volunteers Evaluation Report	To evaluate and report on the 'Countryside Volunteers Project'.	1988/89	Volunteer Centre.
CC15	Community Action Evaluation	To measure the achievement of project objectives for two Community Action projects (Barnsley Community Action in the Rural Environment and Herefordshire Workers' Educational Association).	1987/89	Nigel Roome, Bradford University.
CC16	Assessment of High Grade Limestone Sources in England and Wales	A preliminary study to identify gaps in the data of the occurrence of high grade carboniferous limestone.	1987/88	
CC17	Blackdown Hills Landscape Assessment	To provide a landscape appraisal as supporting material for the proposed designation of the Blackdown Hills as an AONB.	1988	Cobham Resource Consultants.
CC18	Development of Control Statistics	To update a previous analysis on development control cases and appeals in National Parks for the Fourth National Parks Workshop in March 1989.	1988/89	Gloucestershire College of Art and Technology.
CC19	Study of First Reviews of National Park Plans	To review the format and content of National Park Plan 1st reviews, to assist the CC with the formulation of advice on the preparation of the National Park Plan 2nd reviews.	1988	School for Advanced Urban Studies.
CC20	Studies of Good Practice — National Park Ranger Service	To collate and analyse information on Ranger Services in each National Park as background to National Parks Studies of Good Practice.	1988/89	Rural Advisory Service.
CC21	Limestone Pavement	Additional contract to complete limestone assessment of limestone pavements in northern region.	1988/89	NCC.
CC22	Economic Appraisal of Revised Agricultural Support	To prepare detailed costed version of Revised Agricultural Support System.	1988/89	University of Manchester.
CC23	Support System for Sheep Farming: Economic Appraisal of the Options for Improved Conservation Benefits	To assess existing support system for sheep farming and model the economics of alternative regimes.	1988/90	University College of Wales (Aberystwyth).
CC24	Assessment of Regional Water Authority Land Holdings	A review of the conservation and recreation values of land owned by the existing regional WAs.	1988/89	Gloucestershire College of Art and Technology.
CC25	Coed Cymru Experimental Farm Woodland Project	Survey of farmers to identify their attitude towards their woodlands.	1988/89	University College Wales.

CC26	Land Capability Study for Forestry	To produce 1:50,000 maps showing land capability classification for forestry in three areas in England and Wales. The results will form a baseline on which to build the CC's Forestry Strategies.	1987/88	Soil Survey of England and Wales.
CC27	Monitoring Hedgerow Loss	An investigation of causes of changes in hedgerow lengths in selected parts of England and Wales.	1987/88	Environmental Resources Ltd.
CC28	Field Margin Study	'State of the art' study of existing field margin management techniques. Evaluation of these as a means of achieving conservation and recreation objectives costing. Recommendations on how preferred management techniques should be published and promoted to land managers.	1988	CEAS Consultants (Wye) Ltd, with NCC.
CC29	BBC Countryside '88 Videodisc	To produce an advanced interactive videodisc based on the Domesday technology, giving a comprehensive picture about the present state of the countryside. To be used as an education and information resource.	1987/88	Joint sponsorship with DOE, NCC and RDC.
CC30	Desk Study of Pollution	A study of the potential relevance of current pollution issues to the CC's interest.	1988/89	Centre for Rural Studies.
CC31	Survey of Farmers' Intentions on Diversification	To measure the current involvement of farmers in recreational provision and assess the further potential.	1988	Produce Studies Ltd.
CC32	The Ridgeway Use and User Attitude Survey	To provide quantitative information about the current use of the Ridgeway and the attitudes of users to problems.	1988	Social Research Associates.
CC33	Evaluation of Operation Groundwork	Formal evaluation of the extent to which, and processes by which, the original Operation Groundwork met its stated objectives.	1988	Liverpool University.
CC34	BRMB Local Radio Promotion 'Come out of Town'	To test the effectiveness of using local radio to improve awareness.	1988	West Midlands Local Radio (BRMB), West Midlands Passenger Transport Executive et al.
CC35	National Trails	Testing the reaction of the walking public to a change in name for long distance routes.	1988	Research Bureau Ltd.
CC36	Towing Paths Users Survey	To survey towing path users in order to monitor the impact of cyclists on the path.	1988/89	Dept of Town and Country Planning, University of Manchester.
CC37	Review of Canal-side Recreation Opportunities	To test the full potential of canal corridors for recreation and access using the Leeds/Liverpool and Monmouthshire and Brecon canals.	1984/88	Co-sponsored with BW.
CC38	Catalogues of Common Land	To establish a national database of common land based on county registers and other sources. Includes information on location and characteristics, ownership, public and common rights and designations applying.	1985/89	University College of Wales.
<b>Continuous Annual Research</b>				
CC39	Demonstration Farm Programme Phase V	To promote advice and technical knowledge on all aspects of practical landscape conservation to farming interests via a demonstration farms programme on 9 farms, and to produce research findings of wildlife monitoring exercises.	On-going	Cobham Resource Consultants.

CC40	Public Transport Advice	To provide, in conjunction with Transport for Leisure, a public transport advisory service.	On-going	Transport for Leisure Ltd.
CC41	Interpretation Advice	To provide, in conjunction with the Centre for Environmental Interpretation, a countryside interpretive advisory service.	On-going	Centre for Environmental Interpretation.
CC42	National Survey of Countryside Recreation	Annual survey on the volume of, and expenditure incurred on, countryside recreation trips.	On-going	MAS Research Ltd.

### Current Research

CC43	Narberth Initiative	To use the mechanism of a new Development Trust to encourage local countryside initiatives.	1988/92	Taf and Cleddau Development Trust.
CC44	Birmingham National Park Awareness Project	To promote awareness of National Parks amongst young people in a major conurbation, and disadvantaged people in particular.	1987/90	Birmingham City Council.
CC45	Gloucestershire Parish Maps and Village Appraisals	To test the capabilities of a Rural Community Council in promoting the Local Jigsaw and assisting and enabling local communities to undertake Parish Maps and Village Appraisals.	1987/90	Gloucestershire Rural Community Council.
CC46	Wind Turbines	Literature Review by consultant on the economic prospects and environmental implications of electricity generation through wind turbines, drawing on UK and overseas experience.	1988/89	Mark Hancock.
CC47	Protected Landscape — a Guide	To prepare an international guide on the background to selection, management and administration of protected landscapes with case examples (guide to be published by International Union for Conservation of Nature).	1988/89	
CC48	Northamptonshire's Pocket Parks	To encourage and enable the establishment of Pocket Parks in Northants and to prepare a publication to provide guidance and advice on their development and management.	1987/90	Northamptonshire County Council
CC49	Community Action Monitoring	An assessment of the CC's national community action projects to assist decisions on a new national policy initiative.	1988/89	Bishop, Davison, O'Rourke.
CC50	Action for Communities in Rural England/ Rural Communities Councils Study	To undertake a study of the work of Rural Community Councils, which relates to the CC's remit.	1988/89	Action for Communities in Rural England.
CC51	Community Action Evaluation (Wales)	To measure the achievement to project objectives for two projects in Powys and Narberth.	1988/89	Graham Day, University College Wales (Aberystwyth).
CC52	Powys Countryside Initiative	To add local countryside work to the agenda of local communities and development agencies in rural mid Wales.	1987/90	Prince of Wales Committee.
CC53	Wiltshire 'Country Pump'	To test the capability of a Rural Community Council to aid countryside community action.	1987/90	Wiltshire Rural Community Council.

CC54	Community Action in the Rural Environment (CARE) (Barnsley)	To develop and promote a wider base of support for local environmental action with background local authority assistance.	1986/89	Barnsley Metropolitan District Council.
CC55	North Pennines AONB	To help community groups and individuals to identify and develop ideas for creating projects to provide for conservation, recreation, tourism and employment creation which are in keeping with the AONB.	1988/91	Durham Rural Community Council.
CC56	Feasibility Study into a Major New Lowland Forest	A feasibility study to establish how and where a new forest might be created in the East Midlands.	1988/89	Consortium of consultants including Landscape Design Associates and Roger Tym and Partners.
CC57	Evaluation of Broads Grazing Marsh	To assess the effectiveness of livestock compensatory allowances as a means of retaining livestock farming in traditional areas in the face of pressure for change in arable cropping.	1986/89	University of Manchester. Jointly funded with MAFF.
CC58	Forestry Strategy	To produce forestry strategies for mid Wales which interpret the CC's forestry policy.	1988/89	Land Use Consultants (Mid-Wales).
CC59	Countryside Implications of Changes in the CAP	To build an economic model which takes account of land use changes or adjustments to the CAP.	1988/90	Carried out by the Centre for Agricultural Strategies, jointly funded by DOE and MAFF.
CC60	Small Woodlands Project Inventory	The identification of small woods projects and collection of information about each project.	1988/89	Gloucestershire College of Art and Technology.
CC61	Review of Countryside Advisers Policy	To assess the effectiveness of the CC's countryside advisers policy in achieving practical conservation action on farms.	1988/90	Centre for Rural Studies.
CC62	Monitoring Landscape Change in National Parks	To obtain and present in a refined and accessible form, statistical and mapped information on the extent of change in the 1970s and 1980s, and to establish a baseline for future monitoring.	1988/89	Silsoe College. Co-sponsored with National Parks.
CC63	People, Nature and Landscape: a State of the Art Review	To review current research and practice to establish interdisciplinary relationships and future research needs.	1988/89	Landscape Research. Jointly funded by ESRC.
CC64	Coed Cymru Woodland Training	An experimental training course to train individuals in the management of small woodlands. The aim is to function as contractors and undertake management work for woodland owners.	1988/89	Fieldwork Woodland Training, MSC.
CC65	Rural Database	To gather information and data relevant to rural change.	1986/89	Information includes human population, agriculture, natural environment. Co-sponsors DOE, ESRC and others.
CC66	Wales Terrestrial Database	To gather information and data relevant to rural change in Wales. Information includes human population, agriculture and natural environment.	1986/89	Welsh Office.
CC67	New Forest Pony Premium Scheme	To help improve the overall management of the New Forest through encouraging good quality breeding stock. This scheme has been extended to using cattle for grazing the New Forest lawns.	1982/90	Co-sponsored by RDC and NCC. New Forest Verderers.

CC68	Coed Cymru Campaign/Welsh Woods Campaign	A project to promote the management of small woodlands for a range of purposes including landscape and nature conservation and timber production.	1986/90	British Trust for Conservation Volunteers.
CC69	Project Silvanus: Small Woods in the South West	A project to combine environmental conservation with development of wood industries, forestry, employment and alternative sources of income to farmers.	1986/90	Dartington Institute.
CC70	Northern Grouse Moors Experiment	To monitor the recovery of heather under different stocking rates and management practices of the northern grouse moors. In particular the effect of moor gripping on the scenery and hydrology.	1987/92	The Game Conservancy.
CC71	Lake District Commons Management	Establish and report on effective management arrangements for grazing commons owned by Lake District National Park, along the line recommended by the Common Land Forum.	1988/91	Lake District Special Planning Board.
CC72	Rights of Way Survey	A sample survey of the condition of the rights of way network.	1986/89	Travers Morgan Planning. Co-sponsored by DOE.
CC73	Monitoring Part III of the 1981 Wildlife and Countryside Act	To measure changes in rights of way and definitive maps under the new provisions of the Act.	1984/89	Ramblers' Association.
CC74	Shropshire Countryside Marketing Project	A joint project with ETB to raise the awareness of Shropshire's countryside amongst the residents of the West Midlands. The project will promote recreation activities and a 'green' brand of tourism and will be used as a demonstration to other local authorities.	1988/89	Chris Martins. Influential Concepts and Communications.
CC75	Broads Promotion Campaign	To ensure that the impact of the campaign is properly monitored and reported to the CC.	1988/90	Broads Authority. Co-sponsored by East Anglia TB and boat hire industry.
CC76	Greater Manchester Information Project	To test ways of improving awareness of the countryside on a city wide scale. Plus monitoring.	1988/90	Greater Manchester Countryside Unit.
CC77	Rural Community Tourism Development	A research and action project to help local groups co-ordinate and develop rural tourism.	1987/89	University of Bristol.
CC78	Overseas Visitors	Identifying the potential market for walking holidays in Britain.	1988/89	BTA.
CC79	Hannibal's Information Service	A countryside information project testing ways of improving awareness of the countryside. Monitoring and evaluation undertaken independently.	1987/89	Hereford and Worcester County Council.
CC80	Bunkhouse/Camping Barns Marketing and Advice Project	To provide farmers, landowners and agencies with advice on the development and marketing of low cost accommodation for countryside users.	1987/89	YHA.
CC81	Rights of Way Maintenance Manual	To research, write and produce 'codes of practice' manual on rights of way maintenance for local authority staff and others.	1988/90	Northamptonshire County Council.

## Committed New Research

CC82	Landscape Change Data Compatibility	A study of the compatibility of various computer systems involved in monitoring landscape change in the national margins.	1989	MVA Systematica.
CC83	Woodland Preferences of the General Public	A study, to be based on group discussions, of the environments which the public most enjoys for recreation in woods and forest.	1989/90	Joint Project with FC and CCS. Project brief issued.
CC84	Training Advice	To research and produce a publication on training for countryside staff.	1989	
CC85	AONB Directory	To assemble and present in a directory information in standard format for each AONB.	1989/90	
CC86	Training on Rights of Way	To develop effective provision of training material and programmes for managing the rights of way network.	1989	
CC87	Council for Occupational Standards and Qualifications in Environmental Conservation	To provide technical investigatory support for Council for Occupational Standards and Qualification in Environmental Conservation's remit.	1989	
CC88	Economic Impact of Countryside Recreation	To analyse the results of the National Survey of Countryside Recreation and other sources on expenditure in the countryside by visitors.	1989/90	
CC89	National Trails Sponsorship and Marketing Advice	To provide sponsorship and marketing advice for National Trail Development Groups during 1989/90.	1989/91	
CC90	Pennine Way Condition Survey	A survey of the physical condition of the Pennine Way in order to prepare a management strategy.	1989/90	
CC91	Economic Impact of Rights of Way and National Trails	This project will use infra-red counters to provide better measures of the overall usage of National Trails and other rights of way (see also CC92).	1989/92	
CC92	Local Authority Rights of Way Procedures Study	A study on improvements that could be made to existing procedures and to test their effectiveness in selected Highway Authorities.	1989/92	DOE, County Surveyors Society.
CC93	Know Your Countryside Demonstration Campaign	This campaign will demonstrate how tourism, recreation and conservation can be combined to promote a brand of 'green' tourism. Shropshire is the chosen location.	1989/91	ETB, Shropshire County Council and District Council.
CC94	High Street Countryside Information Terminals	This project will develop the role of new technology in improving people's awareness of the countryside. A countryside databank of recreation will be created for use by the public in high street locations in London.	1989/91	
CC95	Advisory Service for Countryside Marketing	An advisory service to provide partners with specific and practical recommendations for improving the development, presentation and delivery of information on local countryside recreation opportunities.	1989/92	

CC96	Experimental Access Projects	To test new techniques for developing and managing rights of way with local authorities and others including their evaluation.	1988/89
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### Tentative New Proposals

CC97	Access Land on Ordinance Survey Maps	To assess means of collecting data on open land where the public has a right of access.	1989/90	
CC98	Providing for Horseriders	To assess the scope for permissive or commercial routes for horseriders.	1989/90	
CC99	Lowland Commons Management Experiment	Support for a County Council in employing a project officer to set up the management arrangements on commons in a county along the lines of the Common Land Forum.	1989/93	
CC100	Review of Conservation Grants Policy	An in-house examination of the results of the grants the CC has offered for conservation and their effectiveness together with those which have been offered by other agencies including, possibly, MAFF.	1989	
CC101	Review of Small Woods	A look at the experience of how to conserve small woods and which approaches appear to have been effective.	1989/90	Co-operation with the FC will be sought.
CC102	Heather Moorland Management Experiments: North York Moors and Exmoor	Projects to examine methods of restoring heather and social economic background, and consequences to such work.	1989/90	A partner is sought for the work on Exmoor.
CC103	Implications of 1992: State of the Art Review	A study of the implications of the Single Market for the CC's work.	1989/90	
CC104	Economic Value of Conservation: State of the Art Review	A review of work being carried out by other agencies on the economic value of countryside conservation policies.	1989/90	
CC105	Agricultural Grants and Countryside Commission Objectives	Follow up work on the CC's paper on a new farm support system, refining the proposals so that they achieve maximum impact at national level and European Community level.	1989/90	
CC106	Urban Forests Feasibility Studies	Contribution to costs of feasibility studies for individual urban forests: contributions will be sought from local authorities and other partners.	1989/90	
CC107	New Training Initiative	To develop more effective training for countryside conservation and recreation work.	1989	
CC108	Training for Trainers	To look at the training needs of countryside trainers.	1988/89	
CC109	Advice on Countryside Content of Local Plans	To produce advice on Local Plans to provide a sound basis for development control decisions.	1989/90	
CC110	Rural Design	Research leading to a publication on the principles of good design, particularly in relation to new housing in villages.	1989/90	

CC111	Fine Tuning the General Development Order	To study the possibility of bringing within the scope of planning control a number of activities which are currently exempt.	1989/90
CC112	Landscape Conservation Guidelines for Onshore Oil and Gas Development	Following the approval of a revised policy, Landscape Conservation Guidelines will be drawn up with the industry.	1989/90
CC113	Appraisal of Limestone Pavements in the Yorkshire Dales National Park	Jointly with NCC, a study designed to identify the full extent of the limestone pavement resource and those which are of most importance for conservation.	1989/90
CC114	Cotswold AONB Landscape Appraisal	A landscape appraisal is required for the Cotswolds AONB in support of the submission documents to the DOE for the boundary review variation order.	1989/90

### Databases 1989/90

<i>Title/Description</i>	<i>Timescale/Access</i>	<i>Geographical Features</i>	<i>Recreational Features</i>
Catalogues of Common Land. To establish a national database of common land based on county registers and other sources. Includes information on location and characteristics, ownership, public and common rights and designations applying.	1985/89. Probably on sale.	Location of all commons in England and Wales.	
Heritage Coast Directory, Part I	Revised 1988. Open access. Hard copy. Free of charge.	Name of heritage coasts.	Lists heritage coast officer, county or national park contact and district contact with addresses and phone numbers.
National Parks Database	Will be annual. Currently in preparation. Will be open access. Hard copy. Free of charge.	Parishes will be listed and county councils within park boundary.	Various visitor attractions in each park. Separate National Parks action guide lists activities and local contacts in each park.
AONB Register	Currently in preparation. Will be open access. Hard copy. Free of charge.	Description of area, local authorities.	Some information on recreational facilities within AONBs.
Survey of local authority involvement with public Rights of Way in England and Wales	1986/87 Via ESRC Rural Data Archive.	Local authority addresses and post-codes.	Lengths of Rights of Way; lengths of Rights of Way promoted; public contact points on legal matters and recreation opportunities; staff involved with and expenditure on creating and promoting use of Rights of Way; recreational paths and circular walks.
Training Database	Currently in preparation. Not yet known.	Location of conservation education courses in UK.	

## Research Publications 1988/89

*The Water Industry and The Countryside*, (1988), CCP 239.

*Changing River Landscapes*, (1988), CCP 238.

*Landscape Assessment of Farmland*, (1988), CCP 255.

*The Blackdown Hills Landscape*, (1988), CCP 258.

*Contact for Research Enquiries:* Jeremy Worth, Head of Recreation and Access Branch, The Countryside Commission, Crescent Place, Cheltenham, Glos GL50 3RA (0242 521381).

*Contact for Database Enquiries:* Jim Lennon, Recreation and Access Branch, The Countryside Commission, Crescent Place, Cheltenham, Glos GL50 3RA (0242 521381).

Research Programme 1989/90

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
<b>Current and Recently Completed Research</b>				
CCS1	Cairngorm Recreation Survey	To study recreational use of the Cairngorms by cordon survey.	1987/89	Initial summer survey in 1987 extended to cover winter/spring 1987/88. Final report integrating the 2 surveys commissioned. Co-sponsored with NCC, HIDB and Highland Regional Council. Contracted to Mackay Consultants.
CCS2	Landscape Conservation in National Scenic Areas	Development project to resolve landscape issues arising from changing land use in the Glen Lyon-Rannoch and Eildon-Leaderfoot National Scenic Areas.	1985/88	Landscape strategies for both National Scenic Areas now complete and an overview of this work undertaken by Cobham Resource Consultants.
CCS3	Visitor Monitoring at Countryside Recreation Sites	To develop systems for collection of more reliable data about visitation to key countryside sites, especially country parks.	1987/89	Contracted to the Centre for Leisure Research. Manual in preparation.
CCS4	Clyde-Calders Urban Fringe Project	Urban fringe project to develop methods of ameliorating landscape problems and to improve recreation opportunities in an area on the east side of the Glasgow conurbation.	1984/89	Co-sponsored with Strathclyde Regional Council, in association with the City of Glasgow, and Hamilton, Motherwell and Monklands District Councils.
CCS5	Edinburgh Green Belt Initiative	To co-ordinate action and promote improved amenity and access in the Edinburgh green belt.	1988/91	Co-sponsored with Lothian Regional Council in collaboration with City of Edinburgh, East, Mid and West Lothian District Councils.
CCS6	Kilpatrick's Project	A project to tackle urban fringe problems on the north western fringe of the Glasgow conurbation.	1988/91	Co-sponsored with Clydebank, City of Glasgow, Bearsden and Milngavie District Councils and Strathclyde Regional Council.
CCS7	Footpath Management Project	To develop experience in and advice for the management of upland footpaths.	1984/91	R Aitken contracted to mount a programme of trials and associated studies. Programme of work extended, with emphasis on promotion of more action on path management.
CCS8	Vegetation in the Uplands	To review and conduct trials of methods of revegetation of bare ground in harsh upland environments.	1988/90	Series of laboratory and field trials initiated, with emphasis on revegetation of bare high level mineral soils and wet peat. Contracted to ITE at Banchory Research Station.
CCS9	Landscape Setting of Buildings	To develop design advice for the siting of buildings in the landscape.	1986/89	Contracted to Gillespies. Publication in preparation.

CCS10	Battleby Display Centre Information Sheets	To collate and publish advice in information sheet format for management techniques for recreation provision, and planting methods for the Scottish countryside.	On-going	Continuing in-house with contributions from external advisers.
CCS11	Accommodation for Walkers	To develop advice for low cost accommodation along long distance routes.	1987/89	Contracted to E Taylor. Final report received.
CCS12	Monitoring Change in the Countryside	Survey of recent change to land cover and other attributes contributing to the appearance of the countryside.	1986/90	The CCS is jointly sponsoring with NCC the implementation in Scotland of NCC's National Countryside Monitoring Scheme. Project extended, including survey of one region using the 1989/90 air photography of all Scotland.
CCS13	Day Trip Survey	To survey day trips by Scottish residents.	1989	Contracted to System Three (Scotland). Co-sponsored with STB, FC and Scottish Museums Council. Continued annually from 1987.
CCS14	Birchwood Management	To identify demonstration sites for multi-use management of birch woods.	1989	Study area Breadalbane ESA initially. Contracted to East of Scotland College of Agriculture.
CCS15	Public Awareness of Forests and Woodlands in the Landscape	To survey public attitudes and perception of the appearance of woods and forests in the landscape and of the internal forest environment.	1989/90	Co-sponsored with FC and CC. T Lee, consultant.
CCS16	Ranger Service Review	Value for money study on grant expended in this area.	1989	Contracted to PIEDA.
CCS17	Review of Education and Training Policy	To examine the CCS's education and training remit and formulate options for future policy.	1989	Contracted to A and M Training Services.
CCS18	Field Penalty Assessment for the Kilpatrick's Project Area	To assess the scale and nature of urban impact on agriculture in this project area.	1988	Support study to the Kilpatrick's Project. Contracted to ADAS.
CCS19	Cairngorm Ski Developments: Landscape Study	To advise broadly on the landscape impact of the proposed westward expansion of ski-ing at Cairngorm.	1988	Contracted to Derek Lovejoy and Partners.
CCS20	Employment Training and the Countryside: an Update	To review recent changes to employment training related work in the Scottish countryside.	1989	Update on earlier study. Contracted to R Sidaway.
CCS21	Great Glen Way	Route feasibility study.	1988/89	In-house with secondment from Arthur Young and Partners.
CCS22	Forestry Incentives Study	To project changes in planting patterns following the changes to the support systems for forestry.	1988/89	Co-sponsored with NCC and CC. Consultants Dartington Institute and Roy Lorraine Smith.
CCS23	Assessment of Landscape for Designation Purposes	To provide concise practical guidelines for the designation of landscape.	1989	Contracted to Land Use Consultants.
CCS24	Public Relations Advice to the Edinburgh Green Belt Initiative	To provide advice on the launch of the Initiative and on the setting up of a proposed Trust.	1989	Support contract to the Edinburgh Green Belt Project. Contracted to PR Consultants (Scotland).

CCS25	Battleby Display Centre Review	To provide policy guidance for the future management and development of the Centre.	1989	Contracted to Northern Planners.
CCS26	Popular Mountain Areas Review: Case Studies	To provide our views of five areas to highlight planning and management issues and needs.	1989	Support study to Popular Mountain Areas Review. Contracted to Cobham Resource Consultants.
CCS27	Popular Mountain Areas Review: General Support	To provide support to the Popular Mountain Areas Review, in particular on experience from outwith Scotland.	1989	Consultants: John Foster and R Aitken.

### New Proposals

CCS28	National Scenic Areas Landscape Strategies	To prepare planning and management strategies for further National Scenic Areas.	1989/92	In-house work proposed.
CCS29	New Urban Fringe Project	Further development of existing work.	1989 start	To be formulated.
CCS30	Land Use and Land Holding Changes	To review change in the light of fiscal and other policy shifts.	1989/90	
CCS31	Review of Access Policies	Research support to broad policy review.	1989 start	
CCS32	Arran Forestry Strategy	To assess potential for further forestry development on Arran.	1989	In collaboration with Cunninghame District Council and Strathclyde Resource Consultants and MILLRI, consultants.

### Research Publications 1988/89

*Gardens and Designed Landscapes: An Owners Guide to Planning their Management and Conservation* (1989), 28pp, The Commission, Perth.

★ *National Scenic Areas: A Report on the Pilot Studies — Loch Rannoch and Glen Lyon NSA and Eildon-Leaderfoot NSA* (1989), 65pp, Report by Land Use Consultants to the CCS.

★ *The Effectiveness of Landscape Designations in Scotland* (1988), 104pp, Cobham Resource Consultants for CCS and SDD.

★ *Restoration of Vegetation in the Scottish Uplands: A Review* (1988), 75pp, ITE for CCS.

★ *Cairngorm Visitor Survey: Summer* (1987), 123pp, Report for CCS, HADB, HRC and NCC, Mackay Consultants, Inverness, The Commission, Perth.

*Countryside Recreation in Central Scotland: A Review of Market Surveys in Strathclyde and Lothian Regions, 1977-85*, A report to CCS by ASH Environment Design Partnership, 79pp, The Commission, Perth.

★ Available in limited numbers only.

*Contact for Enquiries:* John W Mackay, Countryside Commission for Scotland, Battleby, Redgorton, Perth PH1 3EW (0738 27921).

Introduction

The Department's Countryside Research Programme is designed to provide information on the state of the countryside and likely future trends; to investigate means of reconciling agriculture, forestry with conservation and recreation; to find ways of encouraging enterprise in rural areas; and to inform DOE's regulatory activities.

The Department's £7.7m water research programme is designed to meet UK Government Water development and monitoring policy needs and is complemented by water industry research in England and Wales costing £27m, which supports efforts to maintain and improve operational efficiency and compliance with treatment standards. Included in this is research on the effects from land use changes and agricultural development on the quality and quantity of water resources.

According to Section 135 of the Water Bill, the setting up of the National Rivers Authority will have implications for Department-funded research. It is expected that by April 1990 research appropriate to the NRA will transfer to the new Authority with the relevant funds.

Research Programme 1989/90

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
DOE1	Monitoring Landscape Change Data	To provide information on the stock rates of change of countryside features in England and Wales.	1984/86	Carried out by Hunting Technical Services Ltd. Co-sponsored with CC.
DOE2	Countryside Implications of Changes in CAP: Pilot Study	To assess the main options for reform of the CAP and the effects on land use, employment and wildlife.	1985/86	Carried out by Centre for Agricultural Strategy, University of Reading. Co-sponsored with RDC.
DOE3	Investigating Causes and Changes in Hedgerow Lengths	To establish why hedgerows have been removed and new hedgerows planted.	1987/88	Carried out by Environmental Resources Ltd. Co-sponsored with CC.
DOE4	Environmental Options and Agricultural Land Use Issues	To build on existing modelling techniques to explore the interface between environmental factors and the economics of marginal agriculture or forestry.	1986/89	Carried out by Aberdeen University. Co-sponsored with MAFF, NCC and NERC.
DOE5	An Examination of Monitoring Landscape Change Data	Planning for a national landscape survey in 1990/91 to update the Monitoring Landscape Change exercise — see DOE1 above.	1987/89	Carried out by Bristol University.
DOE6	Interactive Videodisc on Rural Issues	To provide data and analyses of rural Britain.	1987/89	Carried out by BBC Enterprises. Co-sponsored with CC, RDC and others.
DOE7	Alternative Support Systems for Rural Areas	To utilise the lessons learnt in the Integrated Rural Development Programme, building on existing alternative systems.		Carried out by Wye College. Co-sponsored with MAFF.
DOE8	Upland Management and Water Quality Phases 1 and 2	To assess the impact of upland management practices on the river biota, recreational fisheries, quality of raw water abstracted or stored for supply, chemical budgets.	1981/88	Carried out and co-sponsored by IFE, IH and ITE. Awaiting final report.
DOE9	Monitoring the After Use of Land Reclaimed with the Aid of the Derelict Land Grant	To collect and collate information on the use being made of land reclaimed through Derelict Land Grants and on the benefits achieved.	1987/88	Let to Environmental Resources Ltd.
DOE10	Land Use Change Statistics	To examine the quality and usefulness of the DOE's land use change statistics and to suggest ways in which their usefulness might be further improved bearing in mind value for money.	1987/88	Carried out by Laurence Gould and Associates Ltd in association with Clyde Surveys Ltd.

DOE11	Case Studies of Good Practice in Urban Regeneration III: Sport and Leisure in the Inner City	A review of sport and leisure projects which contribute to urban regeneration.	1987/89	Carried out by Loughborough University.
DOE12	Trees on Colliery Soil		1985	Let to FC.

### Current Research

DOE13	Countryside Implications of Changes in CAP	See DOE2 above.	1987/89	Carried out by Centre for Agricultural Strategy, University of Reading. Co-sponsored with CC, MAFF, NCC.
DOE14	Ecological Consequences of Land Use Change	To develop guidelines for land management to build on previous work highlighting the relationship of size and fragmentation of wildlife habitats to preservation of diverse species populations.	1987/90	Carried out by ITE.
DOE15	The Impact of Land Use Change on Aquatic Communities	To add a freshwater dimension to DOE14 above.	1988/89	Carried out by IFE.
DOE16	Effects of Nitrogen Fertiliser on Natural Grassland on West Sedgemoor	To determine the effects of nitrogen fertiliser on species composition of natural grassland on West Sedgemoor and to measure agricultural production.	1986/90	Carried out by Animal Grassland Research Institute. Co-sponsored with MAFF and NCC.
DOE17	Bracken: the Extent of Spread and Methods of Control	To examine the extent of bracken spread and cost effective management methods.	1988/89	Carried out by National Remote Sensing Centre.
DOE18	Rural Areas Database	To gather information and data relevant to rural areas and change. Information includes population, agriculture and natural environment.	On-going	Carried out by the ESRC. Co-sponsored with CC, FC, MAFF, NCC, NERC and RDC.
DOE19	Rural Analysis of Census of Population Data	To analyse 1981 Census of Population data for rural areas.	1983/89	Carried out by Management Centre, Aston University.
DOE20	Integrated Rural Development in the Peak District National Park	To evaluate by experimental trials the application of an integrated programme of rural development in the Peak District National Park.	1981/88	Carried out by the Peak Park Joint Planning Board. Co-sponsored with CC, FC, MAFF, NCC, RDC.
DOE21	Survey on the Conditions of the Rights of Way Network	To assess the condition and usability of the national rights of way network, with particular reference to counties damaged in the October 1987 storm.	1988/90	Carried out by Travers Morgan. Co-sponsored with CC.
DOE22	Arboriculture	To support the Arboricultural Advisory and Information Service and support for the DOE Tree Preservation Order appeals work.	On-going	Carried out at FC Research Station, Alice Holt.
DOE23	Deer Mortality in Royal Parks	To investigate reasons for increased deer mortality and implications for deer management.	1988/90	Carried out by Southampton University.
DOE24	Statistical Indicators for Nature Conservation	To develop a set of indicators to monitor trends in nature conservation through a review of key recent work on UK wildlife habitats etc.	1988/89	Carried out by York University.

DOE25	Remote Sensing Techniques for Rural Land Classification	To examine patterns of landscape and how these might be used to collect information on habitat and landscape features.	1986/89	Programme administered by British National Space Agency.
DOE26	Project Silvanus: Co-ordinated Management Techniques for Small Woodlands	To monitor a project combining conservation aims with management of small woods and development of associated industries.	1986/89	Carried out by Dartington Institute. Co-sponsored with CC, FC, MAFF, NCC, RDC.
DOE27	Planning for a Repeat Monitoring Landscape Change Survey	To assist planning for a national landscape change exercise to update the 1980 database.	1988/89	In conjunction with CC.
DOE28	Forestry Impact on Water Quality II	To develop further studies on movement of elements through forested catchments at Plynlimon.	1988/92	Carried out and co-sponsored by IH.
DOE29	Hydrological Impact of Hardwood Plantations in Lowland Britain	To assess the hydrological and hydrochemical effects of small scale hardwood plantations.	1988/91	Carried out by IH.
DOE30	Cost Effective Management of Reclaimed Derelict Sites	To identify cost effective strategies for managing reclaimed derelict sites and to assess the extent to which such strategies are affected by the methods and cost of initial reclamation.	1987/89	Carried out by Land Capability Consultants Ltd.
DOE31	Provision and Protection of Open Space in the Inner City	To identify the main problems which prevent the creation of public open space, greening and the temporary use of vacant land and to identify actions to overcome them.	1989	Let to Birmingham Polytechnic.
DOE32	Mersey South Bank Feasibility Studies	To make an appraisal of the technical feasibility, economic viability and ecological impact of reclaiming land for large scale industrial development.	1987/89	Carried out by Ward Ashcroft and Parkman with Cheshire County Council.
DOE33	Evaluation of Garden Festivals	To assess the cost effectiveness of garden festivals in achieving their economic and environmental objectives.	1987/89	Carried out by PA Cambridge Economic Consultants.
DOE34	Low Level Restoration of Sand and Gravel Workings	To review and assess existing data and experience on the sand and gravel workings where low level restoration is being or might be used.	1987/88	Carried out by M J Carter Associates.
DOE35	Southampton Soil Mapping Study	To evaluate methods and outputs for applied soil mapping in terms of their relevance to land use planning and applied geological mapping.	1987/89	Carried out by Soil Survey England and Wales.
DOE36	Landform Replication as a Technique for the Reclamation of Limestone Quarries	To evaluate restoration blasting and associated revegetation as a practical, acceptable and economic technique for reclamation and long term stability of large scale limestone quarries.	1988/93	Let to Manchester Polytechnic with North West Groundwork Trust and Rock Environmental.
DOE37	Joint Agricultural Restoration Study I Bush Farm and Papercourt Farm Sites	To investigate feasibility of restoring land back to a high standard of agricultural quality after gravel extraction under commercial conditions.	1984/89	Let to RMC (UK) Ltd.

DOE38	Joint Agricultural Restoration Study II Wasperton Site	As above.	1984/91	Let to Pioneer Aggregates.
DOE39	Tourism and Leisure in the Inner City	To evaluate the contribution made to inner city policy objectives by tourism projects that receive Urban Programme/Urban Development Grants.	1987/89	Let to Polytechnic of Central London.

### Committed New Research

DOE40	Recreation and Nature Conservation in the Wider Landscape	To examine the relationship between recreation and nature conservation.		To be let.
DOE41	Income Potential of Conservation Activities	To examine the income, wealth and employment generating potential of conservation activities.		To be let.
DOE42	Environmental Value of Farm Regimes	To examine management techniques and environmental benefits of alternative farm regimes.		To be let.
DOE43	The Dynamics of the Rural Economy	To investigate and provide information on the rural economy.		To be let.
DOE44	1991 Census of Population: a Rural Definition	To provide a rural definition and extraction of associated data.		To be let.
DOE45	Socio-economic Aspects of Farm Woodlands and Amenity Trees	To investigate the socio-economic significance of farm woodlands, amenity trees and urban forestry initiatives.		To be let.
DOE46	The Ecological and Landscape Consequences of Extensification and Set Aside	To examine the ecological and landscape consequences of extensification and set aside, with particular reference to field margins.		To be let.
DOE47	Techniques for Environmental Assessment	To produce a comprehensive guide to the Environmental Assessment Directive and its implications, drawing on current and completed countryside research and identifying gaps.		To be let.
DOE48	Environmental Assessment: A Framework for Monitoring the Implementation of the EC Directive	To establish a framework for monitoring the implementation of the EC Directive on Environmental Assessment.		To be let.
DOE49	The Management of Hedgerows	To investigate the economics of hedgerow management for nature conservation.		To be let.
DOE50	Moorland Management	To look at alternative land uses following reclamation from bracken and other invasive species, with particular reference to ecological and landscape effects.		To be let.
DOE51	Effect of Climate Change	To provide information on the effects of climate change on nature conservation.		To be let.
DOE52	Birds/Feeding Grounds in Estuaries	To identify estuaries of importance to birds and indicate the significance of energy, water and reclamation activities.		To be let.

DOE53	Factors Affecting Recruitment of River Fish	To distinguish the eggs and early stages of some river fish and to establish the distribution of spawning areas.	To be let.
DOE54	Linking Land Use Changes to MAFF Data	As MAFF propose to end their system of collecting land use change data, this research will investigate the linking of MAFF data to DOE's handling of land use data.	To be let.
DOE55	Performance of Vegetated Landfills in Reclaimed Mineral Workings	To review and evaluate vegetation performance for a range of mineral workings in which landfill and restoration have been completed since 1982.	To be let.
DOE56	Landscaping and Revegetation of China Clay Waste Tips	To evaluate and where possible improve existing information and practices on landscaping and reclamation of major waste tips from the extraction of china clay.	To be let.
DOE57	Reclamation of Mineral Workings to Agriculture	To collect, collate and analyse existing published materials and other available information, including site surveys, to provide a review of criteria for successful restoration and aftercare of mineral workings.	To be let.
DOE58	Amenity Reclamation of Mineral Workings	To provide appropriate guidance on requirements for initial restoration and subsequent aftercare where mineral workings are reclaimed for amenity use.	To be let.

### Databases

The Department holds a large number of databases, many of which are geographically referenced and provide information on a wide variety of policy areas. Those which are publicly available are deposited at the Rural Areas Database.

### Research Publications 1987/89

*Environmental Education and Training Industry* (1988), available from the Council for Environmental Education, School of Education, University of Reading, London Road, Reading RG1 5AQ.

*An Assessment of Environmental Education Techniques* (1987), available from the Council for Environmental Education as above.

*Dual Use of Sports Facilities* (1987) by Coopers and Lybrand, contact SARD, Department of the Environment, Room B255, Romney House, 42 Marsham Street, London SW1P 3PY.

'Reclamation: Colliery Spoil' Jobling J in *Advances in Practical Arboriculture* ed Patch D, HMSO (1987), (Forestry Commission Bulletin 65).

*Evaluation of Derelict Land Grant Scheme* (1987), DOE, HMSO.

*Stoke-on-Trent National Garden Festival Visitor Survey Field Report* (1987), NOP Market Research Ltd.

*Bush Farm, Upminster, Essex Final Report (Main Report) 1982-1987* (1987), Ready Mix Concrete (UK) Ltd.

*Developing the Rural Economy* (1988), available from ECOTEC Research and Consulting Ltd, Priory House, 18 Steelhouse Lane, Birmingham B4 6BJ.

*Control of Football Crowd Behaviour* (1988), by Leicester University, contact SARD, Dept of the Environment, Room 2.55, Romney House, 42 Marsham Street, London SW1P 3PY.

*Causes of Increased Deer Mortality in Royal Parks* (1988), contact Mr Baxter-Brown, Richmond Park, Richmond-upon-Thames, Surrey, TW10 5HS.

*Sediment Pollutant Interactions in Estuaries: a Literature Review* (1988), contact DRA, Room 925, Tollgate House, Houlton Street, Bristol BS2 9DJ.

*Effects of the Great Storm — Report of a Technical Co-ordination Committee and the Government's Response* (1988), DOE, MAFF, FC (HMSO).

*Monitoring Landscape Change: October 1987 Storm Damage Assessment* (1988), available from Hunting Technical Services Ltd.

*Developing Sport and Leisure. Good Practice in Urban Regeneration* (1989), DOE, HMSO.

*Land Use Change Statistics Research Project* (1989), published by Laurence Gould Associates Ltd in association with Clyde Surveys Ltd, available from Laurence Gould Associates Ltd (C Mathias) £16.25.

A number of Forestry Commission Arboricultural leaflets and research notes have been produced with financial support from DOE. Annual catalogue of publications available from Publications, Forestry Research Station, Alice Holt Lodge, Farnham, Surrey, GU10 4LH.

*Contact for Enquiries:* J Angell, Room 9/25, Tollgate House, Houlton St, Bristol (0272 218871). (DOE 1-7, 13-27, 40-47, 49-52).

DPS16, Room C15/14, 2 Marsham St, London SW1 (01 276 3953). (DOE 9-12, 30-39, 48, 54-58).

WT3, Room A4/37, Romney House, Marsham St, London SW1 (01 276 8694). (DOE 8, 28, 29, 53).

# FORESTRY COMMISSION

## Introduction

The Forestry Commission promotes good forestry — to produce timber, to provide for recreation and to conserve the natural and cultural heritage of the forest — through managing the national forest, through research and by grant aiding a substantial private sector.

## Research Programme 1989/90

The Research Division of the Forestry Commission has its main base at Alice Holt in Surrey. The Research Programme managed by that Division is extensive and covers biological research across the whole range of forestry matters. The Division includes a Wildlife and Conservation Research Branch, a selection of whose projects have been included in the following list. The Forestry Commission's programme is reviewed by the Forestry Research Co-ordinating Committee which includes representatives from the Commission, the relevant research councils, universities and other government departments. Socio-economic research is undertaken by HQ Divisions. The following projects have been selected because of their main relevance to the main stream aims of CRRAG. The principle areas of interest are nature conservation, landscape and recreation — all aspects of work in the purview of the Environment Branch. Recent changes in the agricultural policy and the recognition of the social value of forestry in recreation and economic regeneration, are encouraging more planting in the lowlands and a surge of interest in urban forestry. In addition many forests planted between the wars are now entering their second rotation. Diversity of opportunity increases for both recreation and conservation with this transition. In striving for greater value for money, work continues in quantifying benefits, determining consumer preferences and describing the characteristics of forest visits. Similarly and in common with other agencies considerable work is being done to investigate alternative methods of funding recreation and conservation projects.

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
<b>Recently Completed Research</b>				
<b>Recreation</b>				
FC1	Value of User Benefits of Forest Recreation, Wildlife and Landscape	To study and analyse the recreational benefits with special reference to the appreciation of wildlife.	1987/89	Contracted out to University of Newcastle upon Tyne. Report on 1987 work published in Forestry Vol 62 No 2, 1989, see also FC9.
FC2	Merchandising Study	To study a sample of forest shops and bring forward recommendations.		Study by Fielder Green Associates — report received and no publication intended.
<b>Nature Conservation</b>				
FC3	Edge Effects of Forests on Moorland Birds	To investigate the impact of forest edges on birds breeding on adjacent moorland.	1986/88	Joint project with RSPB. Report produced 1988; scientific papers in press.
FC4	Woodlark Habitat Requirements	To identify the factors regulating the breeding population of woodlarks in a major production forest (Thetford).	Completed	Joint project with RSPB. Final report produced 1988/9; PhD submission in preparation.
<b>Continuous/Annual Research</b>				
<b>Recreation</b>				
FC5	Scottish Leisure Day Trip Survey	To survey day trips (of 3 hours or more).	1987/89	Co-sponsored with STB, CCS, Scottish Museum Council. Contracted to System Three (Scotland).
FC6	Forest Day Trip Survey	To survey day trips to woodland and forest in England and Wales.	1987/89	Contracted to Mas Research Associates.
<b>Landscape</b>				
FC7	Use of Computer Techniques in Forest Design	To assess the applicability of computer techniques to forest design in Great Britain.	On-going	In-house user trials with advice from Turnbull and Jeffries Partnership.

## Nature Conservation

FC8	Enhancement of Lowland Forest Ridesides and Roadsides	To study the enhancement of ridesides and roadsides to benefit wild plants and butterflies and derive recommendations for shaping and designing these areas to best effect.	On-going	In-house insect monitoring continuing.
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## Current Research

### Recreation

FC9	Non-marketed Benefits of Forestry	Building on FC1, to refine estimates of the values attributable to non-marketed benefits.	1988/89	Contracted out to University of Newcastle upon Tyne. Report received and being considered.
FC10	Public Preferences For and Attitudes to the Appearance of Forests and Woodlands in the Landscape	To study preferences in relation to the amenity and recreation values of woodland and forest.	1989/90	Co-sponsored with CC and CCS. Contract let to St Andrews University.

### Nature Conservation

FC11	Blackgame Management in Welsh Forests	To identify reasons for decline in blackgame population in Wales. Further research using radio tracking and practical application to forest management, eg respacing, maintenance of heather and bog vegetation.	1985/89	Interim reports in preparation; final report due 1989. Contract with RSPB.
FC12	Goosander Ecology on Forest Water Systems	To investigate goosander breeding biology and adult turnover rate on water areas at Kielder Forest.	On-going	Ardentinnny FC Research Station.
FC13	Habitat Protection of Upland Wading Birds	Research on prediction of wader distribution in uplands from satellite vegetation photos.	On-going	Contract being funded 1989.
FC14	Red Squirrel Habitat Requirements	To review existing research to identify further work required to clarify habitat issues.	1986/89	Contract with University College London. Report due in 1989.
FC15	The Ecology of an Upland Forest	To study the ecology of an upland forest, its value and wildlife habitat requirements.	1987/90	FC/NCC funded contract to ITE. Two field seasons completed.
FC16	The Botany of Breckland Forest	A study of the floral development under pine stands in Thetford.	1987/90	University of East Anglia PhD research, FC funded.
FC17	Nightjars	To study the habitat requirements of a declining heathland species in a lowland pine forest.	1988/91	Joint with RSPB. Report due in 1989.
FC18	Ecology of Seed Banks	To study the extent to which flora associated with semi-natural woodland can survive as seed throughout a rotation of a plantation crop.	1988/89	Contract with Wye College, London.
FC19	Pheasants in Broadleaved Forests	To show importance of small woods to pheasants, importance of understorey shrubs and shrubby edges where pheasants spend much of their time. Management for pheasants also benefits plants and insects, especially butterflies.	1986/88	Joint project with Game Conservancy. Report due 1988/89, scientific papers in preparation.
FC20	Arboricultural Research	To continue a variety of research projects.	1987/89	Sponsored by DOE. Carried out in-house at FC Research Station, Alice Holt.
FC21	The Effect of Conifer/Broadleaved Mixtures	To study the ecological effects of conifer/broadleaved mixtures grown on broadleaved sites.	1988/90	Contract with Wye College, London. First year report received 1988.

FC22	Ecology of Tawny Owls in Upland Forests	To investigate distribution and productivity of tawny owls in spruce forests in relation to food supply, habitat quality and climate.	1982/91	In-house.
FC23	Goshawk Ecology and Management	To investigate the productivity, habitat requirements and management of goshawks in conifer forests.	1981/91	In-house.
FC24	Review of Conservation Management by Non-Government Organisations	To discover any successful conservation management practices in managing lowland broadleaved woodlands for conservation reasons.	1988/89	Contract with University College London. Interim report produced 1988.
FC25	Ecology of Capercaillie	To study the extent to which these birds are able to use plantation forests and how the quality of these can be improved for capercaillie.	On-going	Contract with ITE, Brathens.
FC26	Roe Deer Ecology	Analysis of roe deer populations, ecology and management. To produce management guidelines.	On-going	In-house with contract.
FC27	Sika Deer Ecology	Study to produce management recommendations.	On-going	In-house.

### Tentative New Proposals

#### Recreation

FC28	Toilets in the Forest	To develop a range of designs compatible with a range of forest and woodland settings.	1989	Out-house consultants.
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#### Nature Conservation

FC29	Extended Rotation of Forest Crops	To study the conservation interest in forest crops allowed to develop to biological maturity, in particular the value of upland conifers for birds. Effects of non-intervention management.		In-house at FC; RSPB looking at site availability.
FC30	Grazing Effects	To look at domestic grazing as a habitat management tool.		Possible studentship.
FC31	Conifer Seed as a Food Resource	To conduct a community based study on the value of conifer seed as a food resource in upland plantations.		Possible studentship.
FC32	Broadleaves in Upland Forests	To study the likely effects of broadleaves on fauna and flora in upland forests.		In-house FC Northern Research Station.

### Databases 1989/90

<i>Title/Description</i>	<i>Timescale/Access</i>	<i>Geographical Features</i>	<i>Recreational Features</i>
Forestry Commission Subcompartment Database. Contains crop and site details as land (eg SSSIs, Ancient Monuments, AONBs)	Annually updated. Generally limited to FC staff as mainly related to timber production.	Each compartment has a reference number but grid reference centroids are also included.	FC picnic areas; designated car parks.

### Research Publications 1988/89

Report on forest research, for the year ended March 1987 by Forestry Commission, published by HMSO, London ISBN0 11 710255 5.

Report of 1987 work published in Forestry Volume 62 No 2 1989.

*Contact for Research Enquiries:* Richard Broadhurst, Forestry Commission, 231 Corstorphine Road, Edinburgh EH12 7AT (031 334 0303).

*Contact for Database Enquiries:* Database Manager, Forest Survey Branch, Alice Holt Lodge, Near Farnham, Surrey GU10 4LH.

Research Programme 1989/90

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
<b>Current Research</b>				
MAFF1	ESRC Rural Databank	To contribute to the development of a Rural Databank at Essex University.	On-going	Co-sponsored with DOE, RDC and ESRC.
MAFF2	Integrated Moorland Management Programme, North Yorkshire Moors	To study the effects of large scale bracken control on hill sheep production, grouse production, conservation, and landscape.	To 1990	Joint project with North Yorkshire Moors National Park and North of England Grouse Research Project.
MAFF3	Common Bird Census	To investigate the usefulness of habitat data, collected during the Common Bird Census, for analysing changes in bird populations.	On-going	
MAFF4	National Census of Small Mammals in Hedgerows	To investigate the effects of hedge structure and composition and adjacent land use on small mammal populations in hedgerows. To quantify species cycles of abundance and study the ecology of small mammals in hedgerows.	On-going	
MAFF5	Impact of Alternative Agricultural Policies on Scenic Areas in Scotland.	To provide data on two scenic areas, including Breadalbane ESA, to evaluate the likely impact of alternative agricultural policies on farms, rural economies and the environment.	1987/90	Undertaken by Edinburgh School of Agriculture.
MAFF6	Socio-economic Impact of ESAs	To monitor and evaluate the socio-economic impact of the designation of North Peak and Suffolk River Valleys ESAs.	1988/91	Undertaken by Manchester University.
MAFF7	Socio-economic Impact of ESA	To monitor and evaluate the socio-economic impact of the designation of the Pennine Dales ESA.	1988/91	Undertaken by Newcastle University.
MAFF8	Countryside Implications of Possible Changes in CAP	To model and assess the impact on the countryside and agriculture of changes in both CAP and land use policy.	On-going	Undertaken by Centre for Agricultural Strategy, University of Reading. Jointly funded by DOE, NCC, and CC.
MAFF9	Land Restoration and Aftercare	To investigate the feasibility of restoring land to a high quality under various conditions and develop guidelines on good restoration and aftercare.	To 1992	
MAFF10	Erosion Monitoring and Control	To determine the extent of soil erosion problems and develop cultivation techniques aimed at minimising erosion.	To 1992	
MAFF11	The Effects of Agricultural Practices on Wild Animals and Plants	To examine the effects of agriculture on flora and fauna, develop techniques to reduce these effects and to predict the possible effects of future changes in agricultural practices.	On-going	
MAFF12	Project Silvanus	To establish management practices in neglected small farm woodlands in Devon and Cornwall.	On-going	Co-sponsored with CC, DOE, RDC, FC and NCC.

MAFF13	The Establishment and Maintenance of Farm Woodlands	To gain physical and financial information on the establishment of small farm woodlands concentrating on broadleaved species.	To 1992	Work collaborative between ADAS and FC.
MAFF14	Development of Economic Pastoral/ Agroforestry Systems	To investigate the potential for developing pastoral/forestry systems under upland conditions which are visually attractive, economically viable and which lead to an increase in flora/fauna diversity.	To 1990	Undertaken by Welsh Plant Breeding Station.
MAFF15	Effect of Nitrogen Fertiliser on Natural Grassland on West Sedgemoor	To determine the effect of nitrogen fertiliser on species composition of natural grassland on Tealham and Tadham Moors and to measure agricultural production.	To 1990	Co-sponsored with DOE and NCC.
MAFF16	Upland Resource Use: Grassland Management, Animal Production and Land Use Options for Less Favoured Areas	Objectives include an investigation of alternative land use options such as agroforestry and the effects of agricultural practices on the environment.	To 1992	
MAFF17	Grassland on the Hills, Uplands and in ESAs	Includes the development of environmentally benign methods of managing grassland in the hills and uplands consistent with healthy agriculture and to develop establishment and management systems for grasslands in the ESAs.	To 1992	
MAFF18	Management of Grassland Field Boundaries	To monitor the effects of agricultural practices on hedgerow structure, composition and wildlife diversity so as to formulate strategies for the management of grassland field boundaries.	To 1991	Undertaken by Welsh Plant Breeding Station.
MAFF19	Economic Evaluation of Salmon Fisheries in Great Britain	To establish a methodology and provide estimates of the direct and indirect effects of salmon fisheries to the nation, covering both production and recreational aspects.	To 1990	Undertaken by Portsmouth Polytechnic.

### New Proposals

MAFF20	Appraisal of the Farm Woodlands Scheme	To undertake a socio-economic appraisal of the Farm Woodlands Scheme.	1988/90	
MAFF21	Evaluation of Set Aside in England and Wales	To undertake a socio-economic appraisal of the Set Aside Scheme.	1989/90	
MAFF22	Low Level Socio-economic Appraisal of ESAs in England	To undertake a socio-economic evaluation of ESAs in England.	1989/90	

*Contact for Enquiries:* Jacqueline Slater, Ministry of Agriculture, Fisheries and Food, Room 209, Nobel House, Smith Square, London SW1P 3JR (01 238 5696).

**Introduction**

The Natural Environment Research Council, established by Royal Charter in 1965, has responsibility for planning, encouraging and carrying out research in the physical and biological sciences which explain the natural processes of the environment. The Council carries out this research and training through its own institutes and grant-aided associations, and by grants, fellowship, and other postgraduate awards to universities and other higher education establishments. The Council is financed by a grant-in-aid from Parliament, received through the Department of Education and Science, and by commissioned research from Government departments, industry and other agencies.

The research that is relevant to CRRAG is carried out within the Terrestrial and Freshwater Sciences Directorate, at the following Institutions:

- Institute of Freshwater Ecology
- Institute of Hydrology
- Institute of Terrestrial Ecology

The work at each of these Institutes is now listed in turn.

**Research Programme 1989/90**

**Institute of Freshwater Ecology**

The Institute of Freshwater Ecology was established on the 1 April 1989. Most of the staff were previously employed by the Freshwater Biological Association which was founded in 1929 to promote freshwater research into the biology and ecology of all kinds in fresh waters. There is therefore a wealth of experience in the new Institute. The Institute is the only research organisation in the UK to study all aspects of the biology, chemistry and physics of freshwater ecosystems.

	<i>Project Title</i>	<i>Summary</i>	<i>Timescale</i>	<i>Comments</i>
<b>Recently Completed Research</b>				
NERC1	Impact of Watercress Cultivation on River Water Quality	To investigate the possible water quality implications of modern watercress growing practices.	1986/88	Wareham. Funded by DOE.
NERC2	Baseline Survey of Coarse Fish Populations in the Lower River Avon, Hampshire	To assess the current status of the coarse fish populations, chiefly roach, chub, dace, pike, in the lower Avon between Salisbury and Sopley.	1987/88	Wareham. Funded by DOE in conjunction with Wessex WA.
NERC3	The Effect of Chemical and Physical Variables on the Growth and Development of Epilithic and Epiphytic Chalk Stream Algae	To investigate the factors controlling the seasonality and production of epiphytic algae in natural and chalk streams.	1987/88	Wareham.
NERC4	Life History Strategies of Freshwater Fish	To study populations over their geographic ranges in order to catalogue the changes in life history in different environments and to examine long term changes within single populations.	1987/88	Wareham.
<b>Current Research</b>				
NERC5	Population Dynamics of Phytoplankton	To predict the responses of algal communities in lakes throughout the world to major sources of environmental viability.	1976 start	Windermere.
NERC6	To Examine Some Plankton Patchiness in Freshwater Lakes and Reservoirs	To examine some of the physical, chemical and biological factors responsible for the spatial pattern in the lake environment, and to develop predictive models.	1980/90	Windermere.

NERC7	Relative Effects of Fish Predation and Food Availability on the Dynamics of Freshwater Zooplankton	To examine the relative effects of fish predation and food availability on the dynamics of experimental and natural populations of lake zooplankton.	1980/90	Windermere.
NERC8	Long Term Assessment of Physical, Chemical and Biological Components in Lake and River Waters	For selected waters, to assess temporal changes in environmental factors and (in lakes) phytoplankton.	1945 start	Windermere. Partially funded by North West WA.
NERC9	Upland Fresh Waters and Land Management	To develop and apply a system for obtaining continuous records of water temperature, and to determine relationships between temperature and algal growth rates.	1985/90	Windermere. Partially funded by DOE.
NERC10	Biological Environments of Larger UK Rivers	To describe the mechanisms of enhanced residence of water in river reaches, the hypothesised existence of which is essential to phytoplankton maintenance.	1986/89	Windermere. Partially funded by DOE.
NERC11	Analysis of Natural and Polluted River Communities in Great Britain	To develop and test a practical microcomputer based system for classifying river sites from their macroinvertebrate fauna, and for predicting fauna from environmental data.	1984/90	Wareham. Partially funded by DOE and SDD.
NERC12	Invertebrate Survey and Classification of Rivers for Nature Conservation	To classify a series of river sites, identify the macroinvertebrate fauna and assess their nature conservation value.	1986/92	Wareham. Partially funded by NCC.
NERC13	Stream Survey and Assessment in the Ashford and Folkestone Areas	To provide baseline data on stream macroinvertebrates and dominant macrophytes in selected study sites and to assess biological water quality of the streams.	1987/89	Wareham. Funded by Southern WA and Eurotunnel.
NERC14	Investigation of the Relationship Between the Aquatic Plant and Animal Communities of Rivers	To investigate whether there are specified invertebrate communities associated with particular plant communities in a range of lowland rivers.	1987/92	Wareham. Funded by NCC.
NERC15	The Status of the Arctic Charr in Windermere	To provide an adequate basis for comparing spring and autumn spawning stocks of charr in Lake Windermere.	1942/89	Windermere.
NERC16	Management and Ecology of Fish Populations in North West Britain	To understand the biotic and abiotic factors controlling the population dynamics of pike and their principal prey species in Lake Windermere.	1940 start	Windermere.
NERC17	Studies on Populations Of Salmonid Fishes in Upland Waters	To quantify annual fluctuations in numbers of young salmonids in upland streams, and to identify the abiotic factors influencing numbers of young salmonids.	1986/90	Teesdale. Partially funded by MAFF.
NERC18	Identification, Population Dynamics and Daily Activity Patterns of Invertebrates in Stony Streams, Rivers, Tarns and Lakes	To provide new and updated keys to groups of freshwater invertebrates, and to obtain quantitative information on the numbers, biomass, mortality rates, production rates and movements of invertebrates.	1965/90	Windermere.

NERC19	Population Dynamics, Feeding and Growth of Resident and Migratory Brown Trout, and Other Fish Species in Salmonid Streams	To study variations in numbers of trout in Lake District streams and to develop models for predicting quantitative changes.	1966/90	Windermere. Partially funded by MAFF.
NERC20	Physiology of Stress Responses in Freshwater Fish	To understand the basic physiological changes that occur when teleost fish are subjected to acute and chronic environmental stress.	1985/90	Windermere. Partially funded by MAFF.
NERC21	Reclamation of Acid Waters	To test whether organic material can act as a chemical filter in lakes and groundwater supply of acid, and assess the effect of adding nutrients and/or organic matter on the acid base balance of lakes.	1984/94	Windermere. Partially funded by British Industrial Sand.
NERC22	Factors Influencing Salmonid Stocks in Southern Chalk Streams	To investigate population dynamics of trout and juvenile Atlantic salmon in a tributary of River Frome and to monitor upstream migration of adult salmon.	1971 start	Wareham.
NERC23	Control of Simulium Posticatum in the River Stour	To develop and test methods for the control of Simulium posticatum with minimal impact on the environment and to acquire data on aspects of simuliid ecology related to feeding and assimilation in the larval stages.	1987/90	Wareham.
NERC24	Salmon Counting in the River Itchen	To evaluate two sites on the River Itchen for counting migratory salmonids ascending to spawning grounds and set up automatic counters. To correlate salmon runs with various environmental parameters, particularly flow, in order that minimum flows for salmon migration are maintained.	1986/89	Wareham. Funded by Southern WA.
NERC25	Irradiance as a Variable Controlling the Growth of Submerged Macrophytes in Rivers	To develop a model of aquatic plants photosynthesis from light/oxygen relationships.	1987/92	Wareham.
<b>Committed New Research</b>				
NERC26	Chew Valley Lake Compatibility Study	To outline potential problems from the transfer of water from the Bristol Avon into the Chew Valley lake.	1988 start	Windermere/Wareham.
NERC27	Influence of Climate on the Dynamics of Freshwater Plankton	To explore the functional links between climate and plankton growth and develop predictive models of climate induced change.	1989 start	Windermere.
NERC28	Impact of Climatic Change on Freshwater Ecosystems	To co-ordinate the IFE programme of research on climatic change.	1989 start	Windermere.
NERC29	Strategic Ecosystem Studies of Large Slow Flowing Lowland Rivers	To determine the abundance and distribution of invertebrates in the Great Ouse river system.	1988/89	Monks Wood. Funded by DOE Water Directorate.
NERC30	Turbidity and Plant Growth in Large Slow Flowing Rivers	To examine the effects of changes in the light climate on the growth of the macrophyte periphyton.	1988/91	Monks Wood. Partially funded by DOE Water Directorate.

NERC31	Ecology of Juvenile Cyprinid Fish in the Great Ouse	To determine the distribution and abundance of young cyprinid fish in a range of channel habitats.	1988 start	Monks Wood.
NERC32	Pesticide Particle Interaction in Rivers	To collect information concerning the use of pesticides in the UK and formulate a quantitative model of the behaviour of selected pesticides in aquatic systems.	1988/89	Wareham. Funded by DOE Water Directorate.
NERC33	Impact of Land Use Change on Aquatic Communities	To determine the impact of land use change, within land classes, upon the biological communities of British running waters.	1988/90	Wareham. Partially funded by DOE.
NERC34	Effects of Fish Farms on Water Quality and Natural Communities of Rivers	To determine the magnitude, frequency and variability of inputs of dissolved and particulate matter from a river based fish farm, and evaluate changes in plant and invertebrate associations and in natural fish populations.	1988/91	Wareham.
NERC35	Development of Methods for Assessing Minimum Ecological Flows in British Rivers	To assess the impact of low flow manipulation upon macroinvertebrate communities.	1988/91	Wareham. Funded by NCC.
NERC36	Ecological Characteristics of Coarse Fish in Rivers	To investigate interspecific and intraspecific characteristics of feeding behaviour in coarse fish populations.	1988/89	Wareham.

### Institute of Hydrology

The Institute of Hydrology — a component institute of the Natural Environment Research Council — undertakes a broad range of both pure and applied research ranging from the physical processes of hydrology, including climate change and environmental studies, to water resource studies for engineering purposes. The Institute's long record of work on environmental and climate change projects is particularly relevant to present-day issues. Several of the Institute's research sites are being used to develop approaches to Environmental Impact Assessment (EIA). The main programme area of relevance is Impact of Man on the Hydrological Cycle. Within this area, studies of water quality and pollution have become particularly important. The main theme covered is understanding the natural processes that control the movement of water in the environment, and how man's activities affect the quantity and quality of flowing waters.

#### Recently completed research

NERC37	West Sedgemoor, Water Resources	To assess the consumptive use of wet fencing within West Sedgemoor.	1986/89	Funded by Wessex WA.
NERC38	The Effects of Artificial Drainage on Catchment Hydrology	To study the effects of artificial drainage on streamflow response and to investigate the implications on the frequency of flooding of areas downstream.	1982/89	Funded by MAFF.

#### Continuous/Annual Research

NERC39	Water Resource Implications of Upland Afforestation (Catchment Studies)	To determine the change in hydrological responses to 2 catchments of afforestation and forest felling.	1981/92	Partially funded by DOE, SDD, DEn, FC, BW and Water Research Centre.
NERC40	Llanbrynmair Hydrochemical Study	To investigate the role of mire areas acting as chemical sinks.	1988/90	Partially funded by Welsh Office.

#### Current Research

NERC41	Effect of Clear-felling on Upland Run Off	To assess the effects of forest clear-felling and subsequent regrowth on the quantity of stream flow, its chemistry (particularly nutrients N, P, K) and its sediment load, with a view to isolating the effects of various felling techniques undertaken on various types of soil and topography.		
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NERC42	Conservation Management of Wetlands	To obtain a clear understanding of the hydrology of wetland sites and their interaction with surrounding 'reclaimed' land, and the provision of criteria for evaluating possible threats from peripheral damage.	On-going	Partially funded by NCC and MAFF.
NERC43	Hydrology and Wetland Conservation	To provide independent evidence of wetland conservation in the face of agricultural reclamation by drainage.	On-going	Funded by MAFF.
NERC44	Hydrological Studies of West Sedgemoor, Somerset	To investigate the relationship between the volume of water pumped from the moor and the resulting levels of drain surface, groundwater and land.	1985/91	Funded by NCC.
NERC45	Modelling the Effects of Acid Deposition	To provide a comprehensive framework with which to assess the sensitivity of hydrological and chemical processes controlling catchment acidity.	1985/89	Partially funded by EEC and the Royal Society.
NERC46	Hydrochemical Process Studies at Plynlimon	To develop an understanding of the importance of land use change in controlling streamwater quantity in upland areas.	1983/91	Partially funded by DOE.
NERC47	Impact of Hardwood Plantation, Lowland UK	To assess the hydrological effects of small scale hardwood plantations in Britain by determining the evaporation processes.	1988/92	Partially funded by DOE.

### Institute of Terrestrial Ecology

The Institute of Terrestrial Ecology, as a component Institute of NERC, continues to develop research to improve our basic understanding of the ecology of organisms and systems, and to apply this understanding to assess the actual and potential impact of human activity on our natural resources. Collaboration between the northern and southern stations of ITE remains an important principle in developing a concerted approach to ecological research as seen in the recent establishment of the Environmental Information Centre at Monks Wook and a Task Force to co-ordinate Environmental Assessments. The publication of the NERC Strategy for Terrestrial and Freshwater Sciences ('The Green Light' — March 1989) has clearly identified the main research thrusts and the continuing emphasis on both commissioned and Science Vote financing for research.

Although there is no specific programme of research directly focused on recreation, many of ITE projects are concerned with recreation management, eg effects of ski lifts, footpath rehabilitation, or with land use change, and with species of wildlife which are the focus of recreation. With the increasing change in land use, including recreation, an important priority area is in assessing actual and potential change in land use and in its ecological consequences. A developing aspect is on the potential effects of predicted climate change on land use and ecology; this will be part of a new programme initiated by NERC.

#### Recently Completed Research

NERC48	The Effects of Different Silvicultural Systems	To examine the effects of different species, mixtures and silvicultural systems on the soils, flora, etc, on marginal land in Britain.	1976/89	Merlewood.
NERC49	Ecology and Conservation of Charr in Loch Doon	To study the present status and ecology of charr in Loch Doon in relation to water chemistry and other factors as a background to conservation management.	1986/88	Edinburgh. Funded by NCC.
NERC50	The Effects of Management in Lowland Coppices	To review existing information on the effects of management and to survey the vegetation associated with existing examples of differently managed coppices.	1985/88	Merlewood.
NERC51	Environmental and Socio-economic Effects of the CAP	To isolate and evaluate potential changes in the CAP and resulting environmental change, with special regard to socio-economic consequences of such change.	1985/88	Merlewood. Partially funded by DOE and RDC in association with Centre for Agricultural Strategy.
NERC52	Environmental Issues, Agriculture and Forestry Land Use Options in Devon	To develop a land use model for predicting some environmental impacts of possible future changes in agricultural and forestry practices in Devon.	1986/88	Merlewood. Funded by Dartington Institute, subcontracted from DOE/MAFF/NCC. South West WA also involved.

NERC53	Assessment of the Principles of Soil Protection in the UK	To identify the factors to be considered in formulating soil protection policies and in managing soils to protect other resources (eg groundwaters, rare habitats).	1987/88	Merlewood. Partially funded by DOE.
NERC54	Aonach Moor Development Plan	To write the ecological component of a development plan for Aonach Moor for Lochaber DC.	1986/88	Banchory. Funded by Anderson Semens Houston.
NERC55	Grouse Aviary	To maintain captive grouse for use as decoys for catching wild birds and for studies of the inheritance of aggressive behaviour, disease and photoperiodism.	1982/88	Banchory.
NERC56	Waders on Agricultural Land	To study the effects of agriculture on lapwing and oystercatcher numbers and breeding performance in north east Scotland.	1986/89	Banchory. Partly funded by NCC.
NERC57	Effect of Food Availability on Behaviour and Distribution of Otters	To describe spatial organisation in otters and test hypotheses on the underlying causal factors, especially the availability of fish.	1986/89	Banchory. Partly funded by World Wildlife Fund.
NERC58	Creating Attractive Grasslands	To establish demonstration areas of grass/wild flower mixtures at selected sites in Britain.	1984/88	Monks Wood. Funded by NCC.
NERC59	Establishment of Low Maintenance Swards on River Banks	To establish low maintenance vegetation swards on the banks of rivers.	1986/88	Monks Wood. Funded by Severn Trent WA.
NERC60	Nature Conservation and Land Use Change in Lleyn	To identify habitat change and the main habitats of nature conservation interest on farmland in the proposed Lleyn ESA.	1987/88	Bangor. Funded by NCC.
NERC61	Ecology and Conservation of the Black Hairstreak Butterfly	To enable conservation organisations to organise a conservation programme for the black hairstreak in Great Britain, to protect remaining colonies, and to manage nature reserves or other woods in a way to encourage the species.	1971/90	Furzebrook.
NERC62	Ecology of the Brown Hairstreak Butterfly	To analyse numbers of brown hairstreak on a Surrey colony to discover which factors have been responsible for overall changes in numbers and to determine its requirements.	1969/88	Furzebrook.
NERC63	Adonis Blue Populations	To monitor population changes on an introduced colony of Adonis blue butterflies and to compare these with changes in other sites.	1982/88	Furzebrook.
NERC64	Highcliffe Cliffs — Stabilization and Rehabilitation	To evaluate the performance of grass/clover swards for cliff stabilization, to investigate use of salt tolerant shrubs and trees, and to recommend a planting and management programme.	1985/88	Furzebrook. Funded by Christchurch Borough Council.
NERC65	Review of Coom Rigg Moss	To identify the nature of any changes which may have occurred to Coom Rigg Moss since its enclosure by commercial afforestation.	1986/88	Furzebrook. Funded by NCC.
<b>Continuous/Annual Research</b>				
NERC66	Furzey Island; Saltmarsh and Mudflat Monitoring	To survey the salt marshes and mudflats surrounding Furzey Island, Poole Harbour, and to monitor changes in relation to oil development works.	1985/88	Furzebrook. Funded by British Petroleum Ltd.

NERC67	Root Dynamics of <i>Calluna vulgaris</i> on Lowland Heathland in Southern Britain	To further develop nutrient and organic matter models of the <i>Calluna</i> ecosystem, producing an integrated account of the soil/plant management interaction.	1985/88	Furzebrook.
<b>Current Research</b>				
NERC68	Status and Conservation of British Freshwater Fish	To assess the distribution and status of freshwater fish in NNRs and to carry out research on the status and ecology of rare species as a background to conservation measures.	1986/91	Edinburgh. Funded by NCC.
NERC69	Status of Fish Populations in Acidified Waters in Wales	To assess the status of fish populations in acidified waters in Wales.	1988/90	Edinburgh. Funded by DOE.
NERC70	Effects of Afforestation on Flora and Fauna	To estimate the rate of direction of changes in the ecosystem resulting from drainage, planting, game management and woodland management.	1972/91	Merlewood.
NERC71	Long Term Dynamics of Semi-natural Forest Ecosystems	To maintain existing sampling grids in semi-natural woodlands, and to resample plots according to a schedule.	1980/95	Merlewood.
NERC72	Agroforestry: Experimental Assessment of Novel Biomass Systems	To investigate the productivity and environmental implications of mixed cropping systems producing bioenergy, timber and agricultural outputs.	1985/90	Merlewood. Partially funded from EEC.
NERC73	Countryside Implications of Changes in CAP	To assess the implications for the countryside of changes in the CAP.	1988/89	Merlewood. Funded by DOE, MAFF, with the Centre for Agricultural Strategy.
NERC74	Ecological Consequences of Land Use Change	To define ecological effects of land use change on vegetation and fauna, and to convey the relevant ecological information to planners through an expert system.	1987/89	Merlewood. Funded by DOE.
NERC75	Environmental Constraints on the UK Wind Energy Resources	To examine the wind energy resources in Britain, taking account of technical, eg forestry, and institutional, eg NNRs, constraints.	1988/89	Merlewood. Funded by UK Atomic Energy Authority.
NERC76	Acidification of Waters in Wales	To determine the chemistry of stem-flow and/or throughfall chemistry of the main vegetation communities occurring in the study catchments.	1984/89	Merlewood. Funded by DOE.
NERC77	Deer in Production Forests	To analyse existing data on habitat selection by red deer and roe deer, and to maintain the monitoring programme on tree performance and damage.	1978/91	Banchory.
NERC78	Human Impact in the Cairngorms	To assess human impact by measuring numbers and breeding success of hill birds around ski lifts, counting people on these areas and measuring change in vegetation damage.	1986/90	Banchory. Funded by NCC.
NERC79	Ecological Impact of Downhill Skiing Developments in North East Scotland	To review the ecological consequences of the construction and operation of downhill ski-ing facilities at and near sites of value to nature conservation.	1986/90	Banchory.
NERC80	Footpath Rehabilitation Studies for the Yorkshire Dales National Park	To survey the extent of damage to footpaths in the Yorkshire Dales National Park, to devise and test vegetation rehabilitation techniques, and advise on implementation and monitoring.	1986/90	Banchory. Funded by Yorkshire Dales National Park.

NERC81	Restoration of Upland Vegetation	To suggest methods and areas for the restoration of natural vegetation in the uplands of Scotland.	1988 start	Banchory. Funded by CCS and NCC.
NERC82	Path Revegetation Trials on the Pennine Way	To set up trials for re-establishment of natural vegetation on the worn paths along the Pennine Way.	1987/90	Banchory. Funded by the Peak District National Park.
NERC83	Survey of Soil Erosion and Vegetation Damage at Cairn Gorm in 1988	To repeat the 1981 survey of soil erosion and vegetation damage at Cairn Gorm.	1988/89	Banchory. Funded by HIBD and NCC.
NERC84	Effects of Sheep Withdrawal on Upland Vegetation and Wildlife and Landscape	To assess the effects of reduced grazing in upland areas upon birds and mammals.	1987/91	Banchory. Partially funded by DAFS.
NERC85	Population Dynamics of Red Grouse	To gain a better understanding of the mechanisms underlying cyclic population changes in red grouse.	1977/90	Banchory.
NERC86	Demographic Effects of Nest Predation on Golden Plovers and Other Moorland Waders	To test experimentally whether nest robbing by crows and gulls is a major limitation in breeding success and population density of golden plovers and other moorland waders.	1973/90	Banchory. Partially funded by NCC.
NERC87	Population Ecology of Capercaillie	To improve understanding of factors determining capercaillie numbers.	1974/89	Banchory. Partially funded by NCC.
NERC88	Effects of Afforestation on Moorland Birds and Predators	To investigate the effects of moorland afforestation on numbers, breeding success, species composition and habitat of moorland birds and their predators, both within afforested areas and on surrounding moorland.	1987/92	Banchory. Funded by NCC.
NERC89	Piscivorous Birds in Scottish Salmon Rivers	To survey the numbers of fish eating birds in Scottish salmon rivers, and assess their effects.	1988 start	Banchory. Funded by DAFS.
NERC90	Ecology of the Pine Marten	Studies on the ecology of the pine marten.	1988/90	Banchory. Partially funded by Vincent Wildlife Trust.
NERC91	Development of Monitoring of Seabird Populations and Performance	To develop and test schemes for monitoring changes in numbers, survival and breeding biology of cliff nesting seabirds in Britain.	1986/89	Banchory. Partially funded by NCC.
NERC92	Quantity and Quality of Seeds Produced by Montane Plants	To assess the effectiveness of seeds as a means of renewing natural vegetation at high altitude.	1982/90	Banchory.
NERC93	Effects of Grazing on Nardus and Calluna Moorland	To relate changes in cover of important moorland plants to the grazing treatments received.	1982/90	Banchory. Partly funded by NCC.
NERC94	Development of Subalpine Scrub at Northern Corries, Cairngorms SSSI	To determine the density and age structure of the population of pine saplings colonizing ground at Northern Corries, Cairngorms SSSI.	1985/90	Banchory.
NERC95	Response of Gentiana Nivalis Population to Withdrawal of Sheep Grazing	To determine the effects of withdrawal of grazing by large herbivores on the population size and reproductive output of the alpine gentian.	1987/90	Banchory. Funded by NCC.

NERC96	Butterfly Monitoring Scheme	Recording of national butterfly occurrence and distribution. Results published at 5 year intervals; annual report.	1975/91	Partially funded by NCC.
NERC97	Monitoring Floristic Changes	To record changes in the structure and botanical composition of grass/forb mixtures sown at 2 sites in 1978.	1984/91	Monks Wood and Royston, Herts.
NERC98	Knocking Hoe NNR, Analysis of Cutting Experiment	To assess the effects of cutting on the Knocking Hoe NNR.	1987/89	Monks Wood. Funded by NCC.
NERC99	Historical Aspects of Environmental Perception	To determine the way in which the natural environment was perceived and exploited in the past.	1984/90	Monks Wood. Partially funded by CEGB.
NERC100	British Rail Sponsored Grass-land Experiments	To demonstrate by randomised block experiments appropriate management techniques at selected sites of biological interest (proposed SSSIs) on British Rail land.	1986/91	Monks Wood. Funded by British Rail and NCC.
NERC101	Nature Conservation in Upland Conifer Forests	To determine if and how plantation design and patterns of felling and restocking can be modified to improve plantations for selected groups of species.	1986/89	Bangor. Funded by NCC and FC.
NERC102	Ecological Survey of Capel Cynon	To prepare a survey report to be used in the Environmental Impact Assessment process as part of the application phase for a wind generation park at Capel Cynon.	1988/89	Bangor. Funded by CEGB.
NERC103	Effects on Site Properties of Clearfelling in Upland Forests	To determine effects of clearfelling and whole tree harvesting of Sitka spruce on ground vegetation and soil conditions, with special reference to nutrient dynamics.	1981/90	Bangor.
NERC104	Effects of Growth Retardants on the Ecology of Roadside Vegetation in West Sussex	To assess the effects of some herbicides and grass growth retardants on the vegetation of road verges in West Sussex.	1987/89	Monks Wood. Funded by West Sussex County Council and ICI.
NERC105	Predicting Post-barrage Densities of Invertebrates and Shorebirds	To analyse the effects of reduced feeding areas and other changes following barrage construction on the populations of overwintering waders (Charadriidae).	1986/91	Furzebrook.
NERC106	Grey Squirrel Damage and Management	To improve the efficacy of present squirrel control methods and produce a model which foresters can use to predict the risk of bark stripping in each vulnerable plantation each year. To design future plantations in which there will be little damage from squirrels.	1978/90	Furzebrook.
NERC107	Poole Bridge Environmental Enhancement	To assess the environmental consequences of the Poole Bridge development.	1988/89	Furzebrook. Funded by Dorset County Council.
NERC108	Conservation of the Large Blue Butterfly	To study whether <i>Maculinea arion</i> can be re-established in Britain: to make a re-establishment, if this is thought possible, and to monitor results.	1983/90	Furzebrook. Funded by World Wildlife Fund.
NERC109	Woodland Fritillary Butterflies	To study the mobility of two violet feeding species of fritillary.	1985/90	Furzebrook. Funded by NCC.

NERC110	Ecology and Management of Coastal Systems	To study biological processes associated with the evolution, growth, development and erosion of soft coasts, to investigate factors controlling species diversity in coastal systems and to predict and assess the effects of climate change on sea level rise.	1985/92	Monks Wood. Partially funded by NCC, Anglian WA and EEC.
NERC111	Heath and Moorland Systems	To understand heathland dynamics by experimental studies, to monitor long term vegetation change in upland systems, and relate soil fertility to vegetation dynamics and our set aside schemes.	1978/92	Monks Wood. Partially funded by NCC.
NERC112	Ecological Processes in Woodland	To understand the dynamics of plant populations in woodlands, with special reference to farm woodland and amenity woodland. The main aim is to make recommendations for woodland managers on how to enhance woodland habitats for desirable plants and animals. A major feature is the development of predictive models.	1989/92	Monks Wood. Partially funded by NCC.
NERC113	Sand Dune Management in Wales	To assess the effects on sand dune vegetation from known grazing and mowing regimes.	1984/89	Bangor.
NERC114	Restoration of Heathland	To monitor the vegetational, faunal and chemical changes in heathland on disused clay workings.	1983/90	Furzebrook. Funded by English China Clays Ltd.
NERC115	Dorset Heathland Survey	To survey the vegetation, extent and land use of the Dorset heathlands, and to establish a computerized databank.	1986/88	Furzebrook. Funded by BP International and BP Development Ltd.
NERC116	Grassland Management	To assess the effects of management systems on the ecology of invertebrate populations with emphasis on rotational grazing and continuous light grazing systems.	1965/90	Furzebrook.
NERC117	Study of Scrub Succession on Chalk at Aston Rowant NNR	To assess the effects of a single treatment or rotovation and burning; of continuous treatment and of no treatment on the colonisation of chalk grassland by woody plants.	1969/90	Furzebrook.
NERC118	Scrub Management at Castor Hanglands NNR	To create structural and floristic diversity by the presence of different age classes of shrubs and trees, and hence to maintain the diversity of seral shrub communities and the associated faunas, with special reference to birds and insects.	1973/90	Furzebrook.
<b>Committed New Research</b>				
NERC119	Wytch Farm Development Biological Monitoring	To repeat observations made in pre-construction phase and to assess any changes attributable to effects of that construction.	1989/90	Furzebrook. Funded by BP.
NERC120	Purbeck-Southampton Pipeline: Biological Monitoring	To repeat observations made before pipeline construction, assess changes and advise on restoration.	1989/91	Furzebrook. Funded by BP.

NERC121	Mapping Heather in England and Wales	To produce a map of the distribution of the principal areas of heather in England and Wales.	1988/89	Merlewood. Funded by DOE.
NERC122	Ecological Effects of Climatic Change	To determine the ecological effects of changes in climate on the terrestrial environment.	1988 start	Edinburgh, Banchory, Merlewood. Partially funded by DOE, NCC.
<b>Tentative New Proposals</b>				
NERC123	Long Term Environmental Reference Sites	To establish a national network of reference sites.	1988/90	Edinburgh.
NERC124	Adaptation of Capercaillie to Novel Environments	To determine the ability of capercaillie to adapt to changes in its environment.	1989/92	Banchory. Partially funded by FC.
NERC125	An Ecological Survey of Britain	To reclassify Britain on the basis of one km grid squares on 15 x 15 grid using map attribute and variable data, and to extend the basic system to further detail at a local level.	1990	Merlewood.
NERC126	Field Survey of Land Cover and Landscape Features and their Recent Changes	To resurvey the national and regional occurrence of a defined set of land cover and landscape feature classes.	1990	Merlewood.

### Databases 1989/90

<i>Title/Description</i>	<i>Timescale/Access</i>	<i>Geographical Features</i>	<i>Recreational Features</i>
Hydrological and water quality database to assess acidification in upland streams	Continuous spot samples. Limited access.		Relating to fisheries

### Institute of Hydrology

### Research Publications 1988/89

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- Elliott, J M (1988), *Life Cycle of Migratory Trout in Lake District Streams*, Ambleside, FBA, 7p.
- Kaspar, H F, Hall, G H and Holland, A J, (1988), 'Effects of Sea Cage Salmon Farming on Sediment Nitrification and Dissimilatory Nitrate Reductions', *Aquaculture*, 70, 333 – 334.
- Ladle M (1988), *The Mayfly. (Ephemera danica Muller)* Ambleside, FBA, 4p.
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- Westlake, D F and Dawson, F H (1988), 'The Effects of Autumnal Weed Cuts in a Lowland Stream on Water Levels and Flooding in the Following Spring', *Verh int Verein theor Angew Limnol*, 23, 1273 – 1277.
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#### Institute of Terrestrial Ecology (South)

- Buse, A (1988), *Nature Conservation Guidelines for the Proposed Lleyn ESA*, 49pp, Nature Conservancy Council.
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- (Roberts, G) Reynolds, B and (Talling, J F), eds (1989), *Upland Management and Water Resources*, Department of the Environment; Welsh Office.
- Parr, T W (1988), *Environmental Effects of Grass Growth Retardants on Roadside Verges in West Sussex: Effects after Two Years. Interim Report*, 48pp, ICI: West County Council.

- Goss-Custard, J D, (Warwich, R and Kirby, R) (1988), *The Prediction of Post-barrage Densities of Shorebirds. Vol 1: Overview*, 30pp, Department of Energy.
- Kenward, R D, Parish, T and (Doyle, F I B) (1988), *Grey Squirrel Bark Stripping. II. Management of Woodland Habitats*, Q. J. For 82, 87-94.
- Thomas, J A (1989), *The Large Blue Butterfly in 1988/89*, 10pp, Worldwide Fund for Nature.
- Webb, N R (1989), *Heathland Changes*, NERC News, no 8, 22-23.
- Ward, L K and (Jennings, R D) (1989), *Dynamics of the Succession of Chalk Grassland to Scrub*, Annu Rep Inst Terr Ecol, 1985/86, 87-90.
- Ward, L K (1985), *Scrub Management Trial at Castor Hanglands National Nature Reserve in 1985*, (CSD report no 643), Peterborough: Nature Conservancy Council.

### Institute of Terrestrial Ecology (North)

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## Introduction

The Nature Conservancy Council is the body responsible for advising Government on nature conservation in Great Britain. Its work includes the selection, establishment and management of National Nature Reserves; the selection and management of Marine Nature Reserves; the identification and notification of Sites of Special Scientific Interest, the provision of advice and dissemination of knowledge about nature conservation; and the support and conduct of research relevant to these functions.

The Chief Scientist Directorate which is responsible for a large proportion of the research is based at Peterborough with the other parts of GBHQ including the Conservation Policy Division which commissions much of the socio economic research. The England HQ is also based at Peterborough; the Scotland HQ is in Edinburgh and the Wales HQ in Bangor. In addition there are 8 Regional Offices in England, 4 in Scotland and 3 in Wales and many Regional staff including some County Officers and Wardens are outposted.

## Research Programme 1989/90

The NCC's research programme provides the essential advice for its work in designating sites, managing land and providing advice. It has four main functions — through survey, to quantify the natural resources (wildlife habitats or biotopes, populations of wildlife species, and geological and physiographical features); through survey and monitoring, to identify losses and gains in this resource; through management and impact studies, to identify the causes of these losses and gains and to make predictions; and to establish means of maintaining and, where possible, extending the resource. Only a small part of the NCC's research relates directly to countryside recreation, but almost all of it supports the conservation of the natural resource on which many leisure activities depend. Increasingly, it is embracing socio-economic as well as ecological and earth science projects. The listing that follows omits the substantial survey and monitoring programmes managed by the NCC's Field Survey Units in England, Scotland and Wales and by staff in the Regions, as well as most projects with annual funding under £5,000. Fuller details of the programme may be found in the NCC's 'Blue Book', *The Nature Conservancy Council's research programme 1989/90* (Research & survey in nature conservation No. 23), published in the summer of 1989.

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
<b>Recently Completed Research</b>				
<b>Survey</b>				
NCC1	Survey of Rias, Harbours and Estuaries in Southern Britain	To survey and appraise these threatened sites as a basis for a conservation strategy.	1985/89	Carried out by Field Studies Council.
NCC2	Peatland Survey in Northern Scotland	To survey the peatlands of northern Scotland and to produce conservation recommendations. (Superseded by NCC73.)	1985/89	Carried out in-house.
NCC3	National Survey of Badgers	To assess the current numbers and distribution of badgers by means of a sample based survey.	1985/88	Carried out by University of Bristol.
NCC4	Phase 1 Survey of England	To map the location and distribution of wildlife habitats in selected counties as a basis for nature conservation strategies.	1986/89	Carried out jointly with MSC and other organisations.
NCC5	Seabird Colony Register	To survey the entire British coastline to provide up to date figures for nesting seabirds, to establish a system for future updating and to publish results.	1985/89	In-house analysis; survey undertaken by Seabird Group.
NCC6	Survey of Amphibian Communities	To collect and collate data on sites for British amphibians other than the rare natterjack toad. (See also NCC99.)	1986/89	Carried out by Leicester Polytechnic.
NCC7	Synoptic Intertidal Survey of Chalk Coasts in England	To complete the survey, begun in 1986 in south east England, of intertidal communities of chalk coasts (circa 0.6% of the British coastline).	1986/89	Carried out by British Museum (Natural History).

NCC8	Survey of the Pine Marten in England and Wales	To investigate the status of the small relict populations of this rare mammal (recently protected under the Wildlife and Countryside Act 1981) in England and Wales.	1987/88	Carried out by University of Exeter.
NCC9	Use of Remote Sensing to Map Habitats of Moorland Breeding Birds	To develop techniques for mapping areas of vegetation attractive to such birds from satellite imagery.	1988/89	Carried out by Macaulay Land Use Research Institute.
<b>Monitoring</b>				
NCC10	Development of Monitoring of Seabird Populations and Performance	To refine and test methods of monitoring breeding populations of seabirds that are appropriate for volunteers and nature reserve wardens.	1986/89	Carried out by NERC (ITE) and others. Funded jointly with NERC.
NCC11	Long Term Research on Woodland NNRs	To locate and evaluate existing research data as a basis for long term studies on woodland NNRs.	1988/89	Carried out in-house.
<b>Habitat/Site Management</b>				
NCC12	Review of Butterfly Conservation Priorities	To identify the most important butterfly sites in England and make proposals for their conservation and management. (See also NCC134.)	1985/89	Carried out in-house.
NCC13	Coastal Cliff Top Management Study	To investigate the effects of grazing and burning on coastal cliff top grassland and heathland and to make proposals for monitoring and management.	1986/89	Carried out by University of Lancaster.
NCC14	Peatland Management Handbook	To review relevant literature and management techniques currently employed on peatland nature reserves and to produce a handbook (now published).	1986/88	Carried out in-house.
NCC15	Effects of Cutting on Chalk Grassland Flora	To assess and publish the effects of either removing or returning vegetation after cutting, as a guide to managing chalk grassland where grazing is impracticable.	1987/89	Carried out by NERC (ITE).
NCC16	Botanical Effects of Game Management in Woodlands	To provide a preliminary assessment of the scale of significance of the damaging effects of game management on the botanical interest of woodlands.	1987/90	Carried out by Game Conservancy Trust.
NCC17	Nature Conservation and Drainage	To write a management manual, with guidelines for reducing the impact of land drainage on nature conservation (to be published in 1989).	1988/89	Carried out by K Buckley.
NCC18	Control of Swamp Stonecrop <i>Crassula Helmsii</i>	To investigate techniques for controlling this aggressive alien aquatic plant.	1988/89	Carried out by NERC (IFE).
NCC19	Management Guidelines for Invertebrates in Plantation Woodland	To assess current knowledge of, and to develop guidelines for, management favourable to invertebrate fauna.	1988/89	Carried out by NERC (ITE).
NCC20	Studies of the Factors Influencing Thatching Reed Quality	To investigate the environmental conditions that influence the quality of reed, in view of an increase in the use of imported reed for thatching.	1988/89	Carried out by Universities of East Anglia and Bath. Funded jointly with DOE, MAFF and Broads Authority.

NCC21	Water Quality Needs for River Wildlife	To assist NCC in defining suitable levels of water quality parameters for healthy biotic communities.	1987/88	Carried out by M Jeffries.
NCC22	Field Margins for Conservation and Recreation	To evaluate currently known management techniques and recommend future developments. (See also NCC120.)	1987/88	Carried out by Wye College, University of London.
NCC23	Nature Conservation and Golf Courses	To prepare a report on the past, present and likely future effects of golf course management and their opportunities for appropriate guidelines. (See also NCC136.)	1988	Carried out by CEAS Consultants (Wye) Ltd.
NCC24	Urban Wetlands for Nature Conservation and Stormwater Control	To review current knowledge and practice of stormwater control and opportunities for combined use of specially created wetlands.	1987/88	Carried out by Midland Environment Ltd.
NCC25	Pond and Wetland Habitat Management on Scottish Farms	To investigate relevant experience as a basis for prescriptive advice for Scottish farmers.	1988/89	Carried out by Edinburgh School of Agriculture. Jointly funded.
<b>Impact Studies</b>				
NCC26	Effects of Acidification on Lichens	To review the impact of acid deposition on tree borne lichens and to establish a monitoring programme. (See also NCC156.)	1985/88	Carried out by British Museum (Natural History).
NCC27	Hydrology and Drainage of Mire Systems	To study the implications of hydrological changes in mire systems following the cutting of drainage channels and peat extraction.	1985/89	Carried out by University of Dundee.
NCC28	Invertebrates and Birds in the Wash	To investigate the relationship between wintering birds and their invertebrate prey in the Wash in order to predict the effects of further land claim.	1985/88	Carried out by NERC (ITE). Funded by DOE.
NCC29	Impact of Marine Fish Farming	To examine the ecological impact of salmon farming and mussel farming in Scottish waters and to establish guidelines for the selection and operation of fish farming sites.	1984/89	Carried out by University of Stirling and Scottish Marine Biological Association. Funded jointly with HIDB, Crown Estate Commissioners and Scottish Salmon Growers Association.
NCC30	Effects of Recreational Pressure on the Breeding of Golden Plovers	To investigate the role of human disturbance in the decline in number of golden plovers breeding in Britain.	1986/89	Carried out by University of Manchester.
NCC31	Vegetation Survey and Impact Assessment at Dungeness	To make a detailed appraisal of the surviving vegetation of the Dungeness shingle and an impact assessment of past changes and threats from potential developments. (See also NCC92.)	1987/89	Carried out by Royal Holloway and Bedford New College, London, and NERC (ITE).
NCC32	Impact of Fossil Collecting on Vulnerable Palaeontological Localities	To carry out a pilot study at East Kirton, West Lothian, as a basis for a long term conservation policy for such sites.	1988/89	Carried out by Royal Scottish Museum.
NCC33	Case Study of Eutrophication in Loch Eye	To investigate the nutrient budget of Loch Eye, Ross and Cromarty, a naturally eutrophic lake on Old Red Sandstone, the diverse flora and fauna of which are threatened by increased algal blooms.	1986/88	Carried out by NERC (ITE).

NCC34	Decline of Higher Plants in the Norfolk Broads	To investigate possible causes of the decline of macrophytes in the Norfolk Broads and to conduct experiments aimed at re-establishing a macrophyte dominated ecosystem.	1986/88	Carried out by University of East Anglia.
NCC35	Impact of Agricultural Operations on the Scientific Interest of Caves	To review the impact of agricultural operations on cave systems and the implications for the notification of SSSIs and of potentially damaging operations.	1987/89	Carried out by Manchester Polytechnic.
NCC36	Effects of Disturbance on Hibernating Bats	To ascertain the natural energy expenditure and arousal frequency of hibernating bats and the additional energy cost of forced arousal.	1987/88	Carried out by University of Aberdeen.
NCC37	Impact of Afforestation on the National Distribution of Plants	To assess the past effects of afforestation on semi-natural plant communities and species and to propose further research.	1987/88	Carried out in-house.
NCC38	Effects of Acidification on the Charr of Loch Doon	To establish the rate of acidification in Loch Doon (the only remaining loch in Dumfries and Galloway containing charr), to assess the likely impact of proposed afforestation and to find refugia to ensure the survival of this race of charr.	1987/88	Carried out by NERC (ITE) and P S Maitland.
NCC39	Evidence of Acidification on Sites for Natterjack Toads in Hampshire	To use diatom analysis of sediment and other techniques to investigate whether, to what extent and when ponds supporting one of only two surviving heathland populations of natterjack toads become acidified.	1987/88	Carried out by Ensis Ltd.
NCC40	Radioactivity and Wildlife	To carry out a desk study to identify species and ecosystems at greatest risk from man made radioactivity.	1988	Carried out by NERC (ITE).
NCC41	Mosaic Afforestation and Upland Birds	To unravel the apparent effects of plantation size, shape, age and proximity on numbers of open ground nesting birds.	1987/88	Carried out by P Whitfield.
NCC42	Influences of Afforestation on Plant Communities in Dorset	To resurvey sites surveyed by R Good in the 1930s, to assess the effects of afforestation.	1988/89	Carried out by University of Southampton Geodata Unit.
NCC43	Impact of Bait Collecting on Intertidal Habitats	To investigate the effects of boulder turning on sensitive organisms and of bait pumps and traditional digging both on lugworms and on other invertebrates.	1988/89	Carried out by University College of Swansea.
NCC44	Froglet Production, Water Chemistry and Tadpole Density	To unravel the effects of low pH, high aluminium levels and high tadpole density on the time to metamorphosis, size and numbers of froglets.	1988/89	Carried out by NERC (ITE). Funded jointly with CEGB.
NCC45	Water Pollution from Farm Waters	To assess the effects of such pollution, especially on aquatic flora and fauna, to identify its causes and extent, and to propose measures for reducing it.	1987/88	Carried out by W Roscoe Howells.
NCC46	Study of Proposed Ski Developments in the Cairngorms	To carry out an environmental impact study in the Cairngorms.	1988	Carried out by NERC (ITE). Funded jointly with CCS and HIDB.
<b>Autecological Studies</b>				
NCC47	Population Ecology and Conservation of Bats	To monitor populations of rare bats and investigate conservation problems, including the effects of pesticides.	1985/89	Carried out by NERC (ITE).

NCC48	Ecology of Woodland Fritillary Butterflies	To study the autecology of four or five species of fritillary and to test appropriate management techniques.	1985/89	Carried out by NERC (ITE).
NCC49	Ecology of the Capercaillie	To test hypotheses about the population dynamics of capercaillie in order to discover reasons for their decline and to advise on habitat management and appropriate shooting levels.	1986/89	Carried out by NERC (ITE). Funded jointly with NERC.
NCC50	Ecology of the Dormouse	To study the ecology and habitat requirements of the dormouse and the effects of various forms of woodland management on population density.	1988/89	Carried out by Royal Holloway and Bedford New College, London.
NCC51	Hybridisation of the Wild Cat	To investigate the extent and implications of hybridisation between wild cats (now protected under the 1981 Act) and feral cats in Scotland.	1987/88	Carried out by various contractors.
NCC52	Study of Wild Red Legged Partridges	To study the ecological impact of captive bred chukar and hybrid partridges on the wild population.	1988/89	Carried out by Game Conservancy Trust.
NCC53	Status and Breeding Distribution of the Dotterel in Britain	To study factors affecting population sizes and breeding performance of this rare bird of high mountain plateaux.	1988/89	Carried out by S Rae.
<b>Socio-economic Studies</b>				
NCC54	Integrated Rural Development Plan — Peak District National Park	To evaluate by experimental trials the application of an integrated programme of rural development in the Peak District National Park.	1982/89	Carried out by Peak Park Planning Board. Funded jointly with CC and others.
NCC55	Environmental Issues and Agricultural Land Use Options	To develop a detailed descriptive land use model and to identify the location and extent of land use patterns and their present and potential environmental impact.	1985/89	Carried out by Aberdeen Centre for Land Use and ECONECO (previously by Dartington Institute). Funded jointly with DOE and others.
NCC56	ESRC/NCC Initial Research Review	To establish research priorities for the collaborative programme under NCC166.	1987/88	Carried out by University of Exeter.
NCC57	Development of Conservation Strategies	To assess the use of regional strategies for nature conservation, identify areas of research to develop them and indicate a framework for operating them.	1987/88	Carried out by Political Ecology Research Group Ltd, Oxford.
NCC58	Incentives for Agriculture and Conservation	To study the fiscal and financial incentives relating to conservation and agriculture and to seek opportunities for reconciliation.	1988	Carried out by Laurence Gould Consultants Ltd.
NCC59	Sheepmeat Support and Stocking Rates in Cumbria	To identify optimum stocking rates for Cumbrian sheep farms and to assess the effects of various policy mechanisms on stocking rates.	1988	Carried out by ECONECO.
NCC60	Study of New Woodland Grant Scheme	To review recent changes in the Government's financial support for forestry and the likely effects on nature and landscape conservation.	1988	Carried out by R Lorrain Smith and Dartington Institute. Funded jointly with CC and CCS.
NCC61	Survey of Farmers' Attitudes in South Strathclyde	To survey the attitudes of farmers in South Strathclyde to land use change and conservation.	1987/88	Carried out by Natural Resource Consultants, Mauchline, Ayrshire.

NCC62	Survey of Tourism in Islay	To carry out an extensive 12 month survey of visitors to the island in 1988.	1988/89	Carried out by System Three. Funded jointly with HIBD, CCS, RSPB and Argyll and Bute District Council.
NCC63	People and Nature in Cities	To develop scientifically sound means of assessing the social requirements of users of wildlife sites in towns and cities, as a basis for choosing and establishing such sites and encouraging their enjoyment.	1986/89	Carried out by Trust for Urban Ecology.
NCC64	Perception of Open Space	To study the relationships between different socio-economic groups and open space.	1988	Carried out by Urban Wildlife Group, Birmingham. Funded jointly with Charles Henry Foyle Trust.
NCC65	Nature Conservation Guidelines for Industry	To provide effective guidance for industry on how it may both reduce its impact on and contribute positively to nature conservation.	1988/89	Carried out by Midland Environment Ltd.
Miscellaneous				
NCC66	Entomological Bibliography	To provide an information base to support the Invertebrate Site Register (NCC68).	1985/88	Carried out in-house.
Current Research				
Survey				
NCC67	Distribution of Seabirds at Sea	To determine the distribution and abundance of seabirds around Britain throughout the year.	1979/92	Carried out in-house, currently supported by BP, Shell, Esso, Hydrocarbons GB, Chevron, DEN, DTp and DOE (NI).
NCC68	Invertebrate Site Register	To collect and collate information on the distribution of rarer invertebrate species for site selection, evaluation and defence. (See also NCC133 and NCC174.)	1980/90	Carried out in-house.
NCC69	Survey and Classification of Rivers for Conservation	To carry out invertebrate and macrophyte surveys of rivers and river corridor studies as a basis for selection for conservation measures. (See also NCC84.)	1983/92	Carried out by NERC (IFE), J Southey and K Dale.
NCC70	Rare Vascular Plant Surveys	To bring together existing information on the past and present distribution of rare vascular plant species in England and Wales.	1982/90	Carried out in-house and by consultants.
NCC71	Upland Vegetation Survey and Conservation Evaluation	To computerise and analyse the spatial patterns of vegetation data collected from over 200 upland areas (nearly 15% of Britain's mountains and moorlands).	1981/92	Carried out in-house.
NCC72	Inventories of Ancient and Semi-natural Woodlands	To identify ancient and semi-natural woodlands throughout Britain and to publish related books.	1981/90	Carried out in-house. Publication supported by Esso.
NCC73	National Peatland Resource Inventory: Survey	To survey and map the British peatland resource and to evaluate the sites for conservation. (See also NCC2 and NCC176.)	1989/91	Carried out in-house
NCC74	Survey of Freshwater Lochs in Northern Scotland	To survey the botanical interest of freshwater lochs in northern Scotland.	1985/91	Carried out in-house.

NCC75	Coastwatch	To collect, collate and analyse information on wildlife habitats and human impacts around the British coastline from cliff top to low tide mark, using voluntary survey groups.	1985/90	Carried out in-house. Supported by Earthwatch (USA) and World Wildlife Fund and previously by BP.
NCC76	Moorland Bird Survey	To identify moorland sites of major importance to birds and to assess relevant management factors.	1986/91	Carried out in-house.
NCC77	Survey of Sand-dunes in Great Britain	To produce an inventory of sand dune habitats throughout Great Britain, according to the National Vegetation Classification (NCC170).	1986/92	Carried out in-house.
NCC78	Geological Conservation Review	To identify and describe a series of sites which adequately represent the range of geological and physiological features of Great Britain and should be conserved.	1979/93	Carried out in-house and by various consultants and contractors.
NCC79	Status and Conservation of British Freshwater Fish	To assess the current status of freshwater fish in existing NNRs and of rare and endangered fish in Britain generally.	1986/92	Carried out by NERC (ITE) and P S Maitland.
NCC80	Survey of Invertebrates of Welsh Lowland Peatland Sites	To survey the invertebrate fauna of a large sample of Welsh lowland peatland sites in relation to plant communities already described.	1986/90	Carried out in-house.
NCC81	Marine Nature Conservation Review	To produce a descriptive account of British marine ecosystems for assessing the conservation value of individual sites and as a basis for NCC's advice on the wider marine environment.	1986/97	Carried out in-house and by various consultants and contractors.
NCC82	Conservation of Vulnerable and Dispersed Bird Species	To collate and review data on the identification and management of areas of importance for wide ranging bird species as a basis for advice to Government to fulfil international treaty obligations.	1987/92	Carried out in-house.
NCC83	Survey of Vegetated Shingle Structures	To map the vegetation of shingle structures on the coast of Britain according to the National Vegetation Classification (NCC170).	1988/91	Carried out by Girton College, Cambridge.
NCC84	Investigation of the Relationships between Aquatic Plant and Invertebrate Animal Communities of Rivers	To investigate these relationships and assess the effects on invertebrate communities of vegetation management in rivers. (See also NCC69.)	1987/92	Carried out by NERC (IFE).
NCC85	Biological Survey of Common Land	To make a biological appraisal of all common land by desk study and field survey, as a basis for advice on management.	1987/91	Carried out by University College of Wales, Aberystwyth.
NCC86	Habitat Inventory and Survey for Wales	To draw together existing information on the distribution and extent of semi-natural habitats in Wales and to fill significant gaps by field survey.	1987/90	Carried out in-house.
NCC87	Air Photo Survey of Scotland	To obtain 1:25,000 black and white panchromatic aerial photographs of Scotland.	1988/90	Carried out by Planning and Mapping Ltd. Funded jointly with SDD, CCS and FC.
NCC88	Development of Phase 2 Woodland Survey	To develop a national programme of survey based on the National Vegetation Classification (NCC170) both to verify the inventories of ancient woodlands (NCC72) and to improve the selection of SSSIs.	1987/91	Carried out in-house.

NCC89	Bryophyte Atlas Project	To assemble data on the distribution of British mosses and liverworts for an atlas to be produced in association with the British Bryological Society.	1987/89	Carried out in-house.
NCC90	Assessment of Change in the Saltmarshes of Essex and Kent	To examine stability and change in these saltmarshes as a basis for NCC's response to sea defence and saltmarsh rehabilitation proposals.	1988/90	Carried out in-house.
NCC91	Documentation of Fossil Reptile Sites in the Cambridge Greensand	To investigate and document past and present fossil source sites and assess their conservation worthiness.	1988/90	Carried out by University of Cambridge, Dept of Zoology.
NCC92	Survey of the Invertebrate Fauna of Dungeness	To survey the invertebrate fauna of part of Dungeness SSSI. (See also NCC31.)	1988/91	Carried out in-house. Funded jointly with CEBG.
NCC93	Seaweeds of the British Isles: Ceramiales	To fund the research for and drafting of the first volume of a 6 volume British Seaweed Flora.	1988/91	Carried out by British Phycological Society.
NCC94	Status and Conservation of Rarer Marine Fish	To evaluate the conservation requirements of rarer marine fish in British waters.	1988/90	Carried out by NERC (Plymouth Marine Laboratory).
NCC95	Digital Atlas of Marine Resources and Environment	To prepare and produce a digital marine atlas, including both thematic and catalogue functions.	1989/91	In association with NERC. Funded jointly with others.
NCC96	Cumbria Mire Survey	To survey and evaluate the valley and basin mires of Cumbria.	1987/91	Carried out by H Adams.
NCC97	Identification of Sites Used for Earth Science Fieldwork	To identify the distribution of sites used by schools, colleges and universities for earth science fieldwork and to make recommendations for appropriate interpretative materials.	1988/89	Carried out by Kingston Polytechnic, School of Geological Sciences.
NCC98	Land Use Change Model	To use the land class data which were also used for NCC3 to develop a model for evaluating countryside changes.	1989/90	Carried out by University of Bristol.
NCC99	Survey and Monitoring of Amphibian and Reptile Sites	To build on the network of recorders established for NCC6, to assist NCC in amphibian and reptile conservation.	1989/92	Carried out by Leicester Polytechnic.
<b>Monitoring</b>				
NCC100	Monitoring and Conservation of Raptors	To monitor the status and distribution of rare birds of prey as a basis for conservation measures.	1977/94	Carried out in-house and by NERC (ITE).
NCC101	Lead Poisoning in Mute Swans	To monitor the impact of lead poisoning on mute swans on the River Thames.	1983/90	Carried out by Edward Grey Institute of Field Ornithology, University of Oxford. Funded jointly with RSPB and Thames WA.
NCC102	Wildlife and Pollution	To monitor residues of toxic chemicals in predatory birds' tissues and eggs and to investigate major cases of pollution (other than by agrochemicals or oil) involving birds or mammals.	1983/92	Carried out by NERC (ITE).
NCC103	Services in Wildfowl Research	To study the populations, distribution and migration of wildfowl (including the organisation and reporting of the National Wildfowl Counts).	1971/90	Carried out by Wildfowl Trust.

NCC104	Research in and Advice on Ornithology	To survey and monitor the provision of national bird ringing and nest recording schemes, analysis of data and the preparation of special reports.	1970/90	Carried out by British Trust for Ornithology.
NCC105	Butterfly Monitoring	To monitor the status and distribution of butterflies on NNRs and some other sites.	1981/92	Carried out by NERC (ITE) and E Pollard.
NCC106	British Red Data Books on Invertebrates	To edit and prepare for publication British Red Data Books on insects (now published) and other invertebrates.	1983/90	Carried out in-house.
NCC107	National Countryside Monitoring Scheme	To quantify habitat change county by county (or district by district in Scotland), by comparison of dated aerial photographs, and to provide a framework for future monitoring.	1983/90	Carried out in-house. Funded jointly with CCS for Scottish districts.
NCC108	Biological Records Centre	To collect detailed records of the occurrence of wild plants and animals covered by recording schemes operating throughout the British Isles.	1988/92	Carried out by NERC (ITE).
NCC109	Monitoring the Effects of Phosphate Stripping in the Bure Broads	To monitor phosphate storage, release and uptake patterns at the mud/water interface in the Bure Broads after the extension of phosphate stripping to three sewage works on the upper Bure.	1986/91	Carried out by Anglian WA and individual contractor.
NCC110	Monitoring of Vascular Plant Distribution, Increase and Decrease	To record vascular plants from a selected sample of 10 km squares of the National Grid, for comparison with records in <i>Atlas of the British Flora</i> (1962) and as a basis for monitoring future change.	1986/90	Carried out by Botanical Society of the British Isles (project officer assisted by members' voluntary survey).
NCC111	Monitoring of the Red Deer Population of Rhum	To monitor the red deer population of the Isle of Rhum NNR in the context of culling policy.	1987/92	Carried out by University of Cambridge, Dept of Zoology.
<b>Habitat/Site Management</b>				
NCC112	Effects of Grazing in Upland Woods	To provide information and advice on the impact of stock grazing on upland woods.	1985/89	Carried out by Hill Farming Research Organisation.
NCC113	Effects of Fertiliser Applications — Somerset Levels	To examine the effects of nitrogen fertiliser on herb rich grasslands on peat soils.	1986/90	Carried out by Animal and Grassland Research Institute. Funded jointly with MAFF and DOE.
NCC114	Hydrological Studies on the Somerset Levels	To evaluate the pumped water data from the Somerset Levels over the last 20 years and to monitor water levels.	1986/91	Carried out by NERC (IH). Funded jointly with Wessex WA.
NCC115	Conservation Management for Moths	To review existing knowledge of the habitat requirements of rarer macro-moths, to draw up general management guidelines and to identify where further research is required.	1987/90	Carried out in-house.
NCC116	Management of Hill Vegetation	To establish the limits of acceptable upland management from the point of view of nature conservation, as a basis for SSSI management agreements.	1986/91	Carried out in-house.
NCC117	Nature Conservation in New Conifer Forests	To describe the main habitats of upland conifer forests and to identify means of improving their design and management for wildlife.	1986/89	Carried out by NERC (ITE). Funded jointly with FC.

NCC118	Geomorphological Survey of and Management Strategy for Morrich More	To study this Scottish coastal site's Late Quaternary stratigraphy, land-form evolution and current geomorphological processes as a basis for management of it and similar sites.	1987/89	Carried out by University of Sheffield.
NCC119	Quantification and Control of Fertiliser Run Off into Farm Ponds	To assess the effects of nitrogen fertilisers on pond water and vegetation and to develop means of reducing them.	1987/91	Carried out by Cheshire College of Agriculture.
NCC120	Conservation Management of Cereal Field Borders	To test methods of managing grassy borders of cereal fields which reconcile agricultural and conservation objectives. (See also NCC22.)	1987/92	Carried out by University of Oxford, Dept of Zoology. Funded jointly with Co-op Bank.
NCC121	Nutrient Tolerances of Poor Fen Systems	To characterise poor fen plant communities in terms of their nutrient tolerances and vulnerability to environmental changes.	1987/90	Carried out by University of Sheffield.
NCC122	Design Criteria for Landfill Stability in Geological SSSIs	To determine design criteria for a safe angle of repose for landfill schemes, to enable NCC to propose soundly based modifications.	1987/89	Carried out by M J Carter Associates.
NCC123	Nature Conservation and Low Intensity Agricultural Land	To assess the nature of and threats to the support provided to birds by low intensity agricultural land, as a basis for future conservation strategy.	1988/91	Carried out in-house and by Paisley College of Technology.
NCC124	Investigation of Alternative Methods of Coast Protection	To investigate coast protection methods that are effective but also safeguard geological features of interest.	1988/90	Carried out by Hydraulics Research Ltd.
NCC125	Geomorphology of Ingleborough	To document the karst and cave features of Ingleborough and develop a management strategy.	1988/89	Carried out by Trent Polytechnic.
NCC126	Assessment of Minimum Ecological Flows in British Rivers	To develop methods of assessing the effects of water abstraction and flow regulation on river fauna, as a basis for recommendations on river management.	1988/91	Carried out by NERC (IFE) and University of Loughborough.
NCC127	Experimental Re-creation of Species Rich Grassland	To investigate the opportunities for re-creating species rich grassland by natural recolonisation of arable land under grazing regimes.	1988/90	Carried out by Imperial College.
NCC128	Review of Habitat Creation Techniques	To review the techniques available for creating terrestrial habitats, in order to improve project design, implementation and management.	1989/92	Carried out by University of Liverpool, Environmental Advisory Unit.
NCC129	Heathland Management Handbook	To provide a comprehensive guide to heathland management illustrated by case studies.	1988/90	Carried out by C Gimingham.
NCC130	Survey of Invertebrates of East Anglian Fens	To investigate the effects of different management regimes on selected groups of invertebrates at a few fenland sites, as a basis for management prescriptions.	1988/91	Carried out in-house.
NCC131	Conservation Requirements of Threatened Lower Plants	To formulate detailed recommendations for the conservation of rare and threatened lichens, mosses, liverworts and charophytes.	1988/90	Carried out by Conservation Association of Botanical Societies.
NCC132	Nutrient Depletion for Habitat Restoration	To review the potential of nutrient depletion techniques for restoring grassland and heathland flora.	1989/90	Carried out by NERC (ITB).

NCC133	Invertebrate Site Register — Habitat Reviews	To review the invertebrate fauna of lowland heathlands, lowland grasslands, woodlands and coasts and its habitat requirements as a basis for site management. (See also NCC68.)	1989/90	Carried out in-house.
NCC134	Developing Butterfly Conservation in Britain	To co-ordinate butterfly conservation initiatives in Britain, to improve consistency of habitat management, and to ensure the safeguarding of threatened species. (See also NCC12.)	1989/92	Carried out by M S Warren.
NCC135	Conservation Management of Urban Grasslands	To conduct field trials at Knowsley, Merseyside, aimed at developing methods of urban grassland management for local authorities.	1987/90	Carried out by Groundwork Trust.
NCC136	Nature Conservation and Golf Courses	To produce a technical manual on nature conservation principles in relation to the design and management of golf courses. (See also NCC23.)	1988/90	Carried out by CEAS Consultants (Wye) Ltd.
NCC137	Sport, Recreation and Nature Conservation	To construct guidelines for the integration of sporting recreation and nature conservation interests at individual sites and to produce a framework for site management.	1988/89	Carried out by R Sidaway. Funded jointly with SC, CC and World Wildlife Fund.
<b>Impact Studies</b>				
NCC138	Impact of Water Abstraction on Fen Hydrological Processes	To identify and quantify the major lines of water flux in a range of East Anglian fens and the likely effects of groundwater abstraction schemes.	1986/89	Carried out by University of Birmingham. Funded jointly with Anglian WA and Broads Authority.
NCC139	Impact of Pesticide Drift	To study the effects of pesticides on a range of wild plants and invertebrate animals.	1986/90	Carried out by NERC (ITE), NERC (IFE) and AFRC (Long Ashton Research Station). Funded jointly with DOE.
NCC140	Mountain Plateaux Ecology	To evaluate actual and potential impacts of ski developments and other recreational use on soil, vegetation and fauna on three Scottish mountain plateaux, two with an existing development, the third where development has been proposed.	1986/92	Carried out in-house.
NCC141	Agriculture and the Environment	To award grants and studentships for research into the present and likely future interactions between agriculture and populations and processes of natural environment.	1986/90	Special topic programme. Funded jointly with NERC.
NCC142	Effects of Afforestation on Moorland Birds and their Predators	To investigate the effects of afforestation on numbers, breeding success, species composition and habitat of moorland birds and their predators, both in the afforested areas and on the adjacent moorland.	1987/90	Carried out by NERC (ITE).
NCC143	Nitrate Pathways in Peat and Clay Soils and Effects on Ditch Water Quality	To investigate the effects of fertiliser applications on ditch water quality and the possible remedial effects of reedswamp margins.	1987/90	Carried out by University of Bristol, Dept of Geography.
NCC144	Ecological Effects of Liming Ombrogenous Peatland	To investigate the effects of various liming strategies (used as remedial treatments for acidification) on peatland plant and invertebrate communities.	1987/90	Carried out by University of Manchester, Dept of Environmental Biology. Funded jointly with CEGB.

NCC145	Effects of Land Use Changes on Scavenging and Predatory Birds in the Uplands	To examine empirically and experimentally the consequences for these birds of policies leading to reductions in numbers of sheep and deer.	1987/90	Carried out by University of Glasgow, Dept of Zoology.
NCC146	Invertebrates as Indicators of Freshwater Acidification	To develop and test invertebrate species lists for fresh waters vulnerable to acidification resulting from afforestation.	1988/89	Carried out by University of Wales Institute of Science and Technology.
NCC147	Interactions between Fish Farming and Otters	To study behaviour and population density of otters after the siting of new fish farms on Scottish sea lochs.	1989/91	Carried out by Vincent Wildlife Trust.
NCC148	Impact of Hydraulic Dredging for Cocksles	To assess the environmental impact of this technique, especially on other benthic invertebrates, and to advise whether it should be controlled.	1989/90	Contractor not yet settled.
NCC149	Changes in Species Composition Associated with Increased Atmospheric Inputs of Nitrogen	To investigate the effects of high deposition of ammonia, nitrogen oxide and nitrogen dioxide on native vegetation.	1988/90	Carried out by University of Edinburgh and NERC (ITE).
NCC150	Acidification of Freshwater SSSIs	To identify SSSIs in areas affected by acidification and to investigate its effects.	1988/90	Carried out in-house.
NCC151	Ecotoxicological Modelling of Oil Pollution in Urban Receiving Basins	To develop design guidelines and modelling procedures for management to minimise oil pollution in urban storm control basins and reservoirs.	1989/92	Carried out by Middlesex Polytechnic (Urban Pollution Research Centre).
NCC152	Effects of Acidification on Lichens	To determine trends in lichen health related changes in pollution levels, in areas of greatest vulnerability. (See also NCC26.)	1989/92	Carried out by British Museum (Natural History).
NCC153	Effects of Air Pollution on Beech Trees	To study trends in beech tree health, in relation to pollution, climate and other factors, at sites of conservation interest in southern England.	1987/91	Carried out by Imperial College. Funded jointly with FC.
NCC154	Critical Loads of Nitrogen	To determine critical nitrogen loads for different semi-natural ecosystems in terms of community composition and plant physiology and to produce a predictive model to reveal which British Red Data Book plant species are most vulnerable to excess nitrogen.	1989/92	Carried out by NERC (ITE) and Universities of Manchester and Newcastle upon Tyne.
NCC155	Molluscan Shellfish Farming	To review the nature conservation implications of this activity for marine ecosystems and to prepare guidelines for the selection and management of shellfish farming sites.	1988/90	Contractor not yet settled.
NCC156	Updating of Coastal Schedules for Oil Pollution Incidents	To update the maps and information used to help protect the most sensitive areas during an oil pollution incident.	1988/90	Carried out in-house. Financed by DTp's Marine Pollution Control Unit.
NCC157	Environmental Assessment of Afforestation Schemes	To produce advisory guidelines on assessing the impact of proposed afforestation schemes on the nature conservation resource.	1989	Contractor not yet settled.
<b>Autecological Studies</b>				
NCC158	Rare Vascular Plant Conservation	To support the University Botanic Garden, Cambridge, in propagating rare species for demonstration to the public, re-establishment trials and autecological studies.	1982/90	Carried out in-house (formerly by University of Cambridge).

NCC159	Food Supply and Breeding Performance of Arctic Terns	To quantify the influence of food stocks on the breeding distribution, numbers and success of arctic terns by a comparative study of two contrasting colonies.	1987/90	Carried out by University of Glasgow, Dept of Zoology. Funded jointly with RSPB.
NCC160	Autecology of the Wart Biter Grasshopper <i>Decticus Verrucivorus</i>	To ascertain the habitat and management requirements of this rare and vulnerable insect, protected under the Wildlife and Countryside Act 1981.	1987/90	Carried out by Imperial College.
NCC161	Studies of Alpine Gentian <i>Gentiana Nivalis</i>	To carry out population counts and autecological studies of this rare alpine plant on Ben Lawers NNR in relation to grazing management.	1987/90	Carried out by NERC (ITE).
NCC162	Recovery Programme for Protected Animals and Plants	To prepare an action plan for assisting the recovery of each of the threatened species listed in Schedules 5 and 8 of the Wildlife and Countryside Act 1981.	1988/90	Carried out in-house.
NCC163	Ecology of the Chequered Skipper Butterfly	To study the ecology of this butterfly (now extinct in England) in the field in Scotland and in the laboratory.	1988/91	Carried out by University of Aberdeen.
NCC164	Terrestrial Ecology of the Natterjack Toad	To study the ranging, post-metamorphic survival and terrestrial habitat preferences of this rare and protected amphibian.	1988/91	Carried out by University of Sussex.
<b>Socio-economic Studies</b>				
NCC165	Rural Areas Database	To enable the Rural Areas Database at the University of Essex to develop appropriate programmes and carry out data analyses for NCC.	1986/90	Carried out by ESRC. Funded jointly with DOE and others.
NCC166	ESRC/NCC Joint Collaborative Programme	To fund research aimed at improving understanding of the processes of rural change, as a basis for relevant and effective rural policies.	1989/92	Special programme. Funded jointly with ESRC. (See NCC56.)
NCC167	Countryside Implications of Changes in the CAP	To develop a working model to assist in analysing the effects of agricultural policy changes, suggest appropriate policy settings and allow analysis at regional level.	1987/90	Carried out by Centre for Agricultural Strategy, University of Reading. Funded jointly with DOE and others.
NCC168	Urban Wildlife Values	To assess the economic, social and ecological values of urban wildlife.	1987/91	Carried out by University of Newcastle upon Tyne (CASS studentship under ESRC auspices).
NCC169	Operational Strategies for Rural Land Use Integration in Scotland	To investigate opportunities and means of integrating nature conservation with other rural land uses in Scotland with the aid of geographic information systems.	1987/90	Carried out by University of Edinburgh.
<b>Miscellaneous</b>				
NCC170	National Vegetation Classification	To provide a complete description and classification of British plant communities for publication by Cambridge University Press.	1976/92	Carried out by J Rodwell, University of Lancaster.
NCC171	Reintroduction of Sea Eagles	To reintroduce the white tailed sea eagle to Scotland from Norway and monitor its re-establishment.	1975/91	Carried out by J Love, in co-operation with RSPB, NERC (ITE) and Scottish Wildlife Trust.
NCC172	World Checklist of Threatened Species	To prepare or revise checklists of animal species covered by the Convention on International Trade in Endangered Species, for use by NCC and other states' scientific authorities.	1985/90	Carried out by International Union for Conservation of Nature Conservation Monitoring Centre and Nature Conservation Bureau.

NCC173	Establishment of a Geological Records Centre	To establish a computerised data-bank of earth science site records as an information resource for conservation.	1988/91	Carried out by NERC (British Geological Survey).
NCC174	Preparation of Regional Overviews from the Invertebrate Site Register	To extract relevant computerised data from the Invertebrate Site Register (NCC68) and write a series of regional reports.	1988/91	Carried out in-house.
NCC175	Bat Site Database	To consolidate and computerise the available information in order to improve conservation strategy and responses to consultations about sites.	1988/89	Carried out by Leicester Polytechnic.
NCC176	National Peatland Resource Inventory: Database	To collate existing data and collect new information from soil maps and satellite imagery to build up a database on lowland peatland sites. (See also NCC73.)	1988/92	Carried out by T A Rowell and in-house.
NCC177	Computerisation of Ornithological Databases	To provide a comprehensive integrated database of ornithological information.	1989/92	Carried out in-house.
NCC178	Computerisation of Grassland Database	To develop software for a database which will allow more efficient storage and utilisation of grassland data and be compatible with NCC's geographical information system.	1989/90	Carried out in-house.
NCC179	Wales Terrestrial Database (WALTER)	To develop a 'data dictionary' (to facilitate access to existing information relating to rural Wales) and to establish data storage and maintenance.	1987/90	Carried out by University of Wales Institute of Science and Technology. Funded jointly with Welsh Office and other Welsh countryside agencies.

#### Databases 1989/90

<i>Title/Description</i>	<i>Timescale/Access</i>	<i>Geographical Features</i>	<i>Recreational Features</i>
Coredata. Details of statutory sites including location of sites, area, dates designated, forms of protection (SSSI, NNR, LNR etc), habitats and species, ownership, bibliography of research, survey.	Data collation on-going. Access via NCC regional and HQ office — small charge.	Habitats, geological features, OS grid reference.	

#### Research Publications 1988/89

The NCC's statutory annual reports include an appendix listing, by author(s), staff publications and publications related to external contracts. The 'Blue Book' (see introduction to research above) lists bibliographical references under individual projects.

*Contact for Research Enquiries:* Bridget Smith, Planning and Development Policy Branch, or Philip Oswald, Communications Officer, in the Chief Scientist Directorate, at Northminster House, Peterborough PE1 1UA (0733 40345).

*Contact for Database Enquiries:* Ian Baugh, Nature Conservancy Council, Northminster House, Peterborough PE1 1UA (0733 40345).

# SCOTTISH DEVELOPMENT DEPARTMENT

## Introduction

The Scottish Development Department, SDD, is the Scottish Office Government Department responsible for development and the environment in Scotland.

## Research Programme 1989/90

The Planning and Countryside Research Programme covers a wide range of research relating to urban environmental and landuse issues. The main purpose is to provide information to the Department to assist in policy development. A large part of the current programme is aimed at assessing changes in the countryside.

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
<b>Recently Completed Research</b>				
SDD1	Effectiveness of Landscape Designations	To study current landscape designations in Scotland, and report on the effectiveness of existing procedures.	Completed Dec 1988	Jointly with CCS. Carried out by Cobham Resource Consultants.
SDD2	Natural River Communities	A survey of over 300 sites and classification of their biological communities as indicators of water quality.	Completed 1988	Carried out by IFE. Report to be published.
<b>Current Research</b>				
SDD3	Monitoring Countryside Change in Scotland	A complete aerial photographic survey of Scotland at 1:25,000 scale. 85% completed.	1988/89	Jointly with CCS and NCC. Photographs available from JAS Photographic.
SDD4	Scotland's Land Cover	Interpretation of aerial photography to identify a wide range of land cover features. Information will be digitised into machine readable format to establish a base for future monitoring.	1989/91	To be carried out by MLURI.
SDD5	Ecological Consequences of Landuse Change (ECOLUC)	To predict the magnitude of rural land use change and the ecological consequences arising from this.	1988/89	Jointly with DOE.
SDD6	Countryside Implications of Changes in CAP	To study the implications for the environment and rural economy of changes in agricultural policy.	1988/90	Jointly with DOE, MAFF and DAFS.
SDD7	Acidification of Inland Waters	2nd of a 3 year study to assess water quality by routine sampling and the effects of treatments to counter acidification.	1987/90	Carried out by Solway Purification Board.
SDD8	Effects of Afforestation on Catchment Yields	To assess the effects of differing vegetation types on catchment yields.	Interim Report 1989; Final Report 1990/91	Carried out by IH in conjunction with the Forth Purification Board.
SDD9	Variations in Acid Deposition	To collect and monitor rain and snowfall in upland areas to assess acidification.	On-going 1984/89; Final Report 1989	Carried out by Warren Springs Laboratory.
<b>New Research</b>				
SDD10	Wildlife as a Resource	To examine the potential for promoting Scotland's varied wildlife habitat as a visitor and educational resource.	1989/90	
SDD11	Attitudes to the Environment	A pilot study to assess public perceptions of, and attitudes to Scotland's landscape and countryside.	1989	

Contact for Enquiries: R Brewer, Room 6/66, New St Andrew's House, Edinburgh EH1 3SZ (031 244 4073).

# SCOTTISH SPORTS COUNCIL

## Introduction

The Scottish Sports Council has four main aims: to raise standards of performance; to encourage wider participation; to increase the provision of sports facilities; and to promote general understanding of the importance of sport and physical recreation in society.

## Research Programme 1989/90

The Council's research is carried out within the fields of its four aims. Resources are concentrated on projects with practical applicability in Scotland. The research projects and list of publications given below exclude a number of projects such as sports science studies which are not relevant to CRRAG.

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
<b>Continuing Research</b>				
SSC1	Sports Participation Data	To obtain Scottish data on participation in sport on a regular basis.	Continuing	System Three Scotland.
SSC2	Planning Data Management Service (PDMS)	To update computerised information for analysis of a range of planning problems.	Continuing	c15,000 facility records.
SSC3	Charges for Sports Facilities: Scotland	To provide a review of local authority charges for all sports facilities.	Annual	In-house.
<b>Current Research</b>				
SSC4	Sports Pitches	To provide information on the supply and demand for sports pitches and on comparative costs of provision and maintenance of different types of pitches.	1987/90	Kit Campbell Associates with ASH Environmental Design Partnership and System Three Scotland.
SSC5	Strathclyde Leisure Pools Study	To complete work on swimming pools and leisure pools for calibration of supply/demand model.	1987/90	System Three Scotland.
SSC6	Differential Charges at Sports Centres	To assess the impact of deliberate and significant changes in charges to users on the economics of sports centre operations and participation by target groups.	1989/91	Centre for Leisure Research.
<b>New Research</b>				
SSC7	Local Sports Development Plans	To evaluate local needs and conditions and to inform local sports strategies.		
SSC8	Economic Impact of Sport	To provide improved data on expenditure and income from sport in Scotland.		
SSC9	Facilities Study	To provide information and planning advice and to calibrate supply/demand model.		

## Databases 1989/90

<i>Title/Description</i>	<i>Timescale/Access</i>	<i>Geographical Features</i>	<i>Recreational Features</i>
ICEDATA Composite database of facility information for ice rinks, and artificial ski slopes in Scotland.	Continuous update. Open. Hard copy. No charge.	Postcode and grid reference.	Sports facilities available at the site.

SWIMD  
Facilities database for swimming  
pools in Scotland.

Continuous update.  
Open. Hard copy. £150 per copy  
(50+ pages).

Postcode and grid  
reference.

Sports facilities  
available at the site.

INDCENT AND OUTCENT  
As above, for indoor sports centres  
and outdoor activity centres in  
Scotland.

Continuous update.  
Open. Hard copy. No charge  
for OUTCENT, INDCENT  
available as a publication for  
£100.

Postcode.

Sports facilities/  
outdoor activities  
available.

SSC MASTERFILE  
Full information on all sports  
facilities in Scotland.

Currently being installed on new  
system, being updated in the  
process; thereafter, continuous  
update. Not yet decided.  
Probably hard copy. Probably  
charged.

Postcode and grid  
reference.

Sports facilities  
available on the site.

### Research Publications 1988/89

- MacGregor, A R (1988), *The Nature and Causes of Injuries Sustained in 190 Scottish Mountain Accidents (RR1)*, ISBN: 1 95060 115 1, Price £3.00, Summary report (RD1) available free.
- Coalter, F (1988), *Sport and Anti-social Behaviour: A Literature Review (RR2)*, ISBN 1 85060 118 6, Price £5.00, Summary report (RD2) available free.
- Cox, D and G (1988), *Sport Provision in Schools in Grampian Region (RR3)*, ISBN 1 85060 114 3, Price £4.00, Summary report (RD5) available free.
- Provision for Ice Sports in Scotland: A Profile for Managers and Providers (RR4)*, ISBN 1 85060 119 4, (1988), Price £20.00.
- Target and Field Archery Centre: West Lothian Beecraigs Country Park*, Revised February 1988, (FP8).
- School-aged Sport in Scotland: Report on a Research Programme (RR6)*, ISBN 1 85060 124 0, (1988), Price £5.00, Summary report (RD6) available free, Working papers also available.
- Provision for Indoor Bowls in Scotland: A Profile for Managers and Providers (RR7)*, ISBN 1 85060 131 3, (1988), Price £20.00.
- Sponsorship and Scottish Sport (RR9)*, ISBN 1 85060 137 2, (1988), Price £25.00.
- Swimming Pools in Rural Areas: A User Study (FP14)*, (1989).
- Swimming Pools in Rural Areas: An Economic Study (FM9)*, (1989).
- Sports Participation in Scotland 1987 (RD3)*, ISBN 1 85060 120 8, (1988), Available free.
- Participation in Sport by Young People: Summary (RD4)*, ZISBN 1 85060 123 2, (1988), Available free.
- Contact for Research Enquiries:* Kirsty Robertson, Research Officer, The Scottish Sports Council, Caledonia House, South Gyle, Edinburgh EH12 9DQ (031 317 7200).
- Contact for Database Enquiries:* Hugh Neilson, Data Processor, Scottish Sports Council, Caledonia House, South Gyle, Edinburgh EH12 9DQ (031 317 7200).

## Introduction

The Scottish Tourist Board (STB) was established by the 1969 Development of Tourism Act. The aim of the STB is to develop and promote tourism in Scotland, further details are outlined in the Board's Business Plan (April 1987). During 1989 it is expected that a Government White Paper will be published which may redefine the development and promotion powers of the Board.

## Research Programme 1989/90

Research is a central function of the Board and provides a service for the Marketing, Investment and Planning, and Visitor Services Divisions of the Board. It not only provides information on previous years' trends and activities, but will be developing a number of projects which will attempt to investigate, through survey as well as non-survey techniques the future potential markets of the Board.

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
<b>Annual Research</b>				
STB1	Accommodation Occupancy Survey	To determine occupancy rates in tourist accommodation.	Monthly	Hotel survey runs Jan - Dec. Self-catering and Caravan (Static and Touring) and Camping Site surveys run Apr - Oct. Undertaken by Centre for Leisure Research.
STB2	Survey of Visitor Attractions in Scotland	To obtain information on the number of visitors to a range of attractions in Scotland.	Annual	Retrospective postal survey of visitors to tourist attraction in Scotland in 1988. In-house survey and analysis.
STB3	United Kingdom Tourism Study	To monitor tourist trips undertaken by British residents in Scotland.	Monthly	Survey of 73,000 adults, in the UK. Undertaken by NOP Ltd.
STB4	International Passenger Survey (Secondary Analysis)	To examine the volume, expenditure, and characteristics of overseas visitors to Scotland.	Annual	Managed by BTA/ETB with special analysis of visitors to Scotland.
STB5	The Supply of Tourist Accommodation in Scotland	To update STB's data on the supply of tourist accommodation.	Annual	Data obtained through STB's scheme for the registration of tourist accommodation.
STB6	Marketing Follow up Study	To evaluate the effectiveness of the Area TBs/STB's 1988 promotional campaigns.	Annual	Various surveys of consumers and the travel trade. Both in-house analysis and contract research.
<b>Current Research</b>				
STB7	'Ski Holiday Scotland' — Survey of Advertisers	To investigate response to advertisements in this brochure.	May 1989	Joint project of STB/HIDB.
STB8	Survey of Advertisers — in the Main Brochure	To investigate response to advertisements in this brochure.	July 1989	In-house STB project.
STB9	Leisure Day Trips Study	To determine the size and extent of the leisure day trip market in Scotland.	March 1990	Joint project with CCS, Scottish Museums Council and FC.
STB10	The Conference and Exhibition Market in Scotland	To determine the size and extent of the conference and exhibition market for Scottish tourism.	March, June, Sept and Dec 1989	A retrospective quarterly postal survey of conference and exhibition venues in Scotland.

STB11	Overseas Visitors Survey	To determine the reasons why overseas residents do and do not visit Scotland.	Mid 1989	The survey also probes overseas visitors on their views on countryside and wildlife in Scotland.
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### Tentative New Proposals

STB12	Tourism Employment and Productivity in Scotland	To determine the nature, extent and scope of tourism employment in various tourist sectors in two District Councils in Scotland.	Dec 1989	Joint STB/HIDB/SDA project.
STB13	Farm Tourism in Scotland	To investigate the potential of farms for tourist use.	Early 1990	Joint STB/CCS/HIDB/DAFS/SDA project.
STB14	Tourism Forecasting	To investigate through non-survey techniques the development potential of various market segments.	Early 1990	

### Databases 1989/90

<i>Title/Description</i>	<i>Timescale/Access</i>	<i>Geographical Features</i>	<i>Recreational Features</i>
Holiday Activity/Hobby	12 monthly surveys. Hard copy. Free summary.	By Region (Scotland).	23 Recreation activities.
Leisure Day Trip Survey	Bi-monthly surveys. Hard copy. Free summary.	By Region (Scotland).	Activities analysed by environment; location; type of facility.
Visitor Attraction Survey	Annual. Hard copy. £10 summary.	By Region (Scotland).	Visitors to various facilities.
International Passenger Survey	Annual. Hard copy. Free summary.	By region (Scotland).	
Self Catering Occupancy Study	April - October monthly survey. Hard copy. £30/year.	By region (Scotland).	By Area TB.
National Survey of Tourism in Scotland	12 monthly surveys. Hard copy. Free summary.	By region (Scotland).	

### Research Publications 1988/89

*Research and Planning Information Handbook*, Loose leaf binder containing factsheets and research summaries, updated on a quarterly basis, 25% discount for educational establishments.

*Accommodation Occupancy Summary Reports*, Available on a monthly subscription.

*The Conference and Exhibition Market in Scotland*, quarterly reports.

*The Leisure Day Trip Market in Scotland*, Bi-monthly summaries and annual report (March 1989).

*National Survey of Tourism in Scotland 1984-1988*.

Contact for Enquiries: Brian Hay, Research Manager, Scottish Tourist Board, 23 Ravelston Terrace, Edinburgh, EH4 3EU (031 332 2433).

## Introduction

The Council has been reformed with a smaller membership, 4 committees, and an extended consultative structure. Its budget for this year is increased by £1.5 million but some money will be earmarked à la Arts Council for matching commercial funding.

## Research Programme 1989/90

There are major commitments in the sports medicine area, viz: an epidemiological study of sports injuries; the training of young athletes and a national fitness survey (Total £470,000). There are also major monitoring projects to be managed outwith the research programme: governing body grants, the role of development officers. This limits the new projects to those shown in SC15-18 attached. In keeping with the new management style, the Council will seek co-sponsors wherever possible.

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
<b>Research in Progress</b>				
SC1	Sports Centre Management Information System Feasibility	To develop, install and monitor the effectiveness of computerised management information systems in large sports centres.	1983 start	In association with SSC. Second system computers introduced into standardised SASH sports halls in Scotland and England (Luton District Council).
SC2	Air and Water Motor Sports	To study problems of air and water motor sports throughout England.	1986/88	Carried out by M Elson, Dept of Town Planning, Oxford Polytechnic.
SC3	Participation	To monitor demonstration schemes to increase sports participation. In Phase 1, monitoring Health and Fitness, Liverpool Health Authority; Working Men's Clubs, Cleveland; Women's Institutes, Cambridgeshire; Women's Motivator, Norwich; Comsport, Action Sport Northampton suburbs and nearby villages; Active Lifestyles, School leavers, Coventry. In Phase 2, monitoring Solent Sports Counselling, Southampton; Pub-based sport, East region — Tolly Sports Line; SHIFTS, sport at the workplace, Leicester. In Phase 3, Every Body Active and, Sport for the Disabled, Tyne and Wear; teaching Sport in the Community, Cheltenham. In Phase 4, Loughborough motor sports centre and sport and ethnic groups, Scunthorpe.	1984/90	Monitoring by: M Fitzjohn, M Tungatt, North West Office. Phase 1 and 2 Second year reports and Phase 2 and 3 First year reports complete and mimeo.
SC4	Standards for Constructing and Maintaining Sports Turf	To derive a specification for constructing pitches, base drainage and a surface.	1984/88	Carried out by Sports Turf Research Institute, Bingley.
SC5	Monitoring Prototypes	To establish prototype pitches in different microclimates of selected modes of construction.	1984/87	Carried out by University College of Wales, Aberystwyth.
SC6	Sports Turf Advice	To provide a general advice, information and education service.	1984/87	Carried out by Sports Turf Research Institute, Bingley.
SC7	Locating New Facilities	To test the need for facilities in the Northern Region using a supply/demand model. Possible extension in 1989 to North West Region.	1986/88	Carried out in-house plus Planning Data Management Services, University of Edinburgh.

SC8	The Changing Indoor Sports Centre	To see how long established leisure centres have adapted their designs and management to changing leisure demands.	1986/88	Carried out by W S Atkins.
SC9	Costs in Use of Sports Surfaces	To identify capital and maintenance costs of a range of artificial surfaces compared with natural turf.	1987/89	Carried out by P Dury, Nottinghamshire County Council.
SC10	Sport and Nature Conservation	To identify the range of interactions between sport and nature conservation.	1987/88	Carried out by R Sidaway. Joint project with CC.
SC11	Leisure Pools	To examine the use, design and management of leisure pools.	1988/89	Carried out by ECOTEC and P Serjeant.
SC12	Economics of Sports Enterprises of Farms	To see how sport can add to farm income as part of diversification.	1987/88	Carried out by Laurence Gould Associates. Joint project with MAFF.
SC13	Small Community Recreation Centres	To monitor the use and management of a series of halls, urban and rural.	1988/90	Carried out by K Campbell Associates.
SC14	Response to Community Recreation in Belfast	To measure participation response to sports centre provision.	1987/88	K Roberts, University of Liverpool, with City of Belfast, NI Sports Council.
<b>New Projects</b>				
SC15	Sports Hall Specification	To evaluate the performance of a range of sports halls.	1988/90	Not yet decided.
SC16	General Household Survey	To analyse the 1986 and 1987 General Household Survey.	1989/90	Not yet decided.
SC17	Effects of Competitive Tendering	To set up a before and after study of different styles of management of sports centres, pools, pitches; and to examine the effects of labour intake and career patterns of new graduates in recreation management.	1989/91	Not yet decided; co-sponsors being sought.
SC18	Sport and Commercial Development	To examine resident/tourist mix in use of facilities; to identify trends in marinas provision; to examine the operation of sports holiday villages; and to assess the impact of the 1991 World Student Games in Sheffield.	1989/95	Not yet decided.
SC19	Coastal Recreation in Southern and South West Regions	To develop regional strategies.	1988/89	To be carried out by South West Regional Office, Crewkerne, and project officer in Southern Region.
SC20	The Market for Recreation Management Training in the Eastern and Greater London and South East Regions	To assess the demand and potential suppliers.	1988/89	To be carried out by F Coalter, Polytechnic of North London, Centre for Leisure and Tourism Studies.
SC21	The Use and Management of Urban Parks	To assess the use and management styles and costs of selected parks in Tyne and Wear.	1988/89	To be carried out by project officer linked to Durham Office.

### Databases 1989/90

<i>Title/Description</i>	<i>Timescale/Access</i>	<i>Geographical Features</i>	<i>Recreational Features</i>
Facilities database. Inventory of sports facilities in England	Currently collecting initial data; from then continuous update. At present only via Information Centre.	Postcode; grid reference.	Currently covers sports centres, swimming pools, squash courts and golf courses.

### Research Publications 1988/89

- 1 Elson, M and others (1988), *Providing for Air Sports*.
- 2 Elson, M and others (1988), *Providing for Motorised Water Sports*.
- 3 Sports Turf Research Institute (1988 forthcoming), *Draft Specification*.
- 4 Sidaway, R (1988), *Sport Recreation and Nature Conservation*, (with CC).

Contact for Research Enquiries: S Phipps, Sports Council, Research Unit, 2 Tavistock Place, London WC1H 9RA (01 837 2658).

Contact for Database Enquiries: Sally Hall, Sports Council, 16 Upper Woburn Place, London WC1H 0QP (01 388 1277).

# WALES TOURIST BOARD

## Introduction

The Wales Tourist Board is an independent statutory body; it was established in 1969 to promote tourism to and within Wales, to encourage and assist the provision of tourist facilities and amenities in Wales, and to provide policy advice on tourism matters. The Board's Framework Development Strategy 'Tourism in Wales — Developing the Potential', published in June 1988 following a programme of consultation, sets out a 5 year development programme for tourism in Wales and is complemented by an annual Marketing Plan. The policies of the Board are directed towards ensuring the economic and social well-being of the people of Wales; they are underpinned by a concern to protect and to enhance the physical environment of Wales, and to sustain and promote Welsh culture, language and heritage.

## Research Programme 1989/90

The research activities of the Board are directed towards providing information for policy planning purposes and the programme covers development, marketing and more fundamental research. Most studies are commissioned from outside contractors, and are funded jointly with other bodies wherever possible in order to ensure an integrated and cost effective approach. Research findings are disseminated widely and it is the Board's policy to raise as much revenue as possible from the sale of data with a commercial value.

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
<b>Recently Completed Research</b>				
WTB1	Dinefwr Tourism Study	To consider the tourism potential of Dinefwr Borough and to prepare conservation and development proposals for Dinefwr Park.	1987/88	Multi-agency report published 1988.
WTB2	Conwy Action Plan	To prepare an action plan for conserving, developing and marketing the historic town of Conwy.	1987/88	Multi-agency study: report published 1988.
WTB3	Study of the Social Cultural and Linguistic Impact of Tourism	To examine by means of desk research and case studies the impact of tourism upon the social, cultural and linguistic life of host communities.	1986/88	Independent study. Report published 1988.
WTB4	Brochure Evaluation Study	To consider the perceived usefulness of WTB brochure material and its impact on holiday decisions.	1988	Research completed, December 1988.
<b>Continuous/Annual Research</b>				
WTB5	United Kingdom Tourism Survey	To provide comprehensive information on overnight tourism trips taken by UK residents.	Continuous/Annual	New survey commissioned jointly by ETB/STB/NITE/WTB.
WTB6	International Passenger Survey	To provide secondary analysis of the International Passenger Survey, which is the official source of information on overseas visitors to Great Britain.	Annual	Joint initiative by BTA/STB/WTB.
WTB7	Tourism Demand Monitor	To provide information on monthly demand trends among a representative sample of hotels, holiday parks, self catering agencies and attractions.	Monthly	Integrated programme combining postal/telephone surveys.
WTB8	Survey of Attendance at Visitor Attractions in Wales.	To provide an annual measure of attendance at major tourist attractions.	Annual	Annual postal inquiry.
<b>Current Research</b>				
WTB9	Newport Tourism Study	To consider the tourism potential of the Borough of Newport.	1988/89	Multi-agency study to be completed Spring 1989.
WTB10	Study of Hotel Development Potential	To identify hotel development opportunities in pursuit of WTB strategic policy priorities.	1988/89	Study to be completed Spring 1989.

WTB11	Evaluation of Tourism Employment	To examine the scale and structure of tourism employment, by collecting existing official and other statistical information.	1988/89	Desk study, to be completed Spring 1989.
WTB12	Study of the Schools Visits Market	To examine the pattern and principal determinants of organised visits by primary and secondary schools.	1988/89	Postal survey among visit organisers, report completed March 1989.

### Committed New Research

WTB13	Survey of Visitors to Tourist Information Centres	To provide information on Tourist Information Centre users and their perceptions of what goods and services are available at Tourist Information Centres.	1989/90	Survey programme to be undertaken Summer 1989.
WTB14	Joint Survey of Coach Operators	To identify factors influencing choice of destination within UK by coach tour operators, and to consider the product implications.	1989/90	Joint study by ETB/STB/WTB: methodology under review.

### Tentative New Proposals

WTB15	Review of Harbour and Marina Development	Proposed joint survey to review proposed marina development and to consider the economic and social impact of harbour/marina developments.	1989/90	
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### Databases 1989/90

<i>Title/Description</i>	<i>Timescale/Access</i>	<i>Geographical Features</i>	<i>Recreational Features</i>
Accommodation Inventory	Database subject to regular updating. Limited access — listings available by negotiation.	Establishment addresses; postcodes.	Accommodation capacity and product details.
Tourist Resource Inventory	Data to be subject to regular updating. Limited access — listings available by negotiation.	Establishment addresses; postcodes.	Product details for a variety of tourist facilities, attractions, services.

### Research Publications 1988/89

- Tourism in Wales — Developing the Potential* (1988).
- British Tourism Survey Monthly* (1987), with ETB.
- Hotel Occupancy in Wales 1988*.
- Demand Monitoring Survey 1988*, Summary bulletins.
- Research Factsheets*, (various).
- Marketing Planning Profiles*, (various).
- The Social, Cultural and Linguistic Impact of Tourism*, report of an independent study.
- Dinefwr Tourism Study* (joint publication with several other bodies).
- Conwy Action Plan* (joint publication with several other bodies).

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