

Countryside Recreation Research Advisory Group

COUNTRYSIDE RECREATION RESEARCH 1988/89: THE PROGRAMMES OF THE CRRAG AGENCIES

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PREFACE

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.

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: Upland Footpath Management; Boating, Fisheries and Ecology; and Landscape Assessment.

An annual countryside recreation **Conference** held in September, organised by CRRAG. This is normally a two day conference for 100 to 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; and Recreation and Wildlife: Working in Partnership.

A **Research Market**, being introduced for the 1988 Conference. The CRRAG agencies will be setting up displays about their research programmes, and will be available to discuss details with delegates after the conference. Organisations that are contracted to undertake countryside recreation research are invited to provide display material, and to 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.

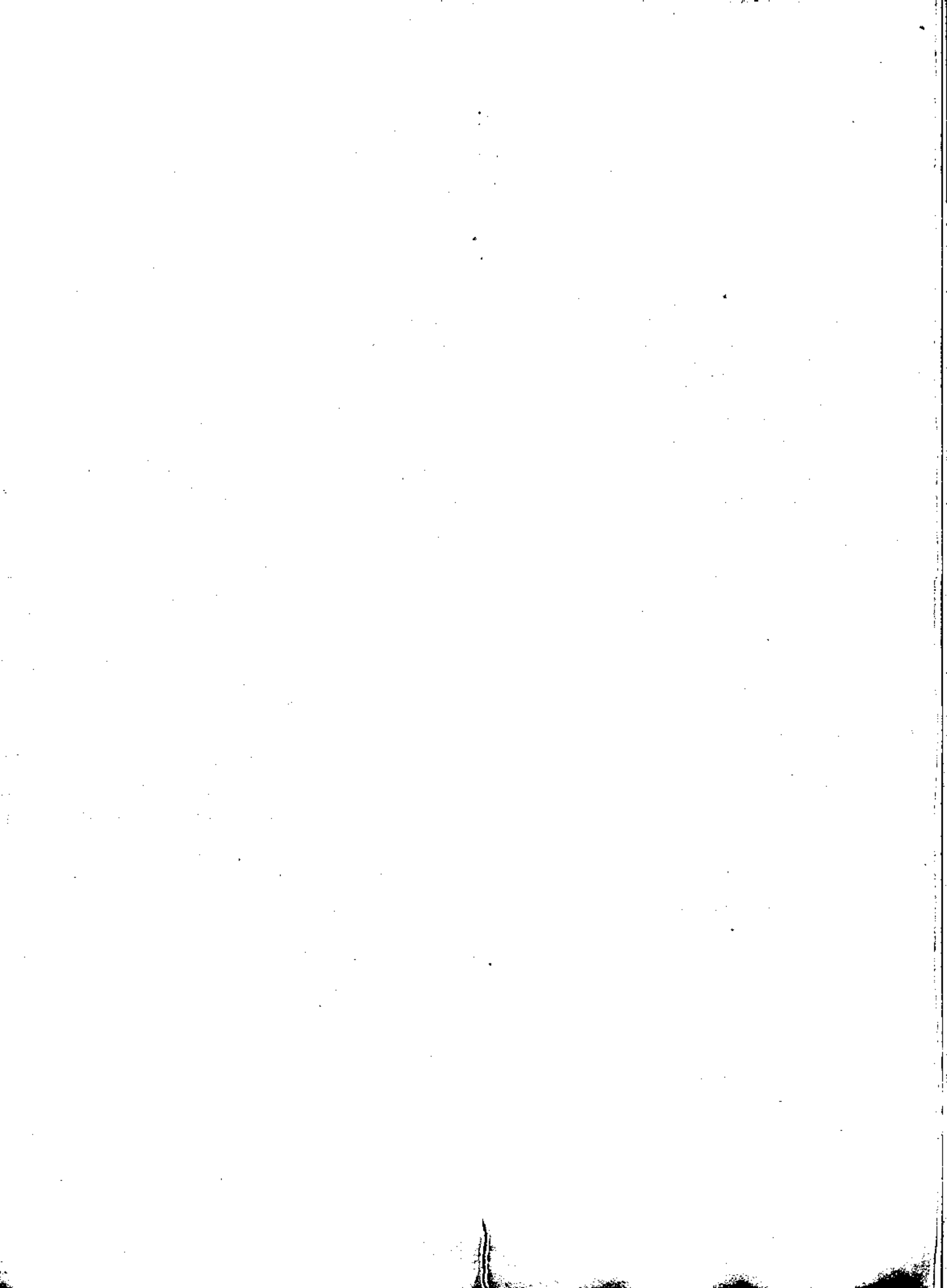
Countryside Recreation Research 1988/89: The Programmes of the CRRAG Agencies

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

THE RESEARCH PROGRAMMES

1988/89

BRITISH TOURIST AUTHORITY/ENGLISH TOURIST BOARD

Research Programme 1988/89

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
Continuous/Annual Research				
BTA/ETB1	British Tourism Survey	Comprehensive monthly survey of all overnight trips taken by British residents, plus an annual survey of Britons' holiday taking at home and abroad.	Continuous/ Annual	Commissioned from NOP Market Research Limited.
BTA/ETB2	English Hotel Occupancy	To survey bed and room occupancy, duration of stay, and the proportion of arrivals from overseas at a sample of hotels throughout England.	Monthly	Commissioned from British Market Research Bureau.
BTA/ETB3	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 Limited.
BTA/ETB4	English Heritage Monitor	To analyse England's historic attractions in terms of their number, type, presentation, and visitor trends.	Annual	In-house.
BTA/ETB5	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/ETB6	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 TBs pay for extra data collection and analysis on specified topics, for instance, the regional distribution of overseas tourism throughout Britain.
BTA/ETB7	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/ETB8	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.
Current Research				
BTA/ETB9	North West Tourism Research	To aid the North West TB in the preparation of a regional tourism strategy. Topics covered are the potential for short break holidays in the region; industrial heritage; investment in leisure and tourism in the region; and overseas tourism in the North West.	1987/88	Commissioned from MaS Research, Leisureworks and Pannell Kerr Foster Associates/John Todd Associates.
BTA/ETB10	Take a Break 1987/88 Evaluation	To assess the effectiveness of different means of distributing a brochure listing short holidays in 4 TB regions in the south of England.	1988	Commissioned from NOP Market Research Limited.
BTA/ETB11	The Market for Visiting Friends and Relatives	A two part study: presenting existing information on the size and characteristics of the market, and investigating means of promoting such travel.	1988	Commissioned from Richard Denman.

BTA/ETB12	London Tourism Impact Study	To review future demand and supply for tourist accommodation in London; investigate the transport implications of more tourists; and appraise the environmental impact of tourism in London.	1987/88	Commissioned by London Planning Advisory Committee/London TB from Touche Ross and Steer Davies and Gleave Ltd.
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Proposed Research

BTA/ETB13	West Country Tourism Research	A programme of surveys to aid the West Country TB to update its tourism strategy for the region.	1988/89	Specific objectives to be determined.
BTA/ETB14	Regional Joint Print Evaluation Research	To evaluate the effectiveness of joint marketing schemes between BTA and regional TBs, in encouraging overseas visitors to travel outside London.	1988/89	
BTA/ETB15	Market Outlook Surveys	To survey recent trends in business and prospects amongst tourism operators in selected regions.	1988	

Databases 1988/89

BTA/ETB hold data about recreational resources on computer for internal use. There are two databases: one recording tourist accommodation, the other tourist attractions, facilities, services etc. Both are updated fairly thoroughly every year. The information can be sorted geographically by town and local authority. It is published in a variety of brochures, guides and other print.

Research Publications 1987/88

BTA/ETB(P)1	British Tourist Authority, English Tourist Board, Wales Tourist Board (1987), <i>British Home Tourism Market 1986</i> .
BTA/ETB(P)2	English Tourist Board (1987), <i>English Hotel Occupancy Survey</i> (monthly reports and annual summary).
BTA/ETB(P)3	English Tourist Board (1987), <i>English Heritage Monitor 1987</i> .
BTA/ETB(P)4	English Tourist Board (1987), <i>Sightseeing in 1986</i> .
BTA/ETB(P)5	British Tourist Authority (1987), <i>Visits to Tourist Attractions 1986</i> .
BTA/ETB(P)6	English Tourist Board (1987), <i>Holiday Intentions Survey 1987</i> .
BTA/ETB(P)7	British Tourist Authority (1987), <i>Overseas Visitor Survey 1986</i> .
BTA/ETB(P)8	British Tourist Authority/English Tourist Board (1987), <i>Self Service Accommodation Occupancy in Cumbria</i> .
BTA/ETB(P)9	Tourism Research Group, University of Exeter (1987), <i>Tourism and the Economy of Cornwall</i> .
BTA/ETB(P)10	Timeshare Developers Association (1987), <i>United Kingdom Timeshare Purchasers 1987</i> .
BTA/ETB(P)11	British Tourist Authority/English Tourist Board (1987), <i>Tourism Business in Cumbria</i> .
BTA/ETB(P)12	British Tourist Authority/English Tourist Board (1987), <i>Attitudes to Cumbria as a Holiday Destination</i> .

Contact for Enquiries: I M Rickson, Planning Research Manager, BTA/ETB Research Services, Thames Tower, Black's Road, London W6 9EL (01 846 9000 ext 2464).

BRITISH WATERWAYS BOARD

Research Programme 1988/89

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
Recently Completed Research				
BWB1	Leeds and Liverpool Canal Long Distance Route Study	A feasibility study of the Leeds and Liverpool Canal towing paths as a Long Distance Route.	Completed	Carried out by a student at Bradford University and funded jointly by BWB and CC.
BWB2	Caen Hill Development and Management Study	To study the development potential of a major lock flight at Devizes, Kennet and Avon Canal.	Completed	Carried out by consultants and part funded by Kennet District Council.
BWB3	Survey of Passenger Boat Users and Operators	To gather information on passenger boat facilities available and market characteristics of the users.	Completed	Carried out in-house. Information being used for new computerised Leisure Information Service. Summary of characteristics of passengers available May 1988.
BWB4	Angling in BWB Fisheries	To investigate types of usage by anglers on some stretches of waterway and the implications for future fishery management.	Completed	Carried out in-house.
BWB5	Waterway Corridor	To identify the basic demographic characteristics of the population living within the waterway corridor.	Completed	Carried out by consultants.
BWB6	Woodlands on the Lancaster Canal	A survey and assessment of the woodlands along the Lancaster Canal leading to the development of a management strategy.	Completed	Carried out by consultants.
Continuous and Current Research				
BWB7	Boating and Angling Relationships	A three year postgraduate studentship has just been completed. The research investigated the relationship between boat traffic, waterway ecology and fisheries on canals.	1984/87	
BWB8	Leeds and Liverpool Canal Cycling Experiment	To investigate usage and user attitudes before and after implementation of the cycling experiment.	1986/88.	Pre-implementation research completed in-house. Post-implementation research to be carried out by consultants. Costs shared between BWB, Transport and Road Research Laboratory and CC.
BWB9	Research into Private Boating	Various aspects of private boating have been researched over recent years. In 1988 a Scheme to encourage new customers to take up boating will be undertaken probably using experimental discounts or incentive schemes on licences.	1988/89	To be undertaken in association with the trade and boat clubs.
BWB10	Lancaster Canal Plan and Research	A plan has been completed to provide the basis of leisure development and management opportunities. Research into usage by informal users and boaters is being carried out and will be completed in 1988.	1986/88	Carried out in-house.

BWB11	Jobs on Inland Waterways	To estimate the number of jobs associated with leisure on inland waterways.	1987/88	This will update the estimate made in 1979 by the Inland Waterways Amenity Advisory Council.
BWB12	Gloucester Museum	First research phase carried out in 1987 to look at potential market for the museum. Further research to be carried out in 1988 after the opening of the museum to investigate types of visitors and assess the success of marketing and publicity.	1988/89	Carried out in-house. Report available on 1987 research.
BWB13	Crinan Canal	A study of boaters to establish market characteristics and user reactions, to guide the provision of facilities and information on the Crinan Canal.	1987/88	Carried out by consultants and jointly sponsored by BWB, HIDE and SDA.
BWB14	Interpretive Signs	To evaluate existing interpretive signs and produce recommendations for future signs.	1987/88	Carried out in-house.
BWB15	Waterway and Reservoir Plans	Further development work is being carried out on waterway plans to help the allocation of resources, clarify leisure requirements and potential, and produce a framework for the involvement of outside organisations. A number of research needs have emerged as the plans have developed.	On-going	To be carried out in-house.
BWB16	Ecological Studies on the Kennet and Avon and Montgomery Canals	Two resource evaluation exercises are being carried out with a view to catering for recreational development on these waterways.	On-going	Kennet and Avon study is funded by BWB, MSC, Kennet and Avon Canal Trust, Berkshire County Council, Newbury District Council. Montgomery Study is funded by BWB and MSC.
BWB17	Evaluation of Backwaters and Non-operational Land	To evaluate backwaters and non-operational land to assess the conservation value and potential for recreational development.	1987/88	Part of this evaluation was completed in 1987 by RSPB. Remainder carried out in-house and to be completed during 1988.

New Research

BWB18	Drive Time Analysis	Following on from completed Waterway Corridor Study (BWB5), further information is to be provided to analyse the population within specific drive times of a development site.	1988/89	Carried out by consultants used for BWB5.
BWB19	Levels of Use by Anglers and Informal Users	Detailed knowledge of levels of use for individual waterways is required to establish statistical targets and some comparison of canals as a basis for subsequent monitoring.	1988 start	To be carried out in-house.
BWB20	Montgomery Canal	A recreation facilities plan is being drawn up for the Recreation and Amenities Working Group. As part of this, a survey of day visitor use of the canal will be undertaken to establish levels of use, market characteristics and requirements.	1988/89	To be carried out in-house.
BWB21	Boating and Angling Relationships	A further studentship is now being sponsored as a result of the findings of BWB7. The research is entitled 'Ecosystem Management in Navigated Waters'.	1988/91	Sponsored by BWB and carried out at Liverpool University.

CONVENTION OF SCOTTISH LOCAL AUTHORITIES

Research of Member Councils 1988/89

	<i>Authority</i>	<i>Project Title and Summary of Objectives</i>	<i>Timescale</i>	<i>Contact Name</i>
Recently Completed Research				
COSLA1	Bearsden and Milngavie DC	The Kilpatricks Project Initial Appraisal. An appraisal report on the feasibility of establishing an urban fringe management project in the Kilpatricks area, in conjunction with Clydebank and Glasgow DCs, Strathclyde RC and CCS.	1987/88	A Sim
COSLA2	Highland RC	Cairngorm Development Plan Working Group. Assessment of potential for expansion of ski-ing at Cairngorm and implications for other recreational activities and land use interests.	Completed	C MacKenzie
COSLA3	Lothian RC, West Lothian DC, Livingston DC	Action in Tourism for West Lothian. Impact of tourism on local economy.	Completed	N Ireland
COSLA4	Stewartry DC	Development of Museums in Stewartry District.	Completed	W Davidson
Current Research				
COSLA5	Argyll and Bute DC	Provision of Sports Pitches (2). Ardenslate — Dunoon.	1987/88	Mr Kessell
COSLA6	Argyll and Bute DC	Islay Visitor Survey. To identify and analyse the characteristics of Islay's visitors and tourism industry, with special emphasis on wildlife related tourism.	Jan 1988/ March 1989	J Souness
COSLA7	Banff and Buchan DC	Special Project Areas Arising from Coastal Study.	1988/92	E Hare
COSLA8	Dundee DC	Dundee Urban Wildlife Project. Survey and assessment of the wildlife interest of undeveloped and derelict land in the City of Dundee.	1987/88	V Bazley
COSLA9	Cunninghame DC	Working party of interested bodies to discuss the preparation of a planting strategy for forestry on Arran.	1988/89	R Henry
COSLA10	Dumfries and Galloway RC	Sites and Monuments Record. To identify and continuously review sites of archaeological importance in the Region.	1980 start	D Karfoot
COSLA11	Dumfries and Galloway RC	Wigtown Bay. Assessment of conflict between conservation and wildfowling interests in a SSSI.	1987/89	J Chapman
COSLA12	Dumfries and Galloway RC	Loch Ken. Implementation of Management Plan to develop the area and to reconcile the interests of recreation, conservation and residents.	1988/91	H Young

COSLA13	Dumfries and Galloway RC	Bobbin Mill. Interpretation of historic town and its influence on the landscape within a National Scenic Area.	1987/88	K Denholm
COSLA14	Dumfries and Galloway RC	Rights of Way. Systematic recording of rights of way and identification of new footpaths.	1987 start	A Howatson
COSLA15	Dunfermline DC	A Countryside Strategy for Dunfermline District. A strategy to respond to emerging pressures for development, forestry, public access, nature conservation and changing agricultural practices.	1988/90	S Beebe
COSLA16	East Kilbride DC	Small Mammal Survey, Calderglen Country Park. Assessing the species diversity and population levels of small mammals within Calderglen Country Park.	1987/88	D O'Neil
COSLA17	East Kilbride DC	Breeding Bird Survey, Calderglen Country Park. Assessing the species diversity and population levels of breeding birds within Calderglen Country Park.	1987/88	D O'Neil
COSLA18	East Lothian DC	Programme of site surveys in selected coastal park catchment areas. (With CCS)	1983/85	I Fullerton
COSLA19	East Lothian DC	Monitoring Car Park use at Lorgniddry Bents, Gullane Bents, Yellowraig, John Muir Country Park. To monitor visitor numbers. Local significance.	Continuous	I Fullerton
COSLA20	Falkirk DC	Visitor Survey of Annual Events Held. To determine, through questionnaires/interviews, distance travelled and visitor satisfaction with local attractions and events.	Annual	A Smith
COSLA21	Fife RC	Town Loch, Dunfermline — National Water Ski Facility Feasibility Study. A study into the feasibility of using Town Loch, Dunfermline as a site for a National Water Ski Centre. (With SSC)	1987/89	R Brown
COSLA22	Fife RC	Chalmers Church, Anstruther — Feasibility Study. A study into the feasibility of using Chalmers Church as an East Neuk Heritage Centre.	1988/89	R Brown
COSLA23	Fife RC	Anstruther Harbour Feasibility Study. A hydraulic study of Anstruther Harbour to determine its suitability for use as a wet dock for historic boats. (With SDA)	1988/89	B Nield
COSLA24	Fife RC	Bats in Fife. A study to identify the location of bat roosts and feeding habitats in Fife, and to identify how Fife RC can best publicise the need to protect the species under S25 of the Wildlife and Countryside Act 1981. (With NCC)	1988	G Moy

COSLA25	Fife RC	Landscape Areas of Regional Importance. A study to identify regionally important landscapes in Fife.	Continuing	R Brown
COSLA26	Fife RC	Harran Hill Wood. Development of a community in an urban fringe setting.	Continuing	N Bullivant, Fife Ranger Service
COSLA27	Fife RC	Footpath erosion in the Lomond Hills.	Continuing	S Webster, Fife Ranger Service
COSLA28	Glasgow DC	Erskine Ferry Road — Bowling Section of Glasgow — Loch Lomond Cycle of Route Usage Survey. (With BWB)	1987	W Bennet
COSLA29	Glasgow DC	Glasgow Urban Spaces. An Ecological Perspective — A Survey. (With Glasgow College of Technology)	1986/87	W Bennet
COSLA30	Gordon DC	Bennachie Study. Collation of environmental and recreational information on much used hill range west of Inverness, Aberdeenshire, including visitor survey, vegetation survey, landscape assessment and historical interests.	April 1987/ April 1989	C White
COSLA31	Grampian RC	Natural Habitat Survey. To map and publish data on natural and semi-natural habitats in Grampian Region.	1983 start	A Woodward
COSLA32	Grampian RC	Sites of Interest to Natural Science. To identify and continuously review sites of natural science interest of Regional importance.	1976 start	A Woodward
COSLA33	Grampian RC	Sites and Monuments Record. To identify and continuously review archaeological sites of Regional importance.	1976 start	I Shepherd
COSLA34	Grampian RC	Regional Interpretive Strategy Review. Review after 10 years of the progress, current state and suggested future and interpretation of the Region's cultural and natural heritage.	1987	I Shepherd
COSLA35	Grampian RC	Country Parks Visitor Survey. To monitor visitor numbers, use of and opinions of the Council's 3 country parks.	1987	J Raemaekers
COSLA36	Grampian RC	Forestry Grant Applications. To monitor amount, location and type of forestry grant applications.	Annual	A Woodward
COSLA37	Highland RC	Cairngorm Winter Visitor Survey and Cairngorm Summer Visitor Survey. Study of patterns and level of recreational use and visitor perceptions of area as a basis for future meeting. (With CCS, NCC, HIDE)		C MacKenzie
COSLA38	Highland RC	Scenic Route Study, West Lochaber. Assessment of potential for minimising adverse effects of by-passing.		C MacKenzie
COSLA39	Highland RC	To repair Lairig Ghru footpath with raw sheep's wool as a sub-base and binding agent.	May 1988/ June 1988	A Sutherland

COSLA40	Highland RC	Fish Farm Survey. The Council aims to improve its knowledge of the impact of this rapidly growing and valuable regional interest.	1986	G Brown
COSLA41	Highland RC	Amenity Woodland Survey. The Council promoted this survey due to concern over the loss of broadleaved woodland, the lack of recent broadleaved planting and the lack of a systematic survey of all woodland in the Region.	1985	R Cameron
COSLA42	Lothian RC, West Lothian DC	Starlaw Feasibility Study. 400 acre site for leisure, recreation and tourist uses. (With BEC)	On-going	N Ireland
COSLA43	Lothian RC	To develop a methodology for farm plans within the Pentland Hills Regional Park and initiate a pilot scheme.	1988/92	M Starrett
COSLA44	Lothian RC	To establish the level of protection necessary for new mixed woodland at Turnhouse Hill, Pentland Hills Regional Park.	On-going	M Starrett
COSLA45	Lothian RC	Levels of car park use at sites on the periphery of Pentland Hills Regional Park.	On-going	M Starrett
COSLA46	Lothian RC	Monitoring of condition of rights of way and footpaths in common use within the Pentland Hills Regional Park.	On-going	M Starrett
COSLA47	Lothian RC	Recording and analysis of visitor use of 13 reservoir trout fisheries.	On-going	D Jamieson
COSLA48	Lothian RC	Recording and analysis of angler success at 13 reservoir trout fisheries.	On-going	D Jamieson
COSLA49	Perth and Kinross DC	Interpretive Strategy. An inventory of stories and places to be interpreted to the public within an interpretive strategy for the District.	April 1988/ Sept 1988	L Schofield
COSLA50	Renfrew DC	Urban Fringe Study. To identify problems and future uses in Urban Fringe Area.	1988 start	J Gough
COSLA51	Renfrew DC	Interpretive Strategy for Gleniffer Braes Country Park. To develop a strategy for interpretations in the Country Park.	1988 start	J Gough
Tentative New Proposals				
COSLA52	Banff and Buchan DC	Tourism Development Initiatives.	1988/92	E Hare
COSLA53	Gordon DC	Bennachie Study. The production of education packs and interpretation material.	1989 start	C White

COUNTRYSIDE COMMISSION

Research Programme 1988/89

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
Current Research				
CC1	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-sponsors include DOE, MAFF, RDC, NCC, FC.
CC2	New Forest Cattle 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	Support to Verderers, New Forest.
CC3	Rural Database	To gather information and data relevant to rural change. Information includes human population, agriculture, natural environment.	1986/89	
CC4	Project Silvanus: Small Woods in South West	A project to combine environmental conservation with development of wood industries, forestry employment, and alternative sources of income to farmers.	1986/90	Carried out by Dartington Institute.
CC5	Demonstration Farms Programme	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	Carried out by Farming and Wildlife Trust.
CC6	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	
CC7	Wales Terrestrial Data Base	To gather information and data relevant to rural change in Wales. Information includes human population, agriculture and natural environment.	1986/89	Co-sponsored by Welsh Office.
CC8	Landscape Assessment	To investigate existing methods and approaches to landscape assessment and to develop a method of landscape description and assessment for CC use.	1987/88	CC publication forthcoming
CC9	Monitoring and Evaluation of Operation Groundwork	Monitoring the work of the project and evaluating the effectiveness of Groundwork in achieving its objectives.	1984/87	Carried out by Manchester Polytechnic, and Liverpool University.
CC10	Promotion of Canal Towpaths for Recreation	To test the potential of canal towpaths for recreation and access on the Leeds and Liverpool, and Brecon and Monmouth canals.	1984/89	Co-sponsored with BWB.
CC11	Monitoring Part III of the 1981 Wildlife and Countryside Act	To measure changes in rights of way and definitive maps following the new provisions of the Act.	1984/89	Carried out by the Ramblers' Association.

CC12	Recreation Trends	Up to date information on countryside visiting obtained by repeating some questions from 1984 survey.	1988/89	
CC13	Wales Countryside Forum Access Project	Project in Wales to demonstrate how access arrangements might be improved and disputes resolved.	1985/89	Operating in Neath District Council.
CC14	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 commoners' rights and designations applying.	1985/88	Carried out by University College of Wales, Aberystwyth.
CC15	Recreation and the Disadvantaged	To devise policies to enable the disadvantaged to enjoy recreation provision: the 'Gateway' project.	1985/88	Co-sponsored with Nottinghamshire County Council.
CC16	Conservation Attitude Research	To collect information on public attitudes to landscape conservation. Questions added to British Social Attitudes Survey.	1985/88	Carried out by Social Community Planning Research.
CC17	Recreation Market Research	To establish public reaction to the facilities which have been provided since the 1968 Countryside Act, and future trends.	On-going	
CC18	Rights of Way Surveys	To assist development of CC's access policies by surveys of use and condition of rights of way network.	1986/88	Carried out by volunteers organised by Travers Morgan Planning.
CC19	Access Land on OS Maps	To establish means of collecting data on open land where the public has a right of access.	1988/89	
CC20	Interpretation Advice	To provide, in conjunction with the Centre for Environmental Interpretation, a countryside interpretive advisory service.	On-going	Carried out by Centre for Environmental Interpretation.
CC21	Community Action Projects	To promote community action projects for conservation and recreation in the countryside.	1986/89	Co-sponsored by various local authorities and voluntary bodies.
CC22	The Retention of Water Meadows	To assess the financial and management implications of the retention of water meadows and the possibility of financial assistance towards their purchase.	1987/88	
CC23	Public Administration of Integrated Rural Development	To investigate the various ways in which existing or new forms of administration might more successfully integrate existing sectoral policies.	1987/88	
CC24	Assessment of High Grade Limestone Sources in England and Wales	Preliminary study to identify gaps in the known data on the occurrence of high grade carboniferous limestone.	1987/88	Carried out by British Geological Survey.
CC25	Unitary Development Plans	To produce guidance for the Metropolitan Authorities on the coverage of countryside conservation and recreation issues in the new Unitary Development Plans.	1986/88	Carried out by Halcrow Fox and Associates with Cobham Resource Consultants.
CC26	Experimental Access Projects	To test new techniques for developing and managing rights of way with local authorities and others.	1987/90	

CC27	Bunkhouse/ Camping Barns Marketing and Advice Project	To provide farmers, landowners and agencies with advice on the development and marketing of low cost accomodation for countryside users.	1987/88	Organised by YHA.
CC28	Experimental Information Projects	To test out methods of making people more aware of countryside opportunities.	1987/89	
CC29	Monitoring Recreation 2000 Initiatives	To examine the progress and achievement of policies launched experimentally through Recreation 2000.	On-going	
CC30	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.	1987/88	Carried out by Royal Society for Nature Conservation.
CC31	Bulls on Footpaths	A short desk study to provide a clearer application and account of the economic effects of the measures to limit the running of bulls on farmland crossed by public rights of way.	1988/89	
CC32	Countryside Staff Training Research	To collect basic data from relevant employers on numbers, qualifications and needs of their countryside staff, to be followed by deeper enquiries on needs and training opportunities in view of sharpening the CC's policy response.	On-going	
CC33	Guidance Notes for WAs	A review of the activities of these organisations with a water management function, and the production of technical guidance notes to extend their conservation and amenity action.	1987/88	
Committed New Research				
CC34	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	
CC35	Monitoring Landscape Change in the National Parks	To provide reliable information on rates of change in countryside features on a continuing basis in the National Parks.	1987/89	Carried out by Silsoe College. Co-sponsored with National Parks.
CC36	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 forests.	1988/89	Possibly co-sponsored by FC and CCS.
CC37	Enjoying the Countryside Baseline Survey	Additional questions to the household survey to establish the knowledge, awareness and activities of the target groups for Enjoying the Countryside.	1988/89	
CC38	Long Distance Route Marketing Strategy	The policies being developed towards Long Distance Routes and the realisation of their tourist potential requires strategy. It is planned to produce such a strategy.	1988/89	In association with ETB and BTA.
CC39	Local Radio Project	Assistance towards the production of a feature to be networked on local radio about walks, outings and information on the local countryside.	1988/89	

CC40	Tourist Information Centre Project, Manchester	Information on local recreation opportunities to be promoted as part of a Greater Manchester Tourist Information Centre.	1988/89	
CC41	Ridgeway Survey	A survey to be carried out throughout 1988 by contractors, to measure the scale and type of usage and attitudes of visitors towards the Ridgeway itself and the different types of use it receives. A report will be issued in 1989.	1988/89	
CC42	Countryside Centre, Hereford	To test and develop ways of ensuring that people become better aware of opportunities to enjoy the countryside.	1987/89	Carried out with Hereford and Worcester County Council.
CC43	Public Transport Advice Service	Offers marketing advice to operators and/or local authorities. A tool to help regions promote CC's Public Transport policies.	Renewed Annually	Contracted to Transport for Leisure.
CC44	Tourism in the Community	To find ways of helping local communities to develop their own tourism industry.	1988/89	Carried out by Bristol University. Co-sponsored by RDC.
CC45	Assessment of Regional WA Land Holdings	A review of the conservation and recreation values of land owned by the existing Regional WAs.	1988/89	
CC46	Monitoring Hedgerow Loss	An investigation of causes of changes in hedgerow lengths in selected parts of England and Wales.	1987/88	Carried out by Environmental Resources Ltd.
CC47	Northern Grouse Moors Experimental Project	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	Carried out by the Game Conservancy.
CC48	Forestry Strategy	To produce a practical forest strategy for mid-Wales, a lowland, and the North Pennines AONB, which interprets the CC forestry policy.	1988/89	Contracted with Land Use Consultants.
CC49	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	Contracted with Landscape Research Group. Jointly funded by ESRC.
CC50	Feasibility Study of a Major New Lowland Forest	A feasibility study lasting approximately 6 months to establish how and where a new forest might be created in the English Midlands.		
CC51	Countryside Implications of Changes in CAP	To build an economic model which takes account of land use changes of adjustments to the CAP.	1988/89	Carried out by Centre for Agricultural Strategies. Jointly funded by DOE and MAFF.
CC52	Evaluation of Broad's Grazing Marsh	To assess the effectiveness of livestock compensatory allowances as a means of retaining livestock farming in a traditional area, in the face of pressure for change in arable cropping.	1986/88	Carried out by University of Manchester. Jointly funded by MAFF.
CC53	Paying Farmers to Maintain and Improve Rights of Way	To explore the possibility of landowners and farmers becoming agents for local authorities, working on a repayment basis for work carried out.	1988/90	Co-sponsored with local highway authorities, in association with MAFF.

Databases 1988/89

<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.	1985/88 Probably on sale.	Location of all commons in England and Wales.	
Heritage Coast Directory, Part 1	Annual update. 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	Annual from June 1988. 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 recreation facilities within AONBs.
Survey of local authority involvement with public Rights of Way in England and Wales	1987 Limited access (due to individual details being given in confidence); access on-line to September 1988.	Local authority addresses and postcodes.	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.

Research Publications 1987/88

- CC(P)1 *The Changing Landscape* (1988), CCP 223.
 CC(P)2 *New Opportunities for the Countryside* (1987), CCP224.
 CC(P)3 *Public Transport to the Countryside — a marketing handbook for operators and local authorities* (1987), CCP 227.
 CC(P)4 *Protected Landscapes: The UK Experience* (1987), CCP233.
 CC(P)5 *Neath Local Access Project* (1987), CCP 236.
 CC(P)6 *Rights of Way Legislation: 2nd monitoring report* (1987), CCP 242.

Contact for Research Enquiries: Jeremy Worth, 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).

COUNTRYSIDE COMMISSION FOR SCOTLAND

Research Programme 1988/89

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
Current and Recently Completed Research				
CCS1	Cairngorm Recreation Survey	To study recreational use of the Cairngorms by cordon survey.	1987/88	Initial summer survey in 1987 extended to cover winter-spring 1987/88. Co-sponsored with NCC, HIBD and Highland Regional Council. Contracted to Mackay Consultants.
CCS2	Review of Landscape Designations	To review the range of designations used at a national, regional and local level for landscape conservation.	1987/88	Co-sponsored with SDD. Contracted to Cobham Resource Consultants.
CCS3	Landscape Conservation in National Scenic Areas	Development project to resolve landscape issues arising from changing land use in the Glen Lyon and Rannoch National Scenic Area.	1985/88	Landscape strategy now complete and proposals are being promoted. A second stage of work in the Eildon-Leaderfoot National Scenic Area is underway.
CCS4	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.
CCS5	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, Hamilton, Motherwell and Monklands District Councils.
CCS6	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.
CCS7	Kilpatricks 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.
CCS8	Review of Landscape Renewal Techniques	A review of a selection of landscape improvement schemes in the central belt of Scotland.	1988	Co-sponsored with SDA. Contracted to Ian White Associates.
CCS9	Glasgow Green Belt Company	To explore the feasibility of establishing a company to hold and manage land in the green belt.	1988	Co-sponsored with Strathclyde Regional Council and SDA. Contracted to Anderson Semens Hanston (ASH).
CCS10	Footpath Management Project	To develop experience in and advice for the management of upland footpaths.	1984/88	R Aitken contracted to mount a programme of trials and associated studies.

CCS11	Vegetation in the Uplands	To review methods of revegetation of bare ground in harsh upland environments.	1987/88	Likely product as information sheets in Plants and Planting Methods series.
CCS12	Management of Gardens and Designed Landscapes	To prepare advice on the preparation of management plans.	1987	Consultants' report received. Publication in preparation.
CCS13	Landscape Setting of Buildings	To develop design advice in respect of site and setting of buildings in the landscape.	1986/88	Contracted to William Gillespie and Partners. Publication in preparation.
CCS14	Plants and Planting Methods for the Countryside	To collate and publish advice in information sheet format for planting and other resource management techniques for amenity and recreation provision.	On-going	Continuing in-house with contributions from external advisers.
CCS15	Equipment and Materials for Recreation Sites	To support developments of CCS information sheets.	On-going	Footpath surfaces and signs are probable topics.
CCS16	Accommodation for Walkers	To develop advice for low cost accommodation along long distance routes.	1987/88	Contracted to E Taylor.
CCS17	Monitoring Change in the Countryside	Survey of recent change to land cover and other attributes contributing to the appearance of the countryside.	1986/88	The CCS is jointly sponsoring with NCC the implementation in Scotland of NCC's National Countryside Monitoring Scheme.
CCS18	Air Photography of all Scotland	To create an archive of new air photography at 1:25,000 scale.	1987/88	Contribution to a project mounted by Scottish Office.
CCS19	Day Trip Survey	To survey day trips by Scottish residents.	1988	Contracted to System Three (Scotland). Co-sponsored with STB, FC and Scottish Museums Council. Continued from 1987.
CCS20	Visitors to Islay and Jura	Survey of visitors to establish their motivation and activities, and their interest in conservation resources.	1987/88	Contracted to System Three (Scotland). Co-sponsored with HIBD, Argyll and Bute District Council and RSPB.
CCS21	Gatehouse of Fleet Study	Feasibility study for Bobbin Mill proposed visitor centre.	1988	Contracted to Frank Howie Associates. Co-sponsored with Dumfries and Galloway Regional Council, SDA.
CCS22	Review of Grants on Lavatories	Value for money study of a sample of grant cases.	1988	Contracted to School of Surveying, Robert Gordon's Institute of Technology, Aberdeen.
CCS23	Cairngorms: Damage to Soils and Vegetation	Repeat of survey undertaken in 1981 to assess current trends.	1988	To be contracted to ITE (A. Watson) and co-sponsored with HIBD and NCC.
CCS24	Landscape Conservation in National Scenic Areas	To review existing experience of work in Perthshire and the Borders.	1988	Final stage of contract with Land Use Consultants.
CCS25	Country Park Marketing Study	An initial review of issues and opportunities.	1988/89	Project being formulated.

CCS26	Aberdeen Green Belt Project	To tackle selected urban fringe problems in the Aberdeen Green Belt.	1989	At an early stage of consideration with co-sponsoring local authorities.
CCS27	Methods of Recording Rights of Way	To prepare guidance on recording rights of way, based on current best practice.	1988/89	
CCS28	Birchwood Management	Follow on from earlier review report, mainly to address management issues.		To be formulated.
CCS29	Review of Scottish Landscapes	To review approaches to an inventory of Scottish landscape types.	1988/89	To be formulated.
CCS30	Public Awareness of Landscape	To survey public attitudes to issues in landscape conservation.	1988/89	Development from exploratory work conducted in 1987. Possible link with forestry issues.
CCS31	Ranger Service Review	Value for money study on grant expended in this area.	1988/89	Proposal being formulated.
CCS32	Review of Education and Training Policy	To examine CCS's education and training remit and formulate options for future policy.	1988/89	To be formulated.

Databases 1988/89

<i>Title/Description</i>	<i>Timescale/Access</i>	<i>Geographical Features</i>	<i>Recreational Features</i>
Cairngorm Recreation Survey — ca 6,000 interviews	1987/88 Survey. On request.	Interviews by cordon survey point; routes taken by grid square.	Activities and attitudes; trip length, etc.
Inventory of 282 Gardens	1985/86 Survey. Limited.	Garden by grid location plus components of garden and linked design landscape.	Access; visitation.
Review of Grant-aided Lavatories — Sample 200	1988 Limited.	Site by grid location; building components.	

Research Publications 1987/88

CCS(P)1	<i>An Inventory of Gardens and Designed Landscapes in Scotland</i> (1987), The Commission, Perth: Vol 1 Summary Report; Vol 2 Dumfries, Galloway and Strathclyde; Vol 3 Highland, Orkney and Grampian; Vol 4 Tayside, Central and Fife; Vol 5 Lothian and Borders.
CCS(P)2	<i>The Countryside Around Towns: A Scottish Programme of Partnership and Action</i> (1988), The Commission, Perth.
CCS(P) 3	<i>Loch Rannoch and Glen Lyon National Scenic Area: Policies for Landscape Conservation and Management</i> (1988), The Commission, Perth.
CCS(P) 4	<i>*A Landscape Strategy for Loch Rannoch and Glen Lyon National Scenic Area</i> (1987). Land Use Consultants, The Commission, Perth.
CCS(P) 5	<i>National Countryside Monitoring Scheme — Grampian</i> (1988), NCC and CCS, Perth.

* Available in limited numbers only.

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

DEPARTMENT OF THE ENVIRONMENT

Research Programme 1988/89

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
DOE1	An Examination of Monitoring Landscape Change Data.	Planning for a national landscape survey in 1990/91 to update the Monitoring Landscape Change exercise.	1987/89	Carried out by Bristol University.
DOE2	Investigating Causes of Hedgerow Losses	To further examine Monitoring Landscape Change hedgerow data to establish why hedgerows have been removed.	1987/88	Carried out by Environmental Resources Ltd. Co-sponsored.
DOE3	Interactive Video Disc on Rural Issues	To provide data and analyses of rural Britain.	1987/89	Carried out by BBC Enterprises. Co-sponsored.
DOE4	The Impact of Land Use Change on Aquatic Communities	To add a freshwater dimension to Project DOES.	1988/90	Carried out by FBA.
DOE5	Ecological Consequences of Land Use Change	To provide advice on most environmentally beneficial land uses.	1987/89	Carried out by NERC.
DOE6	Surveys on the Conditions of the Rights of Way Network	To assess the condition and usability of the rights of way network nationally.	1988/90	Carried out by Travers Morgan. Co-sponsored.
DOE7	Experimental Land Management	To provide a better understanding of the management needed for creation of new habitats.		NERC special topic.
DOE8	Bracken: the Extent of Spread and Methods of Control	To examine the extent of bracken spread and cost effective management methods.	1988/89	Completion: pilot June 1988; main Dec 1989.
DOE9	Thatching Reed Habitat	To advise on causes of premature decay in reed thatch.	1987/89	Carried out by University of East Anglia. Co-sponsored.
DOE10	Deer Mortality in Royal Parks	To follow up the recommendations of a 6 months pilot study (completion Feb 1988) investigating reasons for increased deer mortality and implications for Royal Parks.	1988/90	Southampton University.
DOE11	Sediment/Pollution Interactions in Estuaries.	To investigate pollutants in bird feeding sources in estuaries.	April 1988/Dec 1988	Carried out by Plymouth Marine Laboratory.
DOE12	Impact of Pesticide Regimes	To examine impact of pesticide drift and cost effective means of minimising effects.	1987/90	Carried out by ITE. Co-sponsored.
DOE13	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	Carried out by York University.
DOE14	Forestry and Upland Land Management	To examine the implications of upland forestry through a desk study of existing material.		To be let. Co-sponsored

DOE15	Environmental Impacts of Lowland Hardwood Plantations	To examine the consequences of small scale lowland hardwood plantations for existing plant communities.	1986/92	To be let. Co-sponsored.
DOE16	Implications of Rural Land Use Changes	To examine best uses for land coming out of agricultural production to maximise benefits to nature conservation and the rural estate, making use of geographic information systems and economic modelling.		To be let.
DOE17	Rural Economic and Environmental Issues	To examine the economic, social and landscape effects of changed land uses.		To be let.
DOE18	The Nature of the Rural Economy	To investigate and provide information on the rural economy.		To be let.
DOE19	Economic Benefits of Conservation Activities	To examine the income, wealth and employment generation from conservation activities.		To be let.
DOE20	Local Authority Initiatives in Rural Areas	To advise on how local planning policies can be made more responsive to the rural economy while adequately protecting the countryside.		To be let.

Databases 1988/89

The Department holds a large number of databases, many of which are geographical and provide information on a wide variety of policy areas such as housing and planning. A large database is held on the Monitoring Landscape Change project.

Contact for Research Enquiries: R A Ashman, Room 9/25, Tollgate House, Houlton St, Bristol (0272 218871).

Contact for Database Enquiries: S Toland, Room 9/23, Tollgate House, Houlton St, Bristol (0272 218811).

FORESTRY COMMISSION

Research Programme 1988/89

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
Current Research				
Recreation				
FC1	Development of the Orienteering Map for Wayfaring	To revise the Wayfaring map to improve comprehension by the consumer, and to revise techniques for course layout.	1981/88	In-house at FC. Project nearing completion.
FC2	Midge Control in and Around Recreation Facilities	To investigate what effective control measures (if any) of the main biting species of midge are possible at campsites and cabins.	1982/87	Co-sponsored with NERC, carried out at the Dept of Zoology, University of Edinburgh. Final report received. No publication intended.
FC3	The Effectiveness of Interpretive Programmes Based on Visitor Centres	To enable Visitor Centre managers to monitor the effectiveness of existing interpretive programmes.	To mid 1983	Carried out at the Dept of Psychology, University of Surrey. Publication during 1988/89.
FC4	Bicycle Routes in Scottish Forests	To identify forest roads and tracks which may be suitable for development as bicycle routes or trails.	1984/86	Carried out by Scottish Railway Path and Cycle Route project. Report received 1985. A technical paper is due to be published in 1988/89, whilst the main report is still being evaluated.
FC5	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.
FC6	Queen Elizabeth Forest Park Visitor Survey	To study and analyse the recreational benefits, using travel-cost and contingent valuation methods.	1987/88	Carried out by University of Stirling. Report being considered.
FC7	Values of User Benefits of Forest Recreation and Wildlife	To study and analyse the recreational benefits with special reference to the appreciation of wildlife.	1987/89	Carried out by University of Newcastle-upon-Tyne. Report being considered and further fieldwork being carried out.
Nature Conservation				
FC8	Blackgame	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 start	Contract with RSPB
FC9	Goosander Breeding on Forest Water Systems	To investigate goosander breeding biology and adult turnover rate on water areas at Kielder Forest by using nest boxes.	On-going	Northern FC Research Station.
FC10	Habitat Protection of Northern Wading Birds	To identify means to protect the habitat of northern wading birds in relation to predation from forest margins in Sutherland and Caithness. Further research being carried out on predictions of wader distribution in the uplands from satellite vegetation photos.	1986/88	Joint project with RSPB. Scientific Papers in preparation.

FC11	Woodlark Habitat Requirements	To identify the factors required to stimulate breeding of woodlarks in a major production forest (Thetford). Completed.	1986/88	Joint project with RSPB. Report to be published 1988.
FC12	Red Squirrel Habitat Requirements	To review existing research to identify further work required to clarify habitat issues.	1986/89	Contract with University College London.
FC13	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. One field season complete.
FC14	The Botany of Breckland Forest		1987/90	University of East Anglia. Carried out by PhD student.
FC15	Nightjars	To study the habitat requirements of a declining heathland species.	1988/89	Joint with RSPB.
FC16	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.		In-house FC, Research Information Note 126, published 1987.
FC17	Pheasants in Broadleaved Woodlands	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 to be published 1988.
FC18	Arboricultural Research	To continue a variety of research projects.	1987/89	Sponsored by DOE. Carried out in-house at FC Research Station, Alice Holt, Farnham, Surrey.

Tentative New Proposals

Recreation

FC19	Public Preferences for Broadleaves and Conifers	To identify the aesthetic qualities of broadleaves and conifers and to assess public preferences for these species in ornamental and industrial use.		Out-house consultants. Desk study currently being considered.
FC20	Impact of Orienteering on Wildlife in the Forest	To evaluate the impact of orienteering, and off-trail recreation, on fauna and flora of the forest.		Desk study still under consideration.
FC21	Paying for Recreation in the Forest	To investigate consumer attitudes to charges in relation to recreation in the forest.	1986/90	In-house at FC.
FC22	Performance Indicators and Standard Costs in Recreation	To develop standard costs and performance indicators in relation to forest recreation planning, design and management.	1987/90	In-house at FC.

Nature Conservation

FC23	The Effect of Conifer/Broadleaved Mixtures	To study the ecological effects of conifer/broadleaved mixtures grown on broadleaved sites.		In-house at FC.
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Databases 1988/89

<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 well as other data relating to FC 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.

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.

MINISTRY OF AGRICULTURE, FISHERIES AND FOOD

Research Programme 1988/89

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
Current Research				
MAFF1	Environmental Issues, and Agriculture and Forestry Land Use Options	To develop a land use model capable of predicting environmental impacts associated with possible changes in agriculture and forestry in Devon.	To 1988	Co-sponsored with DOE, NERC and NCC.
MAFF2	Future Land Use in the UK	To assess possible future changes in agricultural land use in the UK over the next two decades, and the agricultural, social and economic implications of any changes.	To 1988	Undertaken at Cambridge University.
MAFF3	Project Silvanus	To establish management practices in neglected small farm woodlands in Devon and Cornwall.	To 1989	Co-sponsored with CC, DOE, RDC, FC and NCC.
MAFF4	ESRC Rural Databank	To contribute to the development of a Rural Databank at Essex University.	To 1988	Co-sponsored with DOE, RDC and ESRC.
MAFF5	Peri-urban Agriculture	To identify the problems and costs of peri-urban agriculture and their causes.	To 1990	
MAFF6	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.
MAFF7	Integrated Rural Development Project — Peak 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-sponsors include DOE, CC, RDC, NCC, FC.
MAFF8	Landscape Treatment of Existing Hill Farm Roads	To investigate the effectiveness of different forms of profiling embankments and reseeding treatments in reducing the visual impact of hill farm roads.	To 1988	
MAFF9	Effect of Arable Water Regime on an SSSI	To monitor the future water regime of a recently drained site which attempts to improve agricultural productivity whilst preserving an SSSI.	1988	
MAFF10	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.
MAFF11	Ditch Design for Wildlife Conservation	To examine the feasibility of constructing berms in deep ditches in peat, and assessing their value for wildlife.	To 1990	Joint project with NCC.
MAFF12	Common Bird Census	To investigate the usefulness of habitat data, collected during the Common Bird Census, for analysing changes in bird populations.	On-going	

MAFF13	National Census of Small Mammals in Hedgerows	To examine 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	
MAFF14	Wildlife and Landscape Conservation within Programmes of Pasture Improvement.	To investigate the potential for integrating wildlife and landscape conservation with pasture improvement within Less Favoured Areas of Wales.	On-going	Undertaken by Welsh Plant Breeding Station.
MAFF15	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	
MAFF16	Impact of Alternative Agricultural Policies on Scenic Areas in Scotland	To provide data on two scenic areas, including Breadalbane Environmentally Sensitive Area, to evaluate the likely impact of alternative agricultural policies on farms, rural economics and the environment.	1987/90	Undertaken by Edinburgh University.
New Proposals				
MAFF17	Socio-economic Impact of Environmentally Sensitive Areas	To monitor and evaluate the socio-economic impact of the designation of North Peak and Suffolk River Valleys Environmentally Sensitive Areas.	1988/91	Undertaken by Manchester University.
MAFF18	Socio-economic Impact of Environmentally Sensitive Areas	To monitor and evaluate the socio-economic impact of designation of the Pennine Dales Environmentally Sensitive Area.	1988/91	Undertaken by Newcastle University.

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MAFF(P) 1	<i>The Cost of Meeting Planning Conditions on Farm Buildings in National Parks (1987), MAFF.</i>
MAFF(P) 2	<i>The Effectiveness of Underdrainage when Restricted for Wildlife Conservation (1987), MAFF/NCC.</i>

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NATURAL ENVIRONMENT RESEARCH COUNCIL

Research Programme 1988/89

	<i>Project Title</i>	<i>Summary</i>	<i>Timescale</i>	<i>Comments</i>
Institute of Terrestrial Ecology				
NERC1	Monitoring at Stonechest, Cumbria	To estimate the rate of direction of changes in the ecosystem resulting from drainage, planting, game management and woodland management.	1972/91	Work at Merlewood Research Station.
NERC2	Monitoring of Woodlands	To maintain existing sampling grids in semi-natural woodlands, and to resample plots according to a schedule.	1980/95	Work at Merlewood Research Station.
NERC3	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	Work at Merlewood Research Station.
NERC4	The Effects of Different Silviculture Systems on Flora, Fauna, Soil, Timber Production and Visual Amenity	To examine the effects of different species, mixtures, and silviculture systems on the soil, flora, etc on marginal land in Britain.	1976/91	Work at Merlewood Research Station.
NERC5	An Ecological Survey of Britain	To classify Britain on the basis of one km grid squares on a 15x15 grid using map attributes and variable data and to extend the basic system to further detail at local level.	1975/88	Work at Merlewood Research Station.
NERC6	Field Survey of Land Cover and Landscape Features and their Recent Changes	To record quantitatively, through field survey, the present national and regional occurrence of a defined set of land cover and landscape feature classes.	1984/88	Work at Merlewood Research Station.
NERC7	Environmental and Socio-economic Effect of CAP	To isolate and evaluate potential changes in CAP and resulting environmental change, with special regard to socio-economic consequences of such change.	1985/88	Work at Merlewood Research Station, in association with the Centre for Agricultural Strategy. Partially funded by DOE and RDC.
NERC8	Countryside Implications of Changes in CAP (Proposal)	To assess the implications for the countryside of changes in the CAP.	1988 start	Work at Merlewood Research Station.
NERC9	Environmental Issues, Agricultural 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	Work at Merlewood Research Station, in association with DOE, MAFF, NCC and South West WA. Funded by Dartington Institute.
NERC10	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	Work at Merlewood Research Station. Funded by DOE.

NERC11	Assessment of the Principles of Soil Protection in 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	Work at Merlewood Research Station. Partly funded by DOE.
NERC12	Acidification of Waters in Wales	To determine the chemistry of stemflow and/or throughfall chemistry of the main vegetation communities occurring in the study catchments.	1984/88	Work at Merlewood Research Station. Funded by DOE.
NERC13	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.	1978/88	Work at Banchory Research Station.
NERC14	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	Work at Banchory Research Station. Funded by NCC.
NERC15	Ecological Impact of Downhill Skiing 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.	1986/88	Work at Banchory Research Station.
NERC16	Aonach Moor Development Plan	To write the ecological component of a development plan for Aonach Moor for Lochaber District Council.	1986/88	Work at Banchory Research Station. Funded by Anderson Semens Haston.
NERC17	Footpath Rehabilitation Studies for 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	Work at Banchory Research Station. Funded by Yorkshire Dales National Park.
NERC18	Restoration of Upland Vegetation (Proposal)	To suggest methods and areas for the restoration of natural vegetation in the uplands of Scotland.	1988 start	Work at Banchory Research Station. Funded by CCS and NCC.
NERC19	Path Revegetation Trials on the Pennine Way	To set up trials for re-establishing natural vegetation on the worn paths along the Pennine Way.	1987/88	Work at Banchory Research Station. Funded by Peak District National Park.
NERC20	Survey of Soil Erosion and Vegetation Damage at Cairngorm	To repeat the 1981 survey of soil erosion and vegetation damage at Cairngorm.	1988	Work at Banchory Research Station. Funded by HIDB and NCC.
NERC21	Ecological Monitoring in Scottish Environmentally Sensitive Areas (Proposal)		1987/91	Work at Banchory Research Station. Partly funded by DAFS via Macaulay Land Use Research Institute.
NERC22	Population Dynamics of Red Grouse	To gain a better understanding of the mechanism underlying cyclic population changes in red grouse.	1987/88	Work at Banchory Research Station.
NERC23	Demographic Effect 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	Work at Banchory Research Station. Formerly funded by NCC.
NERC24	Population Ecology of Capercaillie	To improve understanding of factors determining capercaillie numbers.	1974/89	Work at Banchory Research Station. Funded by NCC.

NERC25	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	Work at Banchory Research Station.
NERC26	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	Work at Banchory Research Station. Funded by NCC.
NERC27	Waders on Agricultural Land	To study the effects of agriculture on lapwing and oystercatcher numbers and breeding performance in north east Scotland.	1986/89	Work at Banchory Research Station. Partly funded by NCC.
NERC28	Effects 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	Work at Banchory Research Station. Partly funded by World Wildlife Fund.
NERC29	Piscivorous Birds in Scottish Salmon Rivers (Proposal)	To survey the numbers of fish eating birds in Scottish salmon rivers, and assess their effects.	1988 start	Work at Banchory Research Station. Funded by DAFS.
NERC30	Ecology of the Pine Marten (Proposal)			Work at Banchory Research Station. Vincent Wildlife Trust are funding a student at Aberdeen University.
NERC31	Development of Monitoring of Seabird Population and Performance	To develop and test schemes for monitoring changes in numbers, survival and breeding biology of cliff nesting seabirds in Britain.	1986/89	Work at Banchory Research Station. Funded by NCC.
NERC32	Effects of Grazing on Nardus and Calluna Moorland	To relate changes in cover of important moorland plants to the grazing treatments received.	1982/90	Work at Banchory Research Station. Partly funded by NCC.
NERC33	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.	1986/88	Work at Edinburgh Research Station. Funded by NCC.
NERC34	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	Work at Edinburgh Research Station. Funded by NCC.
NERC35	Status of Fish Populations in Acidified Waters in Wales		1988 start	Work at Edinburgh Research Station. Funded by DOE.
NERC36	Poole Bridge Environmental Enhancement (Proposal)	To assess the environmental consequences of the Poole Bridge development.	1988/89	Work at Furzebrook Research Station. Funded by Dorset County Council.
NERC37	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	Work at Furzebrook Research Station. Funded by World Wildlife Fund.
NERC38	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	Work at Furzebrook Research Station.

NERC39	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	Work at Furzebrook Research Station.
NERC40	Adonis Blue Populations	To monitor population changes on an introduced colony of adonis blue butterflies and compare these with changes in other sites.	1982/88	Work at Furzebrook Research Station.
NERC41	Woodland Fritillary Butterflies	To study the mobility of 2 violet feeding species of fritillary.	1985/90	Work at Furzebrook Research Station. Funded by NCC.
NERC42	Furzey Island: Saltmarsh and Mudflat Monitoring	To survey the saltmarshes and mudflats surrounding Furzey Island, Poole Harbour, and to monitor changes in relation to oil development works.	1985/88	Work at Furzebrook Research Station. Funded by BP Ltd.
NERC43	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	Work at Furzebrook Research Station. Funded by Christchurch Borough Council.
NERC44	Review of Coombe Rigg Moss	To identify the nature of any changes which may have occurred to Coombe Rigg Moss since its enclosure by commercial afforestation.	1986/88	Work at Furzebrook Research Station. Funded by NCC.
NERC45	Scrub Succession on Chalk at Aston Rowant NNR	To assess the effects of a single treatment of rotovation and burning, of continuous grazing, and of no treatment on the colonisation of chalk grassland by woody plants.	1969/88	Work at Furzebrook Research Station.
NERC46	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 shrub communities and the associated faunas, with special reference to birds and insects.	1973/90	Work at Furzebrook Research Station. Formerly funded by NCC.
NERC47	Hartland NNR Survey	To survey each year the ant and plant species in relation to soil characteristics and to establish a trend in post-burn regeneration.	1980/88	Work at Furzebrook Research Station.
NERC48	Restoration of Heathland	To monitor the vegetational, faunal and chemical changes in heathland on disused clay workings.	1983/88	Work at Furzebrook Research Station. Funded by English China Clays Ltd.
NERC49	Dorset Heathland Survey	To survey the vegetation, extent and land use of the Dorset heathlands, and to establish a computerised database.	1986/88	Work at Furzebrook Research Station. Funded by BP International/BP Development Ltd.
NERC50	Nature Conservation in Upland Conifer Forests (Proposal)	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	Work at Bangor Research Station. Funded by NCC and FC.
NERC51	Tree Planting on Opencast Sites	By continued monitoring of field trials, additional pot experiments and development of clonal rootstocks, to revegetate opencast sites.	1984/88	Work at Bangor Research Station. Formerly funded by National Coal Board.

NERC52	Remote Sensing in the Less Favoured Areas	To identify and establish practical operational models for management of upland land use, based on remotely sensed data.	1987/89	Work at Bangor Research Station. Funded by EEC.
NERC53	Air Photo Interpretation	To assess rates of recent change in land cover and landscape features by means of air photo interpretation.	1984/88	Work at Bangor Research Station.
NERC54	Nature Conservation and Land Use Change in the Llyn	To identify habitat change and the main habitats of nature conservation interest on farmland in the proposed Llyn. Environmentally Sensitive Area.	1987/88	Work at Bangor Research Station. Funded by NCC.
NERC55	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.	1981/88	Work at Bangor Research Station and FC. Partly funded by DOE and Welsh Office.
NERC56	Sand Dune Management in Wales	To assess the effects of sand dune vegetation from known grazing and mowing regimes.	1984/89	Work at Bangor Research Station.
NERC57	Long Term Trends in Upland Vegetation	To monitor long term vegetation change on established sites.	1982/88	Work at Bangor Research Station.
NERC58	Ecology of Arctic Alpine Species in Snowdonia	To investigate population dynamics of selected plant species of arctic alpine affinities.	1982/88	Work at Bangor Research Station.
NERC59	Land Use and Ecology of Swaressey Fens	To use quantitative survey methods to study the distribution and relative abundance of the major groups of plants and animals in both aquatic and terrestrial habitats in relation to land use (current and historical) and management practices.	1986/92	Work at Monks Wood Experimental Station. Funded by Anglian WA and Cambridge County Council.
NERC60	Historical Aspects of Environmental Perception	To determine the way in which the natural environment was perceived and exploited in the past.	1984/88	Work at Monks Wood Experimental Station. Partly funded by CEEGB.
NERC61	Impact of Drainage on Wildlife	To investigate the possibility of reconstructing the chronology and extent of changes in the drainage regime and land use in river corridors in West Dyfed, and to relate the findings to known changes in biological interest.	1984/88	Work at Monks Wood Experimental Station. Funded by NCC.
NERC62	Creating Attractive Grasslands	To establish demonstration areas of grass/wild flower mixtures at selected sites in Britain.	1984/88	Work at Monks Wood Experimental Station. Funded by NCC.
NERC63	Establishment of Low Maintenance Swards on Riverbanks (Proposal)	To establish low maintenance swards on the banks of rivers.	1986/88	Work at Monks Wood Experimental Station. Funded by Severn Trent WA.
NERC64	Knocking Hoe NNR Analysis of Cutting Experiment (Proposal)	To assess the effects of cutting.	1987/89	Work at Monks Wood Experimental Station. Funded by NCC.
NERC65	Numbers of Atlantic Salmon in Scottish Rivers	To assess seasonal fluctuations in numbers of atlantic salmon and to examine the relationships between fish numbers and other environmental variables.	1987/90	Work at Monks Wood Experimental Station.

NERC66	Growth Retardants and the Ecology of Roadside Vegetation (Proposal)	To assess the effects of some herbicides and grass growth retardants on the vegetation of road verges in West Sussex.	1987/89	Work at Monks Wood Experimental Station. Funded by West Sussex County Council and ICI.
NERC67	Butterfly Monitoring Scheme	To complete the ten year period of national butterfly recording and produce a report.	1975/90	Work at Monks Wood Experimental Station. Funded by NCC.
NERC68	Sand Dune Ecology in East Anglia	To provide information on the effects of public pressure on sand dunes, with special reference to the maintenance of their wildlife interest.	1980 start	Work at Monks Wood Experimental Station.
NERC69	Plant Establishment in Woodland	To study the natural and assisted colonisation of woodland by herbaceous plant species.	1976/93	Work at Monks Wood Experimental Station.
NERC70	Saltmarsh Erosion (Proposal)	To quantify the status of saltmarsh in Hamford Water over the past 30 years and to identify where changes are occurring and how fast.	1987/92	Work at Monks Wood Experimental Station. Funded by Anglian WA.
NERC71	Vegetation and Sea Defences	To determine the role of vegetation in protecting the East Anglian coast.	1987/90	Work at Monks Wood Experimental Station. Funded by William Halcrow and Partners.
NERC72	Butterfly Habitats on a Landfill Site	To create conditions suitable for butterflies at St Osyth landfill site, and to measure the success of the proposals.	1982/88	Work at Monks Wood Experimental Station. Funded by Essex County Council.
NERC73	Design and Management of Urban Green Space	To review existing theory and data on urban green space and to formulate research topics.	1987/88	Work at Monks Wood Experimental Station. Funded by NCC.
NERC74	Conservation of Invertebrates in Plantation Woodlands	To prepare general management guidelines for the conservation of invertebrates, especially butterflies, in commercial forestry plantations in lowland Britain, and to initiate a programme of monitoring change.	1986/92	Work at Monks Wood Experimental Station.
NERC75	Heathland Management Research	To investigate the relationship between bracken cover, Calluna and scrub regeneration, and to complete the Biological Flora of Bracken.	1978/91	Work at Monks Wood Experimental Station.
NERC76	Vegetation Change at Moor House NNR	To continue to monitor the long term experiments, investigating the effects of sheep grazing and burning on upland vegetation.	1982/92	Work at Monks Wood Experimental Station.
NERC77	Grassland Experiments (Proposal)	To demonstrate by randomised block experiments appropriate management techniques at selected sites of biological interest (proposed SSSIs) on British Rail land.	1986/91	Work at Monks Wood Experimental Station. Funded by British Rail and NCC.

Freshwater Biological Association

NERC78	Physical, Chemical and Biological Components in Lake and River Waters	For selected waters, the long term recording and assessment of temporal changes in environmental factors and (in lakes) phytoplankton.	1945/71	Work at FBA Windermere. Partly funded by North West WA.
NERC79	Salmonid Stocks in Southern Chalk Streams	To investigate the population dynamics of trout and juvenile atlantic salmon in a tributary of River Frome and to monitor upstream migration of adult salmon.	1971 start	Work at FBA Wareham. Proposal with MAFF for future funding.

NERC80	Management and Ecology of fish Populations in North West Britain	To obtain a fundamental understanding of the biotic and abiotic factors controlling the population dynamics of pike and their principal prey species in Windermere.	1942/89	Work at FBA Windermere. Partly funded by North West WA.
NERC81	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. To describe the effects of an impoundment in northern England and afforestation in mid-Wales upon salmonid fishes.	1986/90	Work at FBA Teesdale. Partly funded by MAFF.
NERC82	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.	1985/88	Work at FBA Windermere. Partly funded by DOE.
NERC83	Analysis of Natural and Polluted River Communities	To develop and test a practical microcomputer based system for classifying river sites from their macroinvertebrate fauna, and for predicting fauna from environmental data.	1984/88	Work at FBA Wareham. Partly funded by DOE and SDD.
NERC84	Salmon Counting in the River Itchen	To evaluate two sites on the River Itchen for the purpose of counting migratory salmonids ascending to the 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.	1986/88	Work at FBA Wareham. Funded by Southern WA.
NERC85	Invertebrate Survey of Rivers	To classify a series of river sites, identify the macroinvertebrate fauna and assess their conservation value.	1986/89	Work at FBA Wareham. Funded by NCC.
NERC86	Ecological Research on a Large Eastern River	Research on the young stages of coarse fish, invertebrates and algae.	1987/92	Work at FBA Wareham.
NERC87	Stream Survey and Assessment in the Ashford and Folkestone Areas	To provide base line data on stream macroinvertebrates and dominant macrophytes in selected study sites, and to assess biological water quality of the streams.	1987/89	Work at FBA Wareham. Funded by Southern WA and Eurotunnel.
NERC88	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.	1986/90	Work at FBA Windermere. Partly funded by DOE.
NERC89	Monitoring the Trophic States of Reservoirs and Lakes	To define a protocol for a national survey of the trophic state of lakes in Britain for inclusion in the 1990 5 year compendium.	1986/88	Work at FBA Windermere. Funded by DOE.
NERC90	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 and pike, in the lower Avon between Salisbury and Sopley.	1987 start	Work at FBA Wareham. Funded by DOE in conjunction with Wessex WA.
NERC91	Variations in Trout Numbers	To study the variations in numbers of trout in the Lake District streams and to develop models for predicting quantitative changes.	1966/90	Work at FBA Windermere.

NERC92	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	Work at FBA Windermere. Partly funded by MAFF.
NERC93	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.	On-going	Work at FBA Wareham.
Institute of Hydrology				
NERC94	Effects of Upland Land Use on Water Quality	To study the effect of three land use changes (clear felling, tree planting and grassland improvement) on water quality in upland areas.	1970/91	Work at IH Wallingford. Partly funded by DOE, Welsh Office and FC.
NERC95	Water Resource Implications of Upland Afforestation	To determine the change in hydrological responses to 2 catchments of afforestation and forest felling.	1981/92	Work at IH Wallingford. Partly funded by DOE, SDD, Water Research Centre, DEn, North of Scotland Hydroelectric Board, FC and BWB.
NERC96	Conservation Management of Wetlands	To obtain a detailed 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 drainage.	On-going	Work at IH Wallingford. Partly funded by NCC and MAFF.
NERC97	West Sedgemoor Water Resources	To assess the consumptive use of wet fencing within West Sedgemoor.	1986/89	Work at IH Wallingford. Funded by Wessex WA.
NERC98	Hydrology and Wetland Conservation	To provide independent evidence of wetland conservation in the face of agricultural reclamation by drainage.	On-going	Work at IH Wallingford. Funded by MAFF.
NERC99	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 start	Work at IH Wallingford. Funded by MAFF.
NERC100	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	Work at IH Wallingford. Partly funded by EEC and Royal Society.
NERC101	Water Resource Implications of Upland Afforestation	To improve models and estimate evaporation from all upland vegetation types.	On-going	Work at IH Wallingford in collaboration with Strathclyde Regional Council, Forth River Purification Board and Meteorological Office. Partly funded by North of Scotland Hydroelectric Board, BWB, DEn, Water Research Centre, DOE and SDD.

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Research Programme 1988/89

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
Survey				
NCC1	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).
NCC2	Invertebrate Site Register	To collect information on the distribution of rare invertebrate species for site selection, evaluation and defence (see also NCC197 and NCC202).	1980/89	Carried out in-house.
NCC3	Entomological Survey by Specialists	To survey NNRs, SSSIs and sites of potential conservation importance for their invertebrate fauna.	Renewed Annually	Carried out by various specialists.
NCC4	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 NCC27).	1983/92	Carried out by FBA, J Southey and K Dale.
NCC5	Rare Vascular Plant Surveys	To bring together existing information on the past and present distribution and abundance of rare vascular plant species in England and Wales.	1982/90	Carried out in-house.
NCC6	Upland Vegetation Survey and Conservation Evaluation	To computerise and analyse the spacial patterns of vegetation data collected from over 200 upland areas (nearly 15% of Britain's mountains and moorlands).	1981/92	Carried out in-house.
NCC7	Inventories of Ancient and Semi-natural Woodlands	To identify ancient and semi-natural woodlands throughout Britain and to publish related books (see also NCC33).	1981/90	Carried out in-house. Publication supported by Esso.
NCC8	Consultancy Work on Rivers	To provide specialist advice on the evaluation and management of rivers for nature conservation.	1984/89	Carried out by N Holmes.
NCC9	Synoptic Survey of Saline Coastal Lagoons	To determine the distribution and status of examples of this threatened habitat and to assess their importance for conservation.	1984/89	Carried out by various university-based consultants.
NCC10	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.
NCC11	Peatland Survey in Northern Scotland	To survey the peatlands of northern Scotland and to produce conservation recommendations.	1985/91	Carried out in-house.
NCC12	Survey of Fresh-water Lochs in Northern Scotland	To survey the botanical interest of freshwater lochs in northern Scotland.	1985/88	Carried out in-house.
NCC13	National Survey of Badgers	To assess current numbers and distribution of badgers by means of a sample-based survey.	1985/88	Carried out by University of Bristol.

NCC14	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 in-house with assistance to other organisations.
NCC15	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.	1985/89	Carried out in-house. Supported by BP.
NCC16	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 (see also NCC68 and NCC75).	1985/89	In-house analysis; survey undertaken by Seabird Group.
NCC17	Moorland Bird Study	To identify moorland sites of major importance to birds and to assess relevant management factors.	1986/91	Carried out in-house.
NCC18	Survey of Sand Dunes in Great Britain	To produce an inventory of sand dune habitats throughout Great Britain, according to the National Vegetation Classification (NCC196).	1986/92	Carried out in-house.
NCC19	Geological Conservation Review	To identify and describe a series of sites which adequately represent the range of geological and physiographical features of Great Britain and should be conserved.	1979/93	Carried out in-house with various consultants and contractors.
NCC20	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 (see also NCC148).	1986/92	Carried out by NERC (ITE) and P Maitland.
NCC21	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.
NCC22	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 with various consultants and contractors.
NCC23	Survey of Amphibian Communities	To collect and collate data on sites for British amphibians other than the rare natterjack toad.	1986/89	Carried out by Leicester Polytechnic.
NCC24	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.
NCC25	Survey of Vegetated Shingle Structures	To map the vegetation of shingle structures on the coast of Britain according to the National Vegetation Classification (NCC196).	1988/91	Carried out by Girton College, Cambridge.
NCC26	Survey of Glen Roy and the Parallel Roads of Lochaber	To map the Quaternary geomorphology and geology of this classic area as a basis for its conservation and management.	1987/88	Carried out by J Peacock.
NCC27	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 NCC4).	1987/92	Carried out by FBA.

NCC28	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.
NCC29	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.
NCC30	Air Photo Survey of Scotland	To obtain 1:25,000 black and white panchromatic aerial photographs of Scotland.	1988/89	Carried out by Planning and Mapping Ltd. Funded jointly with SDD, CCS and FC.
NCC31	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 (c 0.6% of the British Coastline).	1986/89	Carried out by British Museum (Natural History).
NCC32	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 (see also NCC180).	1987/88	Carried out by University of Exeter.
NCC33	Development of Phase 2 Woodland Survey	To develop a national programme of survey based on the National Vegetation Classification (NCC196) both to verify the inventories of ancient woodlands (NCC7) and to improve the selection of SSSIs.	1987/91	Carried out in-house.
NCC34	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.
NCC35	Identification of Semi-natural Habitats Outside SSSIs	To establish clear guidance for those outside NCC on the identification of semi-natural habitats.	1988/89	Carried out by A Smith.
NCC36	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.
NCC37	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.
NCC38	Identification of Sites used for Earth Science Fieldwork	To identify the distribution of localities used by schools, colleges and universities, as a basis for planning NCC's educational and 'diversionary' publications.	1988/90	Contractor not yet settled.
NCC39	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.
NCC40	Lowland Heathland Survey of North West Scotland	To assess the total lowland heathland resource of this region as a basis for SSSI selection, especially in the light of the threat of afforestation.	1988/89	Carried out in-house.
NCC41	Survey of the Invertebrate Fauna of Dungeness	To survey the invertebrate fauna of part of Dungeness SSSI (see also NCC134).	1988/91	Carried out in-house. Currently funded by CEEGB.

NCC42	Assessment of the North York Moors Coastline	To appraise the potential of the coast of the North York Moors National Park for interpretation to the public.	1988/89	Carried out by R and J Foster-Smith.
NCC43	Seaweeds of the British Isles: <i>Ceramiales</i>	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.
NCC44	Status and Conservation of Rarer Marine Fish	To evaluate the conservation requirements of rarer marine fish in British waters.	1988/90	Contractor not yet settled.
NCC45	Digital Atlas of Marine Resources and Environment	To prepare and produce a digital marine atlas, including both thematic and catalogue functions.	1988/91	In association with NERC. Funded jointly with others.
NCC46	Cumbria Mire Survey	To survey and evaluate the valley and basin mires of Cumbria.	1988/91	Carried out by H Adams.
NCC47	Sand Lizard Survey	To resurvey all known and probable localities for this protected but still declining reptile.	1988/90	Carried out by British Herpetological Society.
NCC48	Critical Reviews of Soils in Urban Areas	To prepare reviews of current knowledge on 7 aspects of urban soils.	1988/89	Carried out by various contractors.
NCC49	Survey of Chalk Grassland in England	To determine the extent and botanical quality of the remaining chalk grassland in England.	1986/89	Carried out in-house.
NCC50	Survey of Hay Meadows of Upland Durham and Northumberland.	To locate and assess the botanical quality of the surviving hay meadows of upland Durham and Northumberland.	1986/89	Carried out in-house.
NCC51	Phase 2 Surveys of Grassland in England	To survey more fully grasslands already identified as of some significance for conservation.	1986/89	Carried out in-house.
NCC52	Surveys of Grazing Marsh Ditches in East Anglia	To assess the botanical and invertebrate faunal interest of East Anglian grazing marsh ditches.	1987/89	Carried out in-house.
NCC53	Entomological Surveys in England	To survey the entomological interest of selected sites in England.	1987/89	Carried out in-house and with amateur entomologists.
NCC54	Woodland Surveys in Scotland	To survey semi-natural broadleaved woodlands and native pinewoods in various parts of Scotland, using the National Vegetation Classification (NCC196), and to survey the bryophytes of the Lochaber woods and Borders cleughs.	1980/89	Carried out in-house and with external contractor.
NCC55	Survey of Selected Grasslands in Scotland	To survey or resurvey grassland sites in various parts of Scotland and to assign their plant communities to the National Vegetation Classification (NCC196).	1986/89	Carried out in-house.
NCC56	Botanical Survey of Culbin Forest	To survey the botanical interest of Culbin Forest as a basis for management recommendations.	1987/89	Carried out in-house.
NCC57	Surveys of Scottish River Shingle	To study the composition and succession of shingle plant communities of the Rivers Spey, Findhorn and Dee.	1987/89	Carried out in-house.
NCC58	Urban Nature Conservation in Scottish Cities	To identify and survey sites of wildlife interest in Edinburgh, Aberdeen and Dundee for possible conservation and enhancement.	1987/89	Carried out by Environment Centre, Edinburgh, and in-house.

NCC59	Survey of High Level Pine and Juniper in the Cairngorms	To identify from aerial photographs areas in the Cairngorms with such communities and to map and describe them.	1988/89	Carried out in-house.
NCC60	Upland Vegetation Survey of Wales	To survey the vegetation of all the major upland blocks in Wales as a basis for SSSI selection and management.	1979/89	Carried out in-house.
NCC61	Survey and Evaluation of Wetlands in Wales	To survey, classify and evaluate lowland wetlands/peatlands in Wales.	1983/89	Carried out in-house.
NCC62	Phase 2 Surveys of Grasslands in Wales	To survey lowland grasslands in the South Wales coalfields, in Radnor and on the Clwyd limestone.	1988/89	Carried out in-house.
Monitoring				
NCC63	Survey and Monitoring of Established and Proposed Marine Nature Reserves	To monitor species and communities of high conservation significance and identify management requirements for Marine Nature Reserves.	Long Term	Carried out in-house and by various contractors.
NCC64	Monitoring of Rare British Breeding Birds	To provide information on the breeding success of rare birds.	Renewed Periodically	Carried out by Rare Breeding Birds Panel.
NCC65	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 with NERC (ITE).
NCC66	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.
NCC67	Birds and Pollution	To monitor residues of toxic chemicals in birds' tissues and eggs and to study their effects.	1983/89	Carried out by NERC (ITE).
NCC68	Monitoring of Cliff Nesting Seabirds on Skomer Island	To maintain long term monitoring of cliff nesting seabirds on Skomer Island NNR (see also NCC16 and NCC75).	1981/88	Carried out by Edward Grey Institute of Field Ornithology, University of Oxford.
NCC69	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.
NCC70	Research 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.
NCC71	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.
NCC72	British Red Data Books on Invertebrates	To edit and prepare for publication British Red Data Books on Insects (now published) and other invertebrates.	1983/89	Carried out in-house.
NCC73	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.	1983/89	Carried out in-house. Funded jointly with CCS for Scottish districts.

NCC74	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).
NCC75	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 (see also NCC16 and NCC68).	1986/89	Carried out by NERC (ITE) and others. Funded jointly with NERC.
NCC76	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.
NCC77	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).
NCC78	Monitoring of Changes in the Red Deer population of Rhum	To monitor changes resulting from a decision to cease deer culling on Rhum NNR.	1987/92	Carried out by University of Cambridge, Dept of Zoology.
NCC79	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.
NCC80	Permanent Plots in Semi-natural Woodlands	To analyse data collected from permanent plots since 1955, as a basis for planning future recording.	1988/89	Carried out by C Piggott, University of Cambridge.
NCC81	Rare Plant Monitoring in Scotland	To monitor populations of several rare plant species and to investigate their habitat requirements.	Long Term	Carried out in-house.
NCC82	Monitoring of New Woodland on Beinn Eighe NNR	To record or re-record trees in experimental plots within planted and regenerating woodland on Beinn Eighe NNR.	1985/89	Carried out in-house.
NCC83	Winter Counts of Geese on Islay	To monitor any changes in the goose populations of Islay in the light of the establishment of sanctuaries and management agreements.	1986/90	Carried out in-house.
NCC84	Monitoring of the Effects of Reduced Grazing on Inchnadamph NNR	To establish a base line for the reserve's species-rich calcicole plant communities and to monitor any changes resulting from the removal of sheep.	1988/89	Carried out in-house.
NCC85	Monitoring of the Red Kite in Wales	To monitor numbers and breeding success of the red kite in central Wales.	Long Term	Carried out in-house, jointly with RSPB and others.
NCC86	Monitoring of Persistence of Heather on the Berwyn	To establish permanent plots on the Berwyn to monitor the survival of heather under grazing regimes settled under management agreements.	Long Term	Carried out in-house.
NCC87	Monitoring of Site Integrity and Quality in Wales	To establish two forms of monitoring for selected sites of nature conservation interest in Wales.	1987/91	Carried out in-house.
Habitat/Site Management				
NCC88	Review of Butterfly Conservation Priorities	To identify the most important butterfly sites in England and make proposals for their conservation and management.	1985/89	Carried out in-house.

NCC89	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 Organisations.
NCC90	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.
NCC91	Romney Marsh Management Studies	To assess the impact of various management techniques on ditch flora and fauna and water chemistry.	1985/90	Carried out by University of Loughborough. Funded jointly with Southern WA.
NCC92	Effects on Butterfly populations of Pesticide Free Headlands	To assess the effects of butterfly populations of not spraying headlands around cereal fields with agricultural pesticides (see also NCC102 and NCC106).	1985/90	Carried out by Game Conservancy Trust. Part of work funded jointly with NERC under special topic programme: NCC141.
NCC93	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 (Institute of Hydrology).
NCC94	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.
NCC95	Conservation Management for Moths	To review existing knowledge of the habitat management 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.
NCC96	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.
NCC97	Management of Hill Vegetation	To establish the limits of acceptable upland management from the point of view of nature conservation, as a basis for SSI management agreements.	1986/89	Carried out in-house.
NCC98	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.
NCC99	Geomorphological Survey of and Management Strategy for Morrich More	To study this Scottish coastal site's late quaternary stratigraphy, landform evolution and current geomorphological processes as a basis for management of it and similar sites.	1987/89	Carried out by University of Sheffield.
NCC100	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.
NCC101	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).
NCC102	Conservation Management of Cereal Field Borders	To test methods of managing grassy borders of cereal fields which reconcile agricultural and conservation objectives (see also NCC92 and NCC106).	1987/92	Carried out by University of Oxford. Funded jointly with Co-op Bank.

NCC103	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.
NCC104	Botanical Effects of Game Management in Woodlands	To provide a preliminary assessment of the scale and significance of the damaging effects of game management on the botanical interest.	1987/90	Carried out by Game Conservancy Trust.
NCC105	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.
NCC106	Study of Invertebrates of Grass Margins to Arable Fields	To study the invertebrates of grass margins in the context of 'set aside' and to assess their potential as natural predators for controlling agricultural pests (see also NCC92 and NCC102).	1988/89	Carried out by University of Oxford, Dept of Zoology.
NCC107	Nature Conservation and Drainage	To produce a management manual, with guidelines for reducing the impact of land drainage on nature conservation.	1988/89	Carried out by K Buckley.
NCC108	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 with Paisley College of Technology.
NCC109	Investigation of Alternative Methods of Coast Protection	To investigate coast protection methods that are effective but also safeguard geological features of interest.	1988/90	Contractor not yet settled.
NCC110	Geomorphology of Ingleborough	To document the karst and cave features of Ingleborough and develop a management strategy.	1988/90	Carried out by Trent Polytechnic.
NCC111	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 FBA and University of Loughborough.
NCC112	Control of Swamp Stonecrop <i>Crassula helmsii</i>	To investigate techniques for controlling this aggressive alien aquatic plant.	1988/89	Carried out by FBA.
NCC113	Experimental Re-creation of Species Rich Grassland	To investigate the opportunities for recreating species-rich grassland by natural recolonisation of arable land under various grazing regimes.	1988/90	Carried out by Imperial College.
NCC114	Review of Habitat Creation Techniques	To review the techniques available for creating terrestrial habitats, in order to improve project design, implementation and management.	1988/91	Carried out in-house.
NCC115	Experimental Investigation of Juniper Regeneration Techniques	To investigate simple management techniques such as scarification and burning to achieve juniper regeneration and establishment.	1988/90	Carried out by NERC (ITE).
NCC116	Heathland Management Handbook	To provide a comprehensive guide to heathland management illustrated by case studies.	1988/90	Carried out by C Gillingham.
NCC117	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).

NCC118	Survey of Invertebrates of East Anglia 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.
NCC119	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.
NCC120	Conservation Requirements of Threatened Lower Plants	To formulate detailed recommendations for the conservation of rare and threatened lichens, mosses, liverworts and charophytes.	1988/90	Contractor not yet settled.
NCC121	Water Quality Needs for Wildlife	To assist NCC in defining suitable levels of water quality parameters for healthy biotic communities.	1987/88	Carried out by M Jeffries.
NCC122	Nature Conservation and Golf Courses	To prepare a report on the past, present and likely future effects of golf course management and the opportunities for appropriate guidelines.	1988	Carried out by CEAS Consultants (Wye) Ltd.
NCC123	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.
NCC124	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.
NCC125	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.
Impact Studies				
NCC126	Advice on Hydrology — Crymlyn Bog and Sandwich Bay	To monitor the hydrology of the sites and advise on the effects of various management impacts.	1984/90	Carried out by NERC (Institute of Hydrology).
NCC127	Monitoring of Esthwaite Water	To examine the effects of eutrophication and of remedial action (phosphate stripping) by the WA.	1986/90	Carried out by FBA.
NCC128	Effects of Acidification on Lichens	To review the impact of acid deposition on tree borne lichens and to establish a monitoring programme.	1985/88	Carried out by British Museum (Natural History).
NCC129	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.
NCC130	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.
NCC131	Impact of Marine Fish Farming	To examine the ecological impact of salmon and mussel farming in Scottish waters and to establish guidelines for the selection and operation of fish farming sites (see also NCC157).	1985/89	Carried out by University of Stirling and Scottish Marine Biological Association. Funded jointly with HIDB, Crown Estate Commissioners and Scottish Salmon Growers Association.

NCC132	Native Trees and Air pollution	To undertake a 2 year study of the effects of air pollution on woodland beech and heathland Scots pine.	1987/89	Carried out by Imperial College. Funded jointly with FC.
NCC133	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.
NCC134	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 NCC41).	1987/89	Carried out by Royal Holloway and Bedford New College, London, and NERC (ITE).
NCC135	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.
NCC136	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.
NCC137	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), FBA and Long Ashton Research Station. Funded jointly with DOE.
NCC138	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).
NCC139	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.
NCC140	Mountain Plateau 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.	1986/89	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 the natural environment (see also NCC92).	1986/90	Special topic programme. Funded jointly with NERC (cp NCC187).
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	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 potentially damaging operations.	1987/89	Carried out by Manchester Polytechnic.

NCC144	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.
NCC145	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 (see also NCC168 and NCC203).	1987/88	Carried out by University of Aberdeen.
NCC146	Influence of Afforestation on Adjacent Peatland Ecosystems	To investigate the edaphic and biotic influences imposed on peatland ecosystems by adjacent forest blocks.	1987/90	Carried out by University of Newcastle upon Tyne.
NCC147	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.
NCC148	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 (see also NCC20).	1987/88	Carried out by NERC (ITE) and P Maitland.
NCC149	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 2 surviving heathland populations of natterjack toads became acidified.	1987/88	Carried out by Ensis Ltd.
NCC150	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.
NCC151	Radioactivity and Wildlife	To carry out a desk study to identify species and ecosystems at greatest risk from manmade radioactivity.	1988	Carried out by NERC (ITE).
NCC152	Effects of Land Use Change 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.
NCC153	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.
NCC154	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.
NCC155	Changes in Plant Community Composition Induced by Afforestation	To establish permanent study areas for research into long term changes induced by afforestation.	Contractor not yet settled.	
NCC156	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	Contractor not yet settled.

NCC157	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 (see also NCC131).	1988/90	Contractor not yet settled.
NCC158	Environmental Impact of Estuarine Spoil Disposal	To monitor dispersal of recently deposited spoil in the Salcombe/Kingsbridge estuary, colonisation of spoil and recolonisation of damaged areas of seabed.	1988/89	Contractor not yet settled.
NCC159	Impact of Hydraulic Dredging for Cockles	To study the immediate impact on and recovery of invertebrate fauna in hydraulically dredged areas in the Swale NNR.	1988/89	Carried out by British Museum (Natural History).
NCC160	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.
NCC161	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).
NCC162	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).
NCC163	Acidification of Freshwater SSSIs	To identify SSSIs in areas affected by acidification and to investigate its effects.	1988/90	Carried out in-house.
NCC164	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.	1988/91	Carried out by Middlesex Polytechnic (Urban Pollution Research Centre).
NCC165	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 HIBD.
NCC166	Possible Effects of New Skiing Facilities on Ladder Hills SSSI	To prepare a vegetation map as a basis for monitoring the effects of future developments.	1988/89	Carried out in-house.
Autecological Studies				
NCC167	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 University of Cambridge).
NCC168	Population Ecology and Conservation of Bats	To monitor populations of rare bats and investigate conservation problems, including the effects of pesticides (see also NCC145 and NCC203).	1985/89	Carried out by NERC (ITE).
NCC169	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).

NCC170	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.
NCC171	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.	1986/89	Carried out by Royal Holloway and Bedford New College, London.
NCC172	Food Supply and Breeding Performance of 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. Funded jointly with RSPB.
NCC173	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.
NCC174	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.
NCC175	Studies on Alpine Gentian <i>Gentiananivalis</i>	To carry out population counts and autecological studies of this rare alpine plant on Ben Lawers NNR in relation to grazing management.	1987/89	Carried out by NERC (ITE).
NCC176	Dispersal Rates of Species from NNRs and SSSIs	To investigate the potential for natural colonisation of 'set aside' areas adjacent to NNRs and SSSIs.	1988/89	Contractor not yet settled.
NCC177	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.
NCC178	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.
NCC179	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.
NCC180	Re-establishment of the Pine Marten	To plan and monitor experimental releases of pine martens as a means of strengthening or establishing populations (see also NCC32).	1988/90	Contractor not yet settled.
NCC181	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.
NCC182	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.
Socio-economic Studies				
NCC183	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.
NCC184	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 (previously Dartington Institute). Funded jointly with DOE and others.

NCC185	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.	1986/89	Carried out by ESRC. Funded jointly by DOE and others.
NCC186	ESRC/NCC Initial Research Review	To establish research priorities for the collaborative programme under NCC187.	1987/88	Carried out by University of Exeter.
NCC187	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.	1988/91	Special programme. Funded jointly with ESRC (cp NCC141).
NCC188	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.
NCC189	Countryside Implications of Changes in 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 MAFF.
NCC190	Incentives for Agriculture and Conservation	To study the fiscal and financial incentives relating to conservation and agriculture, and opportunities for reconciliation.	1988	Carried out by Laurence Gould Consultants Ltd.
NCC191	Study of the 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.
NCC192	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).
NCC193	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.
NCC194	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.
NCC195	Survey of Tourism on 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 HIDB, CCS, RSPB and Argyll and Bute District Council.
Miscellaneous				
NCC196	National Vegetation Classification	To provide a complete description and classification of British plant communities for publication by Cambridge University Press.	1976/89	Carried out by J Rodwell, University of Lancaster.
NCC197	Entomological Bibliography	To provide an information base to support the Invertebrate Site Register (NCC2).	1985/88	Carried out in-house.
NCC198	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.
NCC199	World Checklists 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.	1985/88	Carried out by IUCN Conservation Monitoring Centre and others.

NCC200	Computerisation of Earth Sciences Database	To create a comprehensive integrated database for earth science SSSIs.	1988/89	Carried out in-house.
NCC201	Establishment of a Geological Records Centre	To establish a computerised databank of earth science site records as an information resource for conservation.	1988/92	Carried out by NERC (British Geological Survey).
NCC202	Preparation of Regional Overviews from the Invertebrate Site Register	To extract relevant computerised data and write a series of regional reports (see NCC2).	1988/91	Carried out in-house.
NCC203	Bat Site Database	To consolidate and computerise the available information in order to improve conservation strategy and responses to consultations about sites (see also NCC145 and NCC168).	1988/89	Carried out by Leicester Polytechnic.
NCC204	Peatland Resources Database	To collate existing data and collect new information from soil maps and satellite imagery to build up a database on lowland peatland sites.	1988/91	Carried out in-house.
NCC205	Study of the Effectiveness of Invertebrate Sampling Methods	To investigate the effectiveness of various methods of sampling invertebrate animals.	1987/89	Carried out in-house.
NCC206	Review of Survey Information for Scotland	To establish a database of published and unpublished information about the distribution of wildlife species and habitats in Scotland.	1986/89	Carried out in-house.
NCC207	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.	1987/88	Carried out by University of Wales Institute of Science and Technology. Jointly with Welsh Office and other Welsh countryside agencies.

Databases 1988/89

NCC hold data within the following databases: SSSIs, Science Summary, Species Records, Habitat Records, Tenure, Management Records, Loss and Damage. Some Databases use geographical referencing in the form of grid references.

Contact for Research Enquiries: Bridget Smith, Nature Conservancy Council, Northminster House, Peterborough PE1 1UA (0733 40345).

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

Research Programme 1988/89

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
SDD1	Monitoring Countryside Change	A complete aerial photographic survey of Scotland, at 1:25,000 scale.	1988/89	Joint with NCC, CCS and FC.
SDD2	Countryside Implications of Changes in CAP	Implications for the environment and rural economy of changes in agricultural policy.	1988/90	Joint with MAFF, DAFS and DOE.
SDD3	Ecological Consequences of Land Use Change	Predicting the magnitude of land use change and the ecological consequences.	1988/89	Joint with DOE.
SDD4	Effectiveness of Landscape Designations	To report on current landscape designations in Scotland and the effectiveness of policies for protecting the countryside.	1987/88	Joint with CCS.
SDD5	Inventory of Historic Gardens	A source of information on the setting and background of 250 Scottish historic landscapes and associated buildings.		Joint with CCS. Publications available from CCS.
SDD6	Review of Approaches and Sources of Monitoring Change in Landscape of Scotland	Assessment of alternative sources of data for monitoring landscape change.		Report published 1987.
SDD7	Acidification of Inland Waters	Assessment of the effect of acid rain and of treatments to counteract this — continuation of previous study.	1987/90	
SDD8	Effects of Afforestation on Catchment Yield	To provide a definitive basis for assessing the effects of differing vegetation on catchment yields.	1988/90	Joint with DAFS and FC.
SDD9	Natural River Communities as an Indicator of Water Quality	To survey and classify biological communities in selected rivers as an indicator of water quality.	Completed 1988	Joint with DOE.
SDD10	Variations in Acid Deposition	To collect and monitor rain and snowfall in upland areas to assess acidification.	1984/88	
SDD11	Stress Tolerance Characteristics of Trees	Evaluation of suitable tree species for shelter, conservation and ornamental planting.	On-going	Carried out by DAFS
SDD12	Identification of appropriate land use following restoration of opencast sites.		On-going	Carried out by DAFS.
SDD13	Improving Farm Building Design	Approaches to the conservation and visual amenity of countryside by better design of farm buildings.	On-going	Carried out by DAFS.

SCOTTISH SPORTS COUNCIL

Research Programme 1988/89

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
Continuing Research				
SSC1	Sports Participation Data	To obtain Scottish data on participation in sport on a regular basis.	Continuing	System Three, Scotland.
Current Research				
SSC2	Young People's Leisure and Lifestyles	To provide a database for sports development policy in relation to this target group.	1985/89	Funded by Health Promotion Research Trust. May be extended for second 4-year period.
SSC3	Impact of Development Plan Process on Planning for Sport	To analyse relation between structure plans and provision in order to inform advice to and training for local authorities.	1985/88	Carried out by graduate student at Dundee University.
SSC4	Strathclyde Leisure Pools Study	To complete work on swimming pools and leisure pools for calibration of supply/demand model.	1986/89	System Three, Scotland, carrying out facility and household interviews.
SSC5	Sports and Anti-social Behaviour	Literature review of work on the relationship between sport and anti-social behaviour.	1987/88	Carried out by F Coalter, Polytechnic of North London.
SSC6	School-Aged Sport	To obtain information about the current situation regarding provision for and participation in sport by young people aged 5 to 18.	1988	System Three, Scotland, carrying out surveys of schools, governing bodies, clubs, local authorities and young people.
SSC7	Use of Pitches Study	To provide information and planning advice, and calibration of supply/demand model.	1988/89	Carried out by Kit Campbell Associates. Study area is Tayside Region.
SSC8	Viewdata Service	To provide and evaluate a pilot viewdata service for sport.	1986/88	Carried out by N Wood, Robert Gordon's Institute of Technology.
SSC9	Sports Provision in Schools in Grampian	To study sports provision in schools in Grampian Region.	1987/88	Carried out by D Cox, Robert Gordon's Institute of Technology.
SSC10	Mountain Accidents	To collate and analyse all available information on mountain accidents in Scotland.	1987/88	Carried out by A MacGregor, Mountain Rescue Committee of Scotland.
SSC11	Finish Time Equipment	To develop low cost computerised finish time equipment for use in orienteering and other events with large numbers of competitors.	1987/88	Carried out by J Eades, Robert Gordon's Institute of Technology.
SSC12	Orienteering Mapping	To develop methods of using electronic components to record location in forests and hence speed up the mapping process.	1987/88	Carried out by C Aust, Robert Gordon's Institute of Technology.
New Research				
SSC13	Constraints on Participation	To identify constraints on progress in the development of sport.		
SSC14	Local Sports Development Plans	To evaluate local needs and conditions and to inform local sports strategies.		

SSC15	Economic Impact of Sport	To provide improved data on expenditure and income from sport in Scotland.
SSC16	Facilities Study	To provide information and planning advice and to calibrate supply/demand model.

Databases 1988/89

<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, athletics tracks and 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; £10 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.	Continuous update. Open; hard copy; no charge.	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.

Contact for Research Enquiries: Kirsty Robertson, Research Officer, Scottish Sports Council, 1 St Colme Street, Edinburgh EH3 6AA (031 225 8411).

Contact for Database Enquiries: Hugh Neilson, Data Processor, Scottish Sports Council, 1 St Colme Street, Edinburgh EH3 6AA (031 225 8411).

SCOTTISH TOURIST BOARD

Research Programme 1988/89

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
Annual Research				
STB1	Accommodation Occupancy Survey	To determine occupancy rates in tourist accommodation.	Monthly	Hotel survey runs January to December. Self-catering and caravan (static and touring) and camping site surveys run April to October. 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 1987. In-house survey and analysis.
STB3	National Survey of Tourism in Scotland	To monitor tourist trips undertaken by British residents in Scotland.	Monthly	Monthly survey of around 2,700 adults. Undertaken by Survey Research Associates.
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. Analysed by Planning Data Management Service.
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.
STB7	'Ski Holiday Scotland' — Survey of Advertisers	To investigate response to advertisements in this brochure.	May 1988	Joint project of STB/HIDB.
STB8	Survey of Advertisers — in the Main Brochure	To investigate response to advertisements in this brochure.	July 1988	Carried out in-house.
STB9	Short Break Brochure	To investigate response to advertisements in this brochure.	July 1988	Carried out in-house.
STB10	Leisure Day Trips Study	To determine the size and extent of the leisure day trip market in Scotland.	March 1989	Joint project with CCS and the Scottish Museums Council.
STB11	Survey of American Travel Agents	To provide a base measurement for the growth of Scottish tourism in America through selected travel agents.	March 1988	Conducted by Davidson-Paterson Associates of New York and analysed in-house.
STB12	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 1988	A retrospective quarterly postal survey of conference and exhibition venues in Scotland.

Tentative New Proposals

STB13	Analysis of the STB's Classification and Grading System	To measure consumer reaction and use of the accommodation classification and grading system.	Late 1988	Part of an on-going series of surveys.
STB14	Survey of AMNET Participating Suppliers	To provide information on the types and quality of business provided by AMNET agents to Scottish suppliers.	Late 1988	Carried out in-house.
STB15	Survey of North Sea Ferry Users	To evaluate the constraints and difficulties experienced by ferry users in travelling to Scotland.	Late 1988	Joint survey with a ferry operator.
STB16	Survey of Visitors to the STB Stand at the Glasgow Garden Festival	To develop a profile of visitors to the STB stand.	Late 1988	Joint survey with Greater Glasgow TB.
STB17	Holiday Activity Research	To determine the size and expenditure of the activity holiday market in Scotland.	April 1989	Extra questions placed on the National Survey of Tourism in Scotland.

Databases 1988/89

<i>Title/Description</i>	<i>Timescale/Access</i>	<i>Geographical Features</i>	<i>Recreational Features</i>
Holiday Activity/Hobby Research	12 x 1 month surveys. Hard copy; free summary.	By Region (Scotland).	23 Recreation activities.
Scottish Leisure Day Trip Survey	Bi-monthly surveys. Hard copy; free summary.	By Region (Scotland).	Activities analysed by environment/location/category of facility.
Visitor Attraction Survey	Annual Hard copy; £5 summary.	By Region (Scotland).	Number of visitors at various facilities.

Research Publications 1987/88

STB(P)1	<i>Research and Planning Information Handbook</i> , loose leaf binder containing factsheets and research summaries, updated on a quarterly basis, 25% discount for educational establishments.
STB(P)2	<i>Accommodation Occupancy Summary Reports</i> , available on a monthly subscription.
STB(P)3	<i>The Conference and Exhibition Market in Scotland</i> , quarterly reports.
STB(P)4	<i>The Leisure Day Trip Market in Scotland</i> , Bi-monthly summaries and annual report (March 1988).
STB(P)5	<i>National Survey of Tourism in Scotland 1984—1987</i> .

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

SPORTS COUNCIL

Research Programme 1988/89

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
Research in Progress				
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	Monitoring Standardised Sports Hall	To assess these buildings developed by SC and Bovis, in terms of energy and management performance.	1984/86	Carried out by ECOTEC and NBA Tectonics Ltd. See SC(P)12 and SC(P)13.
SC3	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. See SC(P)1 and SC(P)2.
SC4	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.	1984/90	Monitoring by: M Fitzjohn, M Tungatt, North West Office. Phase 1 Second year reports and Phase 2 First year reports complete (mimeo).
SC5	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. See SC(P)2.
SC6	Monitoring Prototypes	To establish prototype pitches in different microclimates of selected modes of construction.	1984/87	Carried out by University College of Wales, Aberystwyth.
SC7	Sports Turf Advice	To provide a general advice, information and education service.	1984/87	Carried out by Sports Turf Research Institute, Bingley.
SC8	Public Sports Programmes for Disadvantaged Groups	To examine the objectives, methods and marketing of local authority programmes. Phase 1 for unemployed people.	1985/87	Carried out by S Glyptis, University of Loughborough. See SC(P)4.
SC9	Locating New Facilities	To test the need for facilities in the Northern Region using a supply/demand model.	1986/88	Carried out in-house plus Planning Data Management Services, University of Edinburgh.
SC10	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.

SC11	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.
SC12	Recreation Impact of the Severn Barrage	To look at the market for water recreation and different scenarios for the impact of the barrage.	1987/88	Carried out in-house (for Severn Tidal Power Group).
SC13	Sport and Nature Conservation	To identify the range of interactions between sport and nature conservation.	1987/8	Carried out by R Sidaway. Joint project with CC. See SC(P)5.
SC14	Sport and Recreation in Rural Communities	To examine rural residents' views of adequacy of provision in Yorkshire Dales and Berkshire.	1986/87	Carried out by S Glyptis, University of Loughborough. See SC(P)6 and SC(P)7.

New Projects

SC15	Leisure Pools	To examine the use, design and management of leisure pools.	1988/89	Carried out by Ecotec and P Sarjeant.
SC16	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.
SC17	Small Pools	To produce cost effective designs for a small pool (Phase 1) and to build prototypes.	1987/90	Carried out by Quarmby Associates. Phase 1 in progress.
SC18	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.

Sports Council/ESRC Joint Panel on Leisure and Recreation

SC19	Rationale for Public Sector Investment in Leisure	To study the development of public policy and institutions in leisure/recreation and implications for the future.	1981/83	Carried out by Centre for Leisure Research. See SC(P)8.
SC20	Leisure and the Home	To investigate the nature and extent of home based leisure and the way in which environment, house design, and family/household composition affect leisure behaviour.	1983/85	Carried out by S Glyptis, University of Loughborough. Complex sample survey of different household types in Nottinghamshire. See SC(P)9.
SC21	Leisure and Gender	To investigate the social and psychological constraints on adult women's leisure lifestyles and how these are sustained.	1983/86	Carried out by E Green, D Woodward and S Hebron, Dept of Applied Social Studies, Sheffield City Polytechnic. See SC(P)10.
SC22	Research Methods in Leisure Studies	To review the use of different analytic methods.	1983/86	Carried out by J Stockdale, LSE. See SC(P)11.

Databases 1988/89

<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 1987/88

SC(P)1	Elson, M and others (1988), <i>Providing for Air Sports</i> .
SC(P)2	Elson, M and others (1988), <i>Providing for Motorised Water Sports</i> .
SC(P)3	Sports Turf Research Institute (1988 forthcoming), <i>Draft Specification for Sports Turf</i> .
SC(P)4	Glyptis, S and Pack, C (1987), <i>Local Authority Provision for the Unemployed Study</i> .
SC(P)5	Sidaway, R (1988), <i>Sport Recreation and Nature Conservation</i> , (with CC).
SC(P)6	Glyptis, S (1987), <i>Sport and Recreation in Rural Areas: a Case Study of Ryedale and Swaledale</i> , Yorkshire and Humberside Council for Sport and Recreation, Leeds.
SC(P)7	Glyptis, S (1988), <i>Sport and Recreation in Rural Areas: The Newbury District</i> , Southern Council for Sport and Recreation, Reading.
SC(P)8	Coalter, F; Long, J and Sidaway, R (1986), <i>Rationale for the Public Sector in Leisure</i> (with ESRC).
SC(P)9	Glyptis, S and McInnes, H (1987), <i>Leisure and the Home</i> (with ESRC).
SC(P)10	Green, E; Woodward, D and Hebron, S (1987), <i>Leisure and Gender</i> (with ESRC).
SC(P)11	Stockdale, J (1987), <i>Research Methods in Leisure Studies</i> (with ESRC).
SC(P)12	Ecotec (1988).
SC(P)13	NBA Tectonics (1988).

Contact for Research Enquiries: M Collins, 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

Research Programme 1988/89

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
Continuous/Annual Research				
WTB1	British Tourism Survey	Comprehensive monthly survey of all overnight trips taken by British residents, plus an annual survey of Britons' holiday taking at home and abroad.	Continuous/ Annual	Combines two previous tourism surveys: the British Home Tourism Survey and the British National Travel Survey.
WTB2	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.
WTB3	Welsh Hotel Occupancy Survey	To provide a monthly measure of demand among a representative sample of hotels.	Monthly	Survey undertaken by WTB; regular monthly bulletins and annual report issued to participating hotels, trade associations and other subscribers.
WTB4	Survey of Attendance at Visitor Attractions in Wales	To provide an annual measure of attendance at major tourist attractions.	Annual	Postal enquiry by WTB; findings published annually.
WTB5	Demand Monitoring Survey	To provide a monthly measure of demand among a representative sample of self catering enterprises and attractions.	Monthly	Monthly survey during peak summer months; monthly bulletins issued to participants.
Current Research				
WTB6	Conwy Tourism Development Study	To prepare an action plan for conserving, developing and marketing the historic town of Conwy.	1987/88	Jointly financed study to be completed Summer 1988.
WTB7	Dinefwr Tourism Study	To consider the tourism potential of Dinefwr Borough and to prepare detailed conservation and tourism development proposals for Dinefwr Park and Castle.	1987/88	Jointly financed study to be completed Summer 1988.
WTB8	Study of the Social, Cultural and Linguistic Impact of Tourism	The overall aim of this independent research is to examine and report on the impact of tourism upon the social, cultural and linguistic life of host communities in Wales.	1986/87	Report to be published June 1988.
New Proposals				
WTB9	Three year Marketing Research Programme	To provide detailed information for marketing planning purposes on an integrated basis.	1988/90	Integrated programme of work, combining database development and ad hoc research techniques.

WTB10	Study of Hotel Development Potential	To provide information on hotel development opportunities in pursuit of priorities identified in the WTB Development Strategy.	1988	To be commissioned May 1988.
WTB11	Evaluation of Tourism Employment	To examine the current structure of employment in tourism, by collating existing official and other statistical information.	1988/89	To be commissioned June 1988.

Research Publications 1987/88

WTB(P)1	<i>British Home Tourism Survey, (1986), with BTA, ETB.</i>
WTB(P)2	<i>Hotel Occupancy in Wales 1987.</i>
WTB(P)3	<i>Demand Monitoring Survey, Summary bulletin.</i>
WTB(P)4	<i>Research Factsheets (various).</i>
WTB(P)5	<i>Marketing Planning Profiles (various).</i>
WTB(P)6	<i>Survey of Holiday and Day Visitors to Wales 1987.</i>
WTB(P)7	<i>The Social, Cultural and Linguistic Impact of Tourism in Wales, an independent study.</i>

Contact for Enquiries: Elwyn Owen, Wales Tourist Board, Brunel House, Fitzalan Road, Cardiff CF1 9LJ (0222 499909).

WATER AUTHORITIES ASSOCIATION

Research Programme 1988/89

	<i>Authority</i>	<i>Project Title and Summary of Objectives</i>	<i>Timescale</i>	<i>Contact Name</i>
WAA1	Anglian WA	Ecological Survey of the Nene Estuary. To make a detailed ecological survey of the Nene Estuary and associated area of the Wash and to predict the effect of reductions in residual freshwater flow to the estuary on flora and fauna.	1985/88	A Ferguson
WAA2	Anglian WA	River Corridor Surveys. To identify the nature conservation requirements of all lengths of river to be subject to land drainage, heavy maintenance and to indicate environmental options for those lengths.	1986/90	W Clough
WAA3	Anglian WA	The Hydrological and Hydrogeological Mechanisms of Wetlands in Norfolk, Suffolk and Cambridge. To help determine the effect of water abstraction on wetland sites and thereby to afford better protection for such sites.	1986/89	W Clough
WAA4	Anglian WA	Scientific Investigations in Broadland. To ascertain the effects of eutrophication and boating on the ecology of the Norfolk Broads.	1977/90	B Crook
WAA5	Anglian WA	Use of Alternatives to Lead Weights. To determine the success of anglers' voluntary use of lead weight alternatives.	1984/86	W Clough
WAA6	Anglian WA	The Assessment of Options for Eutrophication Control. The quantification and control of macrophyte growths following eutrophication control.	1985/86	A Ferguson
WAA7	Anglian WA	Habitat Assessment — River Welland. To establish the relationships between physical diversity of the River Welland and its biological diversity and fish stocks.	1987/89	P Barham
WAA8	Anglian WA	Nutrients and Eutrophication in Oundle Division. To establish nutrient budgets for the Rivers Nene and Welland, Pitsford Water and Rutland Water with a view to predicting the rate of eutrophication.	1988/92	A Ferguson
WAA9	Anglian WA	Studies on the Conservation Value, Status and Factors Affecting Saltings. Identification of the most cost effective methods to regenerate saltings for conservation and sea wall protection purposes.	1987/92	B Harbott

WAA10	Anglian WA	The Significance of Tributyl Tin in the Norfolk Broads. To identify the source and the extent of the contamination of the food chain by Tributyl Tin.	1987/90	B Crook
WAA11	Anglian WA	Assessment of River Flora and Fauna. To design environmentally sensitive management programmes for rivers in Lincolnshire.	1987/89	T Coles
WAA12	Southern WA	Development of sediment toxicity assay to determine the long term impact of industrial and recreational use of estuarial waters.	1983/88	P Soulsby
WAA13	Southern WA	Movement of Salmon in the River Itchen. (With FBA)	1986/94	R Crawshaw
WAA14	Thames WA	Reservoir Fishing. A customer survey will be conducted as part of a plan to improve attractiveness and viability of directly managed fisheries.	1988	M Rowe
WAA15	Thames WA	Reservoir Enhancement. A research project will be conducted to investigate the competition between trout and wildfowl for food and look at ways of enhancing the ability of reservoirs to provide more food (invertebrates etc).	May 1988/ Oct 1988	D Vickers
WAA16	Welsh WA	River Wye User Survey. A water based survey to provide improved user figures for this resource.	1988/89	B Nelson
WAA17	Wessex WA	Hampshire Avon Salmon Radio Tracking. To assess fish movement linked to river flows.	1986/90	A Frake
WAA18	Wessex WA	River Corridor Surveys. To evaluate ecological interest — minimise impact of land drainage and further conservation interest.	Continuous	J Crompton

FACILITIES AND PHYSICAL ENVIRONMENT

LEISURE FACILITIES

sports facilities

SC14

COSLA5, COSLA21, SC1-7, SC10-11, SC14-18, SSC4, SSC6-7, SSC9, SSC16

active outdoor pursuits facilities

COSLA21, SC3, SC12, SC16

casual outdoor pursuits facilities

touring facilities

CC43, CCS16, WTB4-7

entertainment/social facilities

educational facilities

NCC167, SC4, SSC6, SSC9, WTB4

PHYSICAL ENVIRONMENT

natural environment

COSLA42, DOE1

CC7, CC37, CC42, CC49, CCS18, COSLA31, FC7, NERC60, SC13, SDD1-3, SDD9-11

landscape

CC14, CC24, CC35, CC46, CC49, CC5, CCS2, CCS3, CCS12, CCS13, CCS17, CCS24, CCS29, CCS30, COSLA25, COSLA27, COSLA30, DOE2, DOE8, FC5, FC19, FC23, MAFF6, MAFF8, MAFF14, MAFF16, NCC191, NCC206, NCC29, NCC30, NCC35, NCC73, NCC87, NERC10, NERC36, NERC53, NERC73, SDD1, SDD3, SDD4, SDD6, SDD11, SDD12, SDD13, WTB7

woodlands

BWB6, CC48, CC50, COSLA26, COSLA44, FC19, FC23, NCC7, NCC104, NCC13, NCC132, NCC169, NCC171, NCC180, NCC33, NCC32, NCC54, NCC79, NCC80, NCC82, NCC89, NERC1-3, NERC69, NERC74

grasslands

NCC101, NCC115, NCC123, NCC173, NCC49-51, NCC55, NCC62, NCC90, NERC45, NERC56, NERC62, NERC77

heathlands

NCC116, NCC132, NCC149, NCC181, NCC40, NCC47, NERC47, NERC48, NERC49, NERC75

wetlands

CC22, NCC119, NCC124, NCC125, NCC161, NCC163, NCC21, NCC23, NCC52, NCC61, NCC83, NCC91, NCC93, NERC59, NERC61, NERC96-98, WAA2-4

coasts

NCC1, NCC9-10, NCC109, NCC126, NCC130-131, NCC134, NCC15, NCC157-9, NCC16, NCC160, NCC172, NCC18, NCC181, NCC198, NCC22, NCC25, NCC31, NCC37, NCC41-45, NCC47, NCC52, NCC63, NCC68, NCC75, NCC94, NCC99, NERC28, NERC31, NERC42-43, NERC68, NERC70-71, WAA1, WAA9

rivers and lakes

NCC112, NCC121, NCC154, NCC20, NCC76, NERC59, NERC78-93, NERC99, SC3, SC12, SDD9, WAA8, WAA10, WAA11, WAA17, WAA18

uplands

CCS1, CCS10-11, CCS23, COSLA27, NCC6, NCC110, NCC133, NCC140, NCC142, NCC152-3, NCC165-166, NCC17, NCC174-175, NCC182-183, NCC36, NCC59-60, NCC65, NCC78, NCC84-86, NCC89, NCC97, NERC100-101, NERC12-15, NERC18-19, NERC32, NERC52, NERC55, NERC57-58, NERC76, NERC81-82, NERC94-95, SDD10

peatlands

NCC103, NCC11, NCC118, NCC126, NCC129, NCC136, NCC145, NCC150, NCC17, NCC204, NCC21, NCC46, NCC61, NCC90, NCC96

flora and fauna

CC47, COSLA30-32, FC14, FC16, FC23, NCC9-10, NCC102, NCC11, NCC121-122, NCC137-138, NCC14, NCC141, NCC144, NCC15, NCC150-151, NCC158, NCC163, NCC165, NCC176, NCC178, NCC192, NCC206, NCC22, NCC27-29, NCC31, NCC35, NCC45-46, NCC52, NCC58, NCC63, NCC74, NCC79, NCC87, NCC91, NCC98, NERC1, NERC4, NERC14, NERC46-48, NERC59, NERC61, NERC68, NERC73, NERC86-87, WAA1, WAA18

animal life

CC2, CC31, CC47, COSLA16-17, COSLA24, FC7-8, FC23, MAFF12-13, NCC1-4, NCC106, NCC108, NCC111, NCC117-118, NCC13, NCC130, NCC133, NCC142, NCC145, NCC148-149, NCC152-154, NCC157, NCC159, NCC16, NCC160-161, NCC168-169, NCC17, NCC170-174, NCC177, NCC179-182, NCC197-199, NCC20, NCC202-203, NCC205, NCC21, NCC23-24, NCC32, NCC36, NCC41, NCC44, NCC47, NCC53, NCC64-72, NCC75, NCC78, NCC83, NCC85, NCC88, NCC92, NCC95, NERC65, NERC13, NERC22-31, NERC33-35, NERC37-41, NERC67, NERC72, NERC74, NERC79-85, NERC90-93, SC17, WAA17

plant life	COSLA30, FC14, NCC5-6, NCC100-101, NCC103-104, NCC112, NCC119, NCC12, NCC120, NCC127-128, NCC134, NCC139, NCC147, NCC155-156, NCC162, NCC167, NCC175, NCC18, NCC196, NCC25, NCC34, NCC43, NCC49-51, NCC54-57, NCC59-60, NCC62, NCC77, NCC80-82, NCC84, NCC86, NERC2-3, NERC101, NERC12, NERC20, NERC32, NERC43, NERC45, NERC49-51, NERC55-58, NERC62-64, NERC66, NERC69, NERC71, NERC75-76, NERC78, NERC82, NERC88, NERC95, WAA6
man-made environment	DOE7, NCC48, SDD5, SDD12
common lands	CC14, CC30, NCC28
canals and reservoirs	BWB1-20, COSLA21, NCC20, NERC81, NERC89, WAA8
plantations	CC36, FC19, NCC117, NCC145, NCC147, NCC155-156, NCC56, NCC98
urban parks	NCC123, NERC73
rural parks	COSLA35
resorts	
gardens	CCS12, NCC167, SDD5
farmland	CC34, CC53, CC5, NCC100, NCC102, NCC106, NCC108, NCC113, NCC125, NCC137, NCC141, NCC144, NCC176-177, NCC184, NCC83, NCC92
visitor attractions	BTA/ETB5, BTA/ETB4, BWB2, BWB12, CC39, COSLA23, COSLA34, STB2, STB16, WTB4
housing and accommodation	SC20, STB1, STB5, WTB3, WTB5
recreational waters	CCI0, CC33, WAA4
urban fringe	CC9, CCS5-9, CCS26, COSLA1, COSLA26, MAFF5, NCC122, NCC124, NCC164, NCC192, NCC48, NCC58
green belt	COSLA1
areas of special needs	
geological features	COSLA32, NCC105, NCC109-110, NCC135, NCC143, NCC19, NCC200-201, NCC26, NCC38-39, NCC99
linear routes	BWB1, BWB8, CC18, COSLA14, COSLA28, COSLA46

LEISURE AND SOCIETY

RECREATIONAL ACTIVITIES

sports	CC12, CC29, CC36, FC1, FC4, SC14 SSC1, COSLA5, COSLA21, SC1-7, SC10, SC11, SC14-18, SSC2-7, SSC9, SSC13, SSC16, STB10, WAA5
outdoor recreation	BWB2, BWB7, BWB10, BWB15, CC10, CC15, CC17, CC25, CC30, CC45, COSLA7, COSLA12, DOE6, FC22, STB10, STB17
active outdoor pursuits	BWB9, BWB13, CCS2, CCS19, COSLA21, COSLA23, FC1, FC4, FC6, FC20, SC3, SC12, SC16, SSC10-12
casual outdoor pursuits	BWB1, BWB3, BWB8, BWB19, CCS1, CCS4, CCS19, COSLA27, COSLA30, COSLA35, FC6, NERC29
touring activities	STB10
tourism	BTA/ETB1, CC38, CC40, CC44, CCS20, COSLA3, COSLA6, COSLA22, COSLA34, STB17, WTB1-2
holiday making	BWB9, CCS20, FC6, STB3-4, STB13, WTB1-2
trip making	BWB3, BWB20, CCS4, CCS19, COSLA7, STB3-4, STB10, WTB1-2

GROUPS AND INDIVIDUALS

social classes	SC4, WTB1
ethnic groups	
communities	CC21, CCS5, WTB6, WTB8
families	SC20-21
people	CC37, CC41, CC49, COSLA19
male	SC21
female	SC21
employed	BWB11, WTB11
temporary workers	WTB11
part time workers	
voluntary workers	
non-working people	
unemployed	SC8
retired	
socially handicapped people	
disadvantaged people	CC15
SOCIAL DETERMINANTS	BWB18, COSLA18
place of residence	WTB2, WTB8
economic status	
mobility	CC15

ATTRIBUTES AND PROCESSES

HUMAN ATTRIBUTES AND PROCESSES

perception CCS30, FC7, FC19, FC21
health
leadership
motivation
stress

OPERATIONAL ATTRIBUTES AND PROCESSES

accessibility
level of participation CC37, CC39, CC41, CC42, FC21
congestion
efficiency SC1, CC34, SC2, SC11
safety SSC10
use COSLA45, NCC136, WTB11

APPLIED DISCIPLINES AND TECHNIQUES

DESIGN, CONSTRUCTION AND

MAINTENANCE

design process CCS10, CCS13-16, FC5, FC22, SC2, SC5, SC10
construction process CCS10, CCS13-15
maintenance CCS10, COSLA46, FC16, SC5, SC10
reclamation CCS5-6, CCS8-9, CCS11, NERC61, SDD12

MANAGEMENT FUNCTIONS

management
DOE17, SC1, CC14, CC2, CC22-23, CC30, CC33, CCS1, CCS7-9,
CCS12, CCS16, CCS22-23, CCS26, COSLA44, COSLA52, DOE10,
DOE16, DOE19, FC2, FC20
recreational management BWB4, BWB10, BWB14-15, CC21, COSLA7, COSLA18,
COSLA27, COSLA45, COSLA47-48, FC2, FC20, FC22, NERC86
habitat management BWB6-7, BWB16-17, COSLA16-17, COSLA24, COSLA26,
COSLA29, FC9-11, FC12-13, FC15-17, FC20, NERC3, NCC8,
NCC11, NCC24, NCC28, NCC37, NCC56, NCC60, NCC63,
NCC81, NCC88-125, NCC131, NCC135, NCC139, NCC168-169,
NCC170-171, NCC173, NCC175, NCC178-179, NCC198, NCC203,
NERC1, NERC4, NERC10, NERC37-41, NERC43, NERC45-46,
NERC50-52, NERC54-56, NERC59, NERC62-64, NERC66,
NERC68-70, NERC73-74, NERC77, NERC94, SC13, WAA18
CC26
CC32, WTB11
CC23, CC33

project management

development and training

management theories and organisation

corporate strategy

policy development

managerial activities

appraisal and evaluation

policy development

monitoring and control

CC48, NCC188-191, SC19, SDD4, WAA17

CC9, CC31, CC34, CC45-46, COSLA11, SC12, SC19, WTB6

CC48, NCC188-191, SC19, SDD4, WAA17

BWB4, CC9, CC11, CCS22, CCS27, CCS29, NERC24, SC7, SC13,
WTB3, WTB5, WTB9-10

forecasting

planning

marketing

market research

advertising

exhibitions

finance

financial support

personnel management

information systems

CC25, CCS9, COSLA43, WTB9

BTA/ETB10, BTA/ETB14, CC6, CC17, CC27, CC38, CC43,
CCS25, COSLA47, STB11, STB14-15, WTB9

BTA/ETB1, BTA/ETB6-8, BWB3, BWB5, BWB8-9, BWB12-13,
BWB18-20, CCS4, CCS19, COSLA52, STB6-9, STB11-17, WTB10
STB6-9, WTB9

FC21-22

CC52

CC7-8, CC14, CC19, CC24, CC28, CC35, CC3, DOE13, NCC6,
NCC185, NCC197, NCC200-201, NCC203-204, NCC206-207,
NERC10, NERC52, NERC83, NERC85

database and statistics

RESEARCH TECHNIQUES

fieldwork

surveys

DOE1

NERC78-79, WAA8-9

CC12, CC16, CC18, CC41, CCS20, COSLA8, COSLA29,
COSLA35, DOE6, NERC1-3, NERC5-6, NERC8, NERC10,
NERC13-14, NERC21, NERC26, NERC31-32, NERC42-43,
NERC47-49, NERC51, NERC53, NERC58, NERC67, NERC87,
NERC88-92, NERC94, SDD1, SDD6, WAA1-3, WAA6-7,
WAA9-11, WTB3-4

CC12, NCC193, NCC195

questionnaires

interviews

case studies

feasibility studies

CC46, CC5, NCC79

CC50, COSLA21-22, NCC105, NCC113-115, NCC188, NCC205,
NCC75, NERC36, WTB6-7, WTB10

experimentation	CC28, CC47, CC53, NERC100-101, NERC18-20, NERC22-23, NERC25, NERC51, NERC56, NERC64, NERC70, NERC75, NERC77, NERC93, NERC95
research methods	CC32, SC22, SDD6
causal analysis	SDD7-8
comparative analysis	NERC99
content analysis	
cross-cultural analysis	
typological analysis	WTB8
RELATED STUDY AREAS	
TOWN AND COUNTRY PLANNING	
urban planning	SSC14
rural planning	COSLA8, NCC58, SC9, SSC3
	CC23, CC52, CC3, CCS2-3, CCS17, CCS24, COSLA15, COSLA18, DOE20, MAFF7, NCC183-188, NCC194, NCC207, NERC52, SC17, SDD2
regional planning	COSLA3, COSLA32-34, COSLA36, SC9, SC14
waterway planning	BWB2, BWB10, BWB15
development planning	CC44, COSLA25, NERC16, NERC36, WTB10
ECONOMICS	
economic conditions	SSC15
trade	NCC183-187, NCC189-195
supply and demand	
prices	CCS20, STB5
labour economics	
cost-benefit analysis	NERC4, NERC7
LAW	
access	CC11
rights	CC11, CC13, CC19, CC26, CC30-31, CCS27
GEOGRAPHY	
cartography	NCC14, NCC166, NCC204, NCC34, NCC36, NCC45, NCC59, NCC73, NCC77
land classification	CC8, CCS17, NCC7, NCC14, NCC18, NCC196, NCC33, NCC24-25, NCC30, NCC54-55, NCC61, NCC73, NERC5-9
BEHAVIOURAL SCIENCES	
sociology of leisure	SC21
psychology of individual	
social psychology	
politics	
EDUCATION	
health education	FC3, NCC167, SC4, SSC6, SSC9, WTB4
environmental education	
environmental interpretation	COSLA31, COSLA51, COSLA53, FC7, NCC38
ENVIRONMENTAL SCIENCES	
applied biology	BWB14, CC20, COSLA33, FC3, FC6, NCC42
ecology	FC2
	BWB7, DOE8
	BWB16, CCS14, COSLA24, FC8, NERC5-6, NERC13, NERC21, NERC30, NERC33-34, NERC37-41, NERC58, NERC60, NERC79-80, NERC89, WAA1, WAA3-4, WAA6-8, WAA10
botany	FC16
zoology	DOE10, NERC22-28, NERC31, NERC90, NERC92
geology	
hydrology	NCC126, NCC129, NCC136, NCC93, NERC100-101, NERC11-12, NERC78, NERC94-99, SDD7-8
AGRICULTURE	
environmental impact of agriculture	DOE17, CC7, CC52, CC3, CCS7, CCS26, COSLA26, COSLA43, SDD2-3
	CC51, CCS3, CCS24, DOE4-5, DOE12, DOE16, MAFF1-2, MAFF6, MAFF10, MAFF14-18, NCC100, NCC103, NCC108, NCC127, NCC130, NCC137-138, NCC141, NCC143-144, NCC152, NCC189-190, NCC40, NCC67, NCC84, NCC86, NCC89-94, NCC97, NERC79, NERC27, NERC32, NERC45, NERC76
environmental impact of fisheries	NCC131, NCC157, NCC159-160, NCC172
recreational use of farmland	CC27, CC31, SC16
habitats on farms	MAFF10, MAFF12-13, MAFF15, NERC54
urban fringe agriculture	COSLA1, MAFF5
farm buildings	CC27, SDD13
land drainage	MAFF9, MAFF11, NCC107, NCC129, NERC96, NERC98-99, SC16, WAA2, WAA7, WAA11
farm woodlands	MAFF3
FORESTRY	
silviculture	CCS28, COSLA36, DOE14-16, FC13-14, NERC8-9, NERC13, NERC26, NERC44, NERC55, SDD8
arboriculture	CC4, FC13, NCC142, NCC145, NCC147-148, NCC153-156, NCC191, NCC40, NCC82, NERC4, NERC50, SDD11
conservation	CC6, FC14, FC18
	BWB17, CC4, CC16, CC21, CC25, CC33-34, CC5, CCS1-2, CCS12-13, CCS30, COSLA11-12, COSLA33, COSLA43, DOE9, DOE11, DOE18, FC8-12, FC15, FC17, NERC11, NERC16, NERC21, NERC70-71, SC13, SDD4, SDD13, WTB7

conservation areas	BWB17, CCS1, NERC21, WTB7
ancient monuments	COSLA10, COSLA33
historic buildings	
landscape conservation	CCS3, CCS17, CCS24, CCS29, COSLA25, COSLA27, MAFF6, MAFF8, MAFF14, MAFF16, NCC191, NERC36, NERC73, WTB7
nature conservation	CC45, CCS23, COSLA8, COSLA16-17, COSLA24, COSLA31-32, DOE13, FC8-12, FC15, FC17, MAFF6, MAFF9, MAFF11, MAFF14-16, NCC1-207, NERC15, NERC17-20, NERC33-34, NERC37-41, NERC44, NERC46-47, NERC50, NERC54, NERC72, NERC74, NERC84-85, NERC96, NERC98, WAA2-3, WAA7, WAA9-11, WAA18
environmental impact of leisure	BWB16-17, COSLA18, NCC104, NCC122, NCC133, NCC135, NCC140, NCC15, NCC160, NCC165-166, NCC170, NCC177, NCC195, NCC66, NERC14-15, NERC17-20, NERC24, NERC68, WAA4-5, WAA12, WTB8
INDUSTRY	
pollution	DOE11, NCC1, NCC128, NCC132, NCC149-151, NCC161-164, NCC168, NCC67, NCC76, NERC100, NERC11, NERC35, NERC66, NERC83, NERC88, SDD7-10
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environmental impact of industry	NCC128, NCC134, NCC151, NCC158, NCC41, NERC65, NERC42, NERC48, NERC72, NERC84, NERC86-87, WAA12
INFORMATION	CC7-8, CC14, CC19, CC28, CC35, CC3, COSLA7, COSLA52, DOE13, MAFF4, NCC6, NCC185, NCC197, NCC200-201, NCC203-204, NCC206-207, NERC10, NERC52, NERC83, NERC85, SSC8
manuals and guidebooks	NCC7, NCC107, NCC116, NCC196, NCC202, NCC38, NCC43, NCC96, NERC60
visitor centres	BWB12, CC40, CC42, CCS21, COSLA22
visual information	CC40, DOE3
interpretation	BWB14, CCS21, COSLA13, COSLA34, COSLA49, COSLA51, NCC42, NERC53
registers and directories	NCC2, NCC16, NCC19, NCC197, NCC199, NCC22, NCC34, NCC39, NCC69-72, NCC74, NCC76, NERC67
ORGANISATIONS	
CENTRAL GOVERNMENT	NCC24, NCC130, NCC189-191, NCC199, NCC207
LOCAL GOVERNMENT	CC53, NERC16-17, SC19
VOLUNTARY ORGANISATIONS	NCC15-16, NCC34, NCC47, NCC53, NCC69-72, NCC74, NCC77, NCC85, NCC198
COMMERCIAL ORGANISATIONS	NCC1, NCC7, NCC15, NCC41, NCC102