

## **Countryside Recreation Research Advisory Group**

# **COUNTRYSIDE RECREATION RESEARCH 1987/88: THE PROGRAMMES OF THE CRRAG AGENCIES**

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**Published by CRRAG  
Free copies available from:**

School for Advanced Urban Studies  
University of Bristol  
Rodney Lodge  
Grange Road  
Bristol BS8 4EA  
(0272) 741117

August 1987

Published by the Countryside Recreation Research Advisory Group (CRRAG)  
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University of Bristol, Rodney Lodge, Grange Road, Bristol BS8 4EA  
Typeset by Morgan-Westley, Somerset House, 28-30 High Street, Portishead, Bristol BS20 9EN  
Printed by Portishead Press, 28-31 Wilder Street, Bristol BS2 8QS  
ISBN 0 948502 09 6

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## PREFACE

In 1982, The Countryside Recreation Research Advisory Group decided to publish an annual compilation of the current and prospective research programmes of agencies represented on the Group (see list of member agencies below), so that more information about this work could reach a wider audience of interested organisations. For each agency the research included is a list of those projects relevant to Countryside Recreation Research, and is not necessarily their full programme. The first edition of the compilation appeared in June 1982. This publication is the sixth in this series and contains information on countryside recreation research and recent publications, correct at April 1987.

In content and inevitable limitations, the document closely resembles previous editions. As with the 1986/87 edition, a thematic index has been included. Each project has been allocated a code which relates it to the relevant agency programme and appears both in the main text and at the appropriate point in the index.

Although considerable effort has been made to edit agencies' research programmes as originally submitted into a common format, the result does not disguise the varied nature of the individual programmes nor the differing extents to which the programmes have a bearing on countryside recreation research as strictly defined. A range of choice has been exercised by each contributor in the cut-off between that judged to be relevant to CRRAG and that not, with some lists more tightly drawn than others. The register only includes the research programmes of member agencies. It is planned to include the research undertaken by two of the local authority associations each year: this year the research programmes of the Association of County Councils and the Association of Metropolitan Authorities are described.

A listing of this kind is of short term value as it stands, in that programmes of research are often subject to change according to the availability of resources and changing operational needs of sponsoring bodies. Therefore not all the prospective items listed may, in fact, proceed. However, to mitigate these circumstances, at the end of each section is the name, address and telephone number of a suitable contact in the respective agency, who will be pleased to respond to enquiries and requests for further information.

It is hoped that this compilation will be of value and interest to those with an involvement in countryside recreation and allied fields. Further copies are available free of charge from Hilary Talbot-Ponsonby, School for Advanced Urban Studies, University of Bristol, Rodney Lodge, Grange Road, Bristol BS8 4EA (0272) 741117.

### BODIES REPRESENTED ON CRRAG

Association of County Councils  
Association of District Councils  
Association of Metropolitan Authorities  
British Tourist Authority/English Tourist Board  
British Waterways Board  
Convention of Scottish Local Authorities  
Countryside Commission  
Countryside Commission for Scotland  
Department of the Environment (Observer)  
Forestry Commission  
Historic Buildings and Monuments Commission (English Heritage)  
Ministry of Agriculture, Fisheries and Food (Observer)  
Natural Environment Research Council  
Nature Conservancy Council  
Scottish Development Department (Observer)  
Scottish Sports Council  
Scottish Tourist Board  
Sports Council  
Wales Tourist Board  
Water Authorities Association

The Group includes representatives of a range of statutory agencies: from those whose role is mainly to provide grants and advice (such as the two Countryside Commissions), to representatives of the Local Authorities Associations whose member Councils are the main public sector providers. The Group was established in 1968 as an advisory technical liaison group to harmonise the countryside recreation research of member agencies and to promote knowledge of such research. The harmonisation aim is achieved by the agencies making regular presentations of their research and development programmes to the Group.

## GLOSSARY

ACC	Association of County Councils	HIDB	Highlands and Islands Development Board
ACORN	A classification of residential neighbourhoods	HMSO	Her Majesty's Stationery Office
AMA	Association of Metropolitan Authorities		
BTA	British Tourist Authority	LB	London Borough
BWB	British Waterways Board	LDR	Long Distance Route
CAP	Common Agricultural Policy	MAFF	Ministry of Agriculture, Fisheries and Food
CASE	Collaborative Award in Science and Engineering	MOD	Ministry of Defence
CC	Countryside Commission	MSC	Manpower Services Commission
CCS	Countryside Commission for Scotland	NCC	Nature Conservancy Council
CIPFA	Chartered Institute of Public Finance and Accountancy	NERC	Natural Environment Research Council
CRRAG	Countryside Recreation Research Advisory Group	OPCS	Office of Population and Census Statistics
DAFS	Department of Agriculture and Fisheries for Scotland	OS	Ordnance Survey
DC	Development Commission	RSPB	Royal Society for the Protection of Birds
DE	Department of Employment	SC	Sports Council
DEn	Department of Energy	SDD	Scottish Development Department
DOE	Department of the Environment	SSC	Scottish Sports Council
EC	European Commission	SSSI	Site of Special Scientific Interest
EH	(English Heritage) Historic Buildings and Monuments Commission	STB	Scottish Tourist Board
ESRC	Economic and Social Research Council	TB	Tourist Board
ETB	English Tourist Board	TRRL	Transport and Road Research Laboratory
FC	Forestry Commission	WA	Water Authority
GHS	General Household Survey	WAA	Water Authorities Association
		WTB	Wales Tourist Board

**THE RESEARCH PROGRAMMES**

**1987/88**

# ASSOCIATION OF COUNTY COUNCILS

## Research of Member Councils 1987/88

	<i>Authority</i>	<i>Project Title and Summary of Objectives</i>	<i>Timescale</i>	<i>Contact Name</i>
<b>Ecology/Nature conservation</b>				
ACC1	Cleveland CC	Cleveland County Habitat Survey. Leading to Wildlife Strategy.	Feb 1987/ March 1988	D Counsell.
ACC2	Hampshire CC	Habitat Survey of County Council Recreation Sites. To assess vegetation types with attention to features of special interest, flora and fauna, on nearly 40 sites managed for countryside recreation. Completed.	1986	C R Cuthbert, Recreation Dept.
ACC3	Mid Glamorgan CC	Kenfig Local Nature Reserve. Hydrological/morphological survey related to wider management of site.	1986/87	J Wykes.
ACC4	Mid Glamorgan CC	Cwm Nofydd Farm, Machen. A study of potential for nature conservation and public access.	1984/86	Phil Jayne, Caerphilly Mountain Project.
ACC5	Mid Glamorgan CC	Fforest Ganol. A study of potential for nature conservation and public access.	1985/87	Phil Jayne, Caerphilly Mountain Project.
ACC6	Exmoor National Park	Remote Sensing Applications in National Parks. To monitor changes in landscape, vegetation etc.	On-going	L F Curtis.
ACC7	North York Moors National Park	Moorland Research and Management. Improvement of moorland management for economic, ecological and recreational purposes; with national applicability.	1976/90 (1st phase) 1990 start (2nd phase)	R W Brown.
ACC8	North York Moors National Park	Farm Conservation Plans. Development of farms for conservation and amenity purposes.	1986/89	P J Barfoot.
ACC9	Yorkshire Dales National Park	Phase I Botanical Survey. To provide information on natural and semi-natural habitats in the Yorkshire Dales National Park.	1985/88	National Park Officer.
ACC10	Yorkshire Dales National Park	Survey of Coppicing of Ancient Woodlands. Survey of the ecological effects of coppicing to provide background information on which to base management plans.	Continuous	National Park Officer.
ACC11	Yorkshire Dales National Park	Three Peaks Project — Reports by Institute of Terrestrial Ecology for Yorkshire Dales National Park Committee. Footpath surveys — surveys of the extent and nature of erosion on 65 km of upland paths; reinstatement trials — first phase of trials to reinstate native vegetation on damaged ground adjacent to upland footpaths.	1986	National Park Officer.
ACC12	Broads Authority	Deterioration and Restoration of Freshwater Ecosystems. To investigate further the causes of the deterioration of the Broads and their associated rivers and propose remedies.	1986/88	D Brewster.

ACC13	Broads Authority	Hydrological and Hydrogeological Mechanisms of Wetlands. Classification and modelling of wetlands in order to assess impact of water abstraction and irrigation proposals.	1986/89	D Brewster.
ACC14	Broads Authority	Mud-pumping of Broads. Removing enriched sediment from Belaugh Broad in order to stimulate the restoration of clear water conditions with associated water plants.	1987	D Brewster.
ACC15	Broads Authority	Experimental Phosphorus Reduction at Sewage Works. In conjunction with Anglian Water, an experimental programme of removing phosphorus from the effluent of sewage treatment works on the Rivers Bure and Ant in order to restore the broads and rivers.	1986/91	D Brewster.

### Education

ACC16	Berkshire CC	Learning Through Landscapes.	1986/89	M G Melton.
ACC17	Berkshire CC	Teacher Fellowship in Environmental Education.	Jan 1987/ April 1987	S N Armstrong.
ACC18	Leicestershire CC	Educational Use of Rights of Way. To study the suitability of rights of way as a teaching resource — including appreciation of the countryside, awareness of nature conservation, preparation of information sheets and resource pack material.	1986/87	R Mills.

### Land Reclamation/Restoration

ACC19	Dyfed CC	Derelict Metal Mines in Dyfed. Research into the reclamation of derelict metal mines, including their potential for recreation and interpretation.	1987	D P Bown.
ACC20	Gwent CC	Aftercare and Management of Reclaimed Land. To integrate reclaimed derelict land into the existing landscape through agricultural techniques, ultimately for recreational purposes.	1983 start	Basil Evans.
ACC21	Gwent CC	Creation of Woodland by Direct Seeding. To investigate the most effective method of direct seeding of trees and shrubs onto derelict/disturbed ground.	1984 start	Basil Evans.

### Plans and Studies

ACC22	Devon CC	Haytor Granite Tramway and Stover Canal Study. Completed.	Sept 1985	D Andrew.
ACC23	Hampshire CC	Blackwater Valley Recreation Strategy. To prepare a Recreation Strategy in the light of an assessment of demand for various recreational activities, for which provision in the Valley would be appropriate.	1986/87	A Inder, Recreation Dept.
ACC24	Lancashire CC	Management Plan for Areas of the West Pennine Moors Subject to Access Agreements. To integrate demands placed on such land, resolve any apparent conflicts and set out clear proposals for future management practices.	Oct 1986/ Oct 1987	Derek Taylor.



ACC25	Lancashire CC	Farm Woodland Feasibility and Management Study. To investigate deteriorated areas of broad-leaved woodland in order to bring such areas into appropriate management.	1987	Geoff Morries.
ACC26	Lancashire CC	Trough of Bowland Study. To highlight problems of visitor pressure on the Trough of Bowland and to recommend solutions to potential conflicts.		David Padley.
ACC27	Broads Authority	Broads Boat Museum. Feasibility study of exhibits, location, funding and management.	1984 start	B E de Iongh.
ACC28	Broads Authority	Broads Area Case Studies. Studies by Design Consultants of key recreational areas in the Broads.	1983/85	B E de Iongh.

### Recreation

ACC29	Devon CC	Tarka Project → North Devon. To investigate recreation and tourism initiatives in the area associated with the Tarka the Otter books. To be published September 1987.		G Wills/D Andrew.
ACC30	Northamptonshire	Pocket Parks Advisory Officer. 3 year joint project between the CC and Northamptonshire CC Leisure and Libraries Dept. To promote the concept and encourage the establishment of 'Pocket Parks'.	April 1987/ April 1990	A Teulon.

### Rights of Way

ACC31	Hampshire CC	Rights of Way Users Survey 1986. To assess the extent of current use of rights of way in Hampshire, and to find out if the use of rights of way was being inhibited for any reasons.	July 1986/ Nov 1986	A Inder, Recreation Dept.
ACC32	Humberside CC	Footpaths in Humberside. A survey of the recreational use of public footpaths in 3 high amenity areas of Humberside.	June 1986/ Sept 1986	T Williams.
ACC33	North York Moors National Park	National Park Rights of Way Condition Survey. Survey of state of repair and physical condition of rights of way in the North York Moors National Park.	May 1986/ May 1987	Toni Clark.

### Rural Environment/Heritage

ACC34	Cambridgeshire CC	A Survey of Landscape Changes in Cambridgeshire. An MSC funded project to measure landscape change, comparing 1985 field survey with 1971 air photographs, for 20x9 sq km plots across the county; 100 page report.	April 1985/ March 1986	Chris Brown, Landscape Conservation Officer.
ACC35	Lincolnshire CC	Green Lanes. Their identification, protection and maintenance.	1987/91	R E Taylor.
ACC36	Broads Authority	Staites Survey and Register. To record historic landing places used by vessels for centuries prior to the advent of road and rail transport.	1985/86	B E de Iongh.

## Surveys

ACC37	Hampshire CC	Queen Elizabeth Country Park: Visitors Survey 1986. To examine the use of the Park Centre and Butser Ancient Farm and the attitudes of visitors to the facilities on offer.	Summer 1986	A Inder, Recreation Dept.
ACC38	Hampshire CC	Monitoring of Visitor Numbers. To monitor the numbers of visitors to Country Parks and other important recreation sites, to assist with marketing and site management; also to improve the information system.	On-going	A Inder, Recreation Dept.
ACC39	Hampshire CC	Household Survey 1987. To assess latent demand to use the County Council's visitor attractions, and to identify ways of meeting that demand.	Summer and Autumn 1987	A Inder and K Mann, Recreation Dept.
ACC40	Leicestershire CC	1986 Countryside Visitor Survey. Interviews at Country Parks, to guide Countryside Local Plan policies.	1986/87	N Hunt.
ACC41	Leicestershire CC	1986 Household Survey — Recreational Use of the Countryside. Questionnaire survey to establish pattern of recreational use of the countryside, to guide Countryside Local Plan policies.	1986/87	N Hunt.
ACC42	North York Moors National Park	Visitor Surveys. Survey of attributes, preferences and attitudes of visitors to the National Park; and a survey of visitors to 10 sites on the National Park coastline.	1985/87	J Watts.
ACC43	Pembrokeshire Coast National Park Authority	Pembrokeshire Visitor Survey 1984. Study to assess trends in relation to desires and requirements of visitors as a guide to policy formation and assessment. Completed. Publication forthcoming.		C S Kirkbride.
ACC44	Pembrokeshire Coast National Park Authority	Pembrokeshire Coast National Park Visitor and Recreational Site Surveys. Surveys to monitor trends in visitor numbers, accommodation types, and types of visitors to intensively used sites in the National Park.	Aug 1986 start	George Yeomans.
ACC45	Yorkshire Dales National Park	Visitor Surveys 1985/86. A survey of visitor patterns and characteristics in Yorkshire Dales National Park.	1986	National Park Officer.

## Tourism

ACC46	Devon CC	Devon Tourism Review. Annual reports published in March.		L Garlick/ D Andrew.
ACC47	Essex CC	Tourism Signposting in Essex. To develop and operate a strategy for signposting tourist attractions.	On-going	Lynn Ballard.
ACC48	Gloucestershire CC	Tourism in Gloucestershire: Tourism Action Plan. To develop forms of tourism best suited to the County and to examine and develop marketing strategies and opportunities.	Continuous	R Colley, Planning Dept.
ACC49	Gloucestershire CC	Tourism Statistics. To develop the statistical information base for tourism in the County.	Continuous	J Yates, Planning Dept.

ACC50	Mid Glamorgan CC	Rhondda Heritage Park. Feasibility study for major tourism site related to coal and social themes.	1985/86	J Wykes.
<b>Water Recreation</b>				
ACC51	Pembrokeshire Coast National Park Authority	Study of Diving in the Pembrokeshire Coast National Park. Recreation management study of diving around the Pembrokeshire Coast.	June 1986/ Sept 1986	C S Kirkbride.
ACC52	Pembrokeshire Coast National Park Authority	Recreational and Waterborne Activities Study. Study of water recreation and general waterborne activities with the aim of identifying patterns of boating to highlight areas of potential growth and development.	Sept 1986/ July 1987	Ian C Marshall.
ACC53	Broads Authority	Boat Wash Research. To assess wash generated by a range of typical Broads craft and hence to establish measures to reduce bank erosion caused by boat wash.	April 1986 start	B E de Iongh.
ACC54	Broads Authority	Broads Boatyard Study. To assess pressures for change and examine ways of assisting boat industry.	1986	M Scott.
ACC55	Broads Authority	Broads Boat Census. Analysis of craft movements in mid-August.	1976/86	D Brewster.
ACC56	Broads Authority	Experimental Signing System on River Ant. To develop a visually acceptable and comprehensive signing system for the navigational area of the Broads in order to prevent the clutter of ad hoc signs.	1986/87	D Shipp.

# ASSOCIATION OF METROPOLITAN AUTHORITIES

## Research of Member Councils 1987/88

	<i>Authority</i>	<i>Project Title and Summary of Objectives</i>	<i>Timescale From/To</i>	<i>Contact Name</i>
AMA1	Doncaster MBC	Hedgerow Survey. To study the ecological and landscape value of hedgerows in the borough.	1986/88	P Bromley.
AMA2	Doncaster MBC	Household Recreation Survey. To study informal recreational patterns of population of borough. Provisionally committed research.	1987/88	P Bromley.
AMA3	Doncaster MBC	Phase 1 Ecological Survey. To update existing ecological data for borough. Provisionally committed research.	1988 start	P Bromley.
AMA4	Doncaster MBC	Woodland Survey. To study condition and extent of woodland in borough with a view to securing its long term management. Provisionally committed research.	1988 start	P Bromley.
AMA5	LB of Hackney	Leisure Services for People with Disabilities. Appraisal of service delivery and recommendations to solve problems. Completed.	April 1986	G Morgan.
AMA6	LB of Hackney	Women and Leisure Services. Appraisal of service delivery including results of a questionnaire studying women's responsibilities, leisure interests and constraints. Completed.	Jan 1987	H Brown.
AMA7	LB of Hackney	Opportunities for Improving the Leisure Use of Hackney Marsh. A study of 330 acres of inner city countryside to identify residents aspirations and meet their needs for outdoor countryside pursuits.	1986/88	G Morgan.
AMA8	LB of Hackney	Research Programme to Identify Priorities and Explore Ways of Meeting the Needs for Play. The study aims to identify existing opportunities for all types of play experience and match this with children's social and environmental conditions to determine deficiencies and priorities for action.	1985/88	G Morgan.
AMA9	Wigan MBC	Nature Conservancy Council's Phase I Survey. Survey is being placed on micro-computer for the first time.	May 1986/ May 1987	S Crombie.
AMA10	Wigan MBC	Sites of Biological Importance.	On-going	D Crawley.
AMA11	Wigan MBC	Nature Conservancy Council's Phase II Survey. This will require constant update.	On-going	S Crombie.
AMA12	LB of Merton	Leisure Survey. User survey of recreation facilities in the borough.	Sept 1983/ Sept 1984	Recreation Division.

AMA13	North Tyneside MBC	Visitor use of facilities on an Urban Fringe Site (Rising Sun).	1986/87	M Green.
AMA14	LB of Southwark	Borough Nature Conservation Strategy.	1987 start	S McAndrews
AMA15	Rotherham MBC	Rotherham Countryside Study. To objectively examine and monitor the 'green' areas of the borough to provide guidance for future countryside policies.	July 1986/ Dec 1988	D A Wood, Dept of Planning.
AMA16	South Tyneside BC	Boldon Flats: Encouraging Wildlife. A proposal to manage Boldon Flats to encourage migratory and wintering birds through controlled partial flooding of summer grazing pastures and to benefit wildlife in the area generally. Project report February 1986.		J Durkin.
AMA17	South Tyneside BC	Tourism Development Policies and Programme 1987/88. A review of initial assumptions, initial measures and increased levels of demand; and proposals for future development, programming, costs and funding.	June 1985/ Sept 1986	R Pierce.
AMA18	South Tyneside BC	National Trust: Enterprise Neptune. Review of existing geology, flora, fauna of coastal leas; grassland management proposals; alternative means of financing gift to Trust; positive covenants.	April 1985/ Dec 1986	R Pierce.
AMA19	Sheffield City Council	Access to Countryside. User survey interviews undertaken at selected deprived residential areas and in the urban fringe (small sample).	Sept 1986	J Barnes.
AMA20	LB of Barking and Dagenham	Eastbrookend Nature Reserve and Country Park.	1986 start	I Draper.
AMA21	Wakefield MDC	An Ecological Context for Environmental Improvements. To set out a strategy for the protection, enhancement and management of the District's natural environment and its integral elements; to provide a framework of areas of different landscape/ecological character; to provide a framework for the co-ordination of environmental work of other public bodies, the private sector and voluntary groups and to provide a context for seeking longer term funding of aspects of the campaign.	Feb 1987/ Feb 1988	C J Hall/M Pinder.
AMA22	Kirklees MDC	Propogation and introduction of wild flora into grassland swards.	On-going	J Fletcher, Leisure Services Outdoor.
AMA23	Kirklees MDC	Joint management of a woodland area as nature reserve with Yorkshire Wildlife Trust.	On-going	R Brooker, Leisure Services Outdoor.
AMA24	Greater London Ecology Unit	Production of policies for nature conservation in London appropriate for strategic planning. Completed.	1984	D A Goode.
AMA25	Greater London Ecology Unit	Production of guidelines on creation of habitats, especially in urban areas. Completed.	1984	J Smart.

AMA26	Greater London Ecology Unit	Production of guidelines for nature conservation in local plans. Completed.	1985	D Dawson.
AMA27	Greater London Ecology Unit	Review of existing policies for ecology and nature conservation in local plans throughout Greater London. Completed.	1986/87	D Dawson.
AMA28	Greater London Ecology Unit	Review of current provision of nature centres and nature reserves in Greater London, with advice for establishing such centres. Completed.	1986/87	J Chandler.
AMA29	Greater London Ecology Unit	Survey of grassland habitats in Greater London and selection of significant nature conservation sites.	On-going	A D R Hare.
AMA30	Greater London Ecology Unit	Nature conservation strategies for individual London Boroughs.	1985/89	M Game.
AMA31	Greater London Ecology Unit	Survey of wildlife habitats in London (2000 Sites) and development of computer data-base for this information.	On-going	M Game.
AMA32	Greater London Ecology Unit	Nature conservation strategies for woodlands, wasteland and the tidal Thames.	1985/86	A D R Hare.
AMA33	Greater London Ecology Unit	Surveys of heathlands and wetlands in Greater London. Future research.	1987/88	A D R Hare.
AMA34	Greater London Ecology Unit	Review of ecological factors in planning and management of green belt land. Future research.	1987/88	D A Goode.
AMA35	Greater London Ecology Unit	Review of management requirements for urban habitats. Future research.	1987/88	J Smart.
AMA36	LB of Richmond upon Thames	Sites of Nature Conservation Interest. Survey of the Borough by London Wildlife Trust.	March 1986/ Dec 1986	W Hodgson.
AMA37	LB of Richmond upon Thames	Survey of Public and Private Indoor Sports Facilities in South West London.	Aug 1986	W Hodgson.
AMA38	LB of Waltham Forest.	Kelmescott Leisure Centre Market Research 1986. To improve a highly successful dual use centre.	1984/86	K Rickett.
AMA39	LB of Waltham Forest	Sports Market Research 1986. To investigate consumer awareness and satisfaction of sports provision and their preferences.	1984/86	K Rickett.
AMA40	LB of Waltham Forest	Recreation Services: 50+. To examine the size and characteristics of people in the 50+ age range, their leisure needs, levels of satisfaction and their awareness of current provision.	Aug 1985/ Dec 1985	G Evans.
AMA41	Greater Manchester Countryside Unit	Greater Manchester Countryside Recreation Visitor Survey. To establish patterns of use and visitor attitudes to provision at key countryside informal areas. Completed research by GMC, published 1985.	1984/85	M Raines.

AMA42	Greater Manchester Countryside Unit	Greater Manchester Survey of Sites of Biological Importance. To identify, describe and grade key sites as aid to development control, site management and consideration for access/education issues. Completed research by GMC. Published 1984.		R Gemmell.
AMA43	Greater Manchester Countryside Unit	Greater Manchester Survey of Sites of Biological Importance. First Review. Completed.	1987	R Gemmell.
AMA44	Greater Manchester Countryside Unit	Accessibility of the Urban Fringe in Greater Manchester. Further analysis of findings of 1984 Countryside Recreation Visitor Survey (see AMA41) on access issues, especially public transport. Undertaken with Manchester University.	1986/87	M Raines.
AMA45	Greater Manchester Countryside Unit	Bus Deregulation and Access to the Countryside of Greater Manchester. Analysis of changing patterns of bus services arising from deregulation, and effects on access to the countryside.	1986/87	M Raines.
AMA46	Greater Manchester Countryside Unit	Local Rights of Way Network as Recreation Resource in Metropolitan Areas. To review several rights of way networks with a view to concentrating resources on key routes; proposing and implementing new links, diversions and changes of status; promotion and marketing. Undertaken with several local authorities in Greater Manchester.	1987 start	J Jones.
AMA47	Greater Manchester Countryside Unit	Bolton South West Fringe Landscape Enhancement. To develop and improve landscape in an urban fringe environment by application of comprehensive landscape analysis, appraisal, policy formulation and a variety of implementation techniques. Undertaken with Bolton MBC.	1986/91	J Jones.
AMA48	Greater Manchester Countryside Unit	Remnant Lowland Mosslands. Development of a strategy to conserve remnant mosslands in Wigan and Salford through detailed survey of habitat and physical, economic and political constraints on their survival. In conjunction with Wigan MBC, Salford City Council, and voluntary sector groups.	1986/87	C Davenport.
AMA49	Greater Manchester Countryside Unit	Oldham Upland Plantation Establishment. To examine and overcome factors militating against successful establishment of trees on exposed, upland areas of the Borough. With Oldham MBC. Provisionally committed research.	1987 start	J Jones.
AMA50	Trafford MBC	Trafford Ecological Park. Public facility for ecological study in industrial area, incorporating wildlife refuge and amenity area.	On-going	J Sutton.
AMA51	Manchester City Council	Blackley Forest. Improve public access and maintain conservation value of replanted woodland forming part of the Irk River Valley.	Continuous	E Norsworthy, Recreational Services Dept.

AMA52	Manchester City Council	Scheme for the Control of Dogs in Parks. To control the use of park facilities for the purpose of exercising dogs, on the basis of dog exercise areas and areas of restricted use. Trial scheme.	On-going	P Schofield, Recreational Services Dept.
AMA53	Manchester City Council	Platt Fields Lake Biological Control of Algal Blooms. The use of Silver Carp as a biological control for algae in a recreational lake. Trial scheme.	On-going	K M Fellows, Recreational Services Dept.
AMA54	Manchester City Council	Chorlton Water Park Grass Carp Experiment. The use of Grass Carp to control <i>Elodea</i> in 19 acre recreational lake. Trial scheme.	On-going	K M Fellows, Recreational Services Dept.
AMA55	City of Westminster	Victoria Embankment Gardens Survey. To provide effective support data for policy planning and marketing of Victoria Embankment Gardens. Provisionally committed research.	June 1987/ July 1987	M Maroney, Leisure Services.
AMA56	City of Westminster	Westbourne Green Sports Complex Survey. To provide effective support data for policy planning and marketing of an outdoor sports complex. Provisionally committed research.	Autumn 1987	M Maroney, Leisure Services.
AMA57	City of Westminster	Parks and Gardens of Westminster — A Survey. To provide effective support data for policy planning and marketing of Westminster's parks and gardens. Provisionally committed research.	June 1987/ July 1987	Mick Maroney, Leisure Services.
AMA58	City of Westminster	Greening the City — A Survey. To provide effective support data for policy planning and marketing of the City of Westminster's 'Greening the City' campaign. Tentative new proposal.	Late 1987	Mick Maroney, Leisure Services.



# BRITISH TOURIST AUTHORITY/ENGLISH TOURIST BOARD

## Research Programme 1987/88

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
<b>Continuous/Annual Research</b>				
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	Combines two previous tourism surveys: the British Home Tourism Survey and the British National Travel Survey.
BTA/ETB2	English Hotel Occupancy Survey	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 England's residents' intentions to take a holiday of four 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 the DE. BTA and the tourist boards 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	London Visitors Survey	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.
BTA/ETB9	Tourism Barometer	To survey business trends by sector of the tourist industry.	Quarterly	
BTA/ETB10	Regional Tourism Fact Sheets	Statistical digests for each of the twelve ETB regions.	Annual	
<b>Current Research</b>				
BTA/ETB11	British Leisure Visits Study	To evaluate the scale and nature of leisure day visiting by the British population. Leisure outside the home will be covered comprehensively throughout 1986. Both activities and spending will be surveyed and breakdowns provided for national and regional statistics, seasonal trends, and demographic data.	1986/87	Commissioned from Taylor Nelson Associates.

BTA/ETB12	Northumbria Tourism Survey	To devise a five-year tourism strategy for Northumbria, covering principal marketing targets and campaign proposals; requirements for tourist development; specific themes to promote the region's tourism; proposals for tourism information provision; and procedures for monitoring trends.	1985/87	Commissioned from Pannell, Keer, Foster and Associates.
BTA/ETB13	Evaluation of the Contribution of Tourism to the Economy of Cornwall	To assess overall importance of tourism to the county, using existing sources, to survey tourism-related business in a variety of case study areas, and survey employees in these areas.	1986/87	Co-sponsored with the DC, MSC, Cornwall County Council and District Councils. Undertaken by University of Exeter.
BTA/ETB14	Timeshare Research	To investigate UK owners of timeshare units and developers of UK timeshare projects.	1986/87	Jointly sponsored by BTA, National TBs, and timeshare exchange organisations from Tourism Advisory Group.
BTA/ETB15	Self Service Accommodation Occupancy Surveys	To measure the use of self service tourist accommodation during the 1987 season in Cumbria, East Midlands, East Anglia and South East England.	1987	Commissioned from the Centre for Leisure Research.
BTA/ETB16	North West Tourism Research	The North West TB is devising a strategy for future tourism development in its region and a programme of research will be carried out in support.	1987/88	Details under consideration.

### Proposed Research

BTA/ETB17	Effectiveness of Regional Tourist Board Direct Mail Campaigns	To investigate brochure recipients' recall, use and opinions of directly-mailed literature and their subsequent holiday taking behaviour.	1987/88	To be commissioned from a market research agency, taking the Southern region as a case study.
BTA/ETB18	The Market for Visiting Friends and Relatives	A two part study would present existing information on the size, characteristics, and economic impact of the market; conduct new research related to the potential for marketing this type of tourism.	1987/88	The first stage is in-house. The second stage is under consideration and will be commissioned.
BTA/ETB19	Retired Holidaymakers	To assemble existing information of the size and characteristics of the retired on holiday, as a foundation for new research on motivations, attitudes and destination choice.	1987/88	The first stage is in-house. A research agency will be commissioned for further work.

### RESEARCH PUBLICATIONS 1986/87

BTA/ETB(P) 1	British Tourist Authority, English Tourist Board, Wales Tourist Board (1986), <i>British Home Tourism Survey 1985</i> .
BTA/ETB(P) 2	British Tourist Authority, <i>Tourism Intelligence Quarterly</i> .
BTA/ETB(P) 3	English Tourist Board (1986), <i>English Hotel Occupancy Survey</i> (monthly reports and annual summary).
BTA/ETB(P) 4	English Tourist Board (1986), <i>English Heritage Monitor 1986</i> .
BTA/ETB(P) 5	English Tourist Board (1986), <i>Sightseeing in 1985</i> .
BTA/ETB(P) 6	British Tourist Authority (1986), <i>Heritage and Leisure Attendances 1985</i> .
BTA/ETB(P) 7	English Tourist Board (1986), <i>Holiday Intentions Survey 1986</i> .
BTA/ETB(P) 8	British Tourist Authority (1986), <i>Overseas Visitor Survey 1985</i> .
BTA/ETB(P) 9	British Tourist Authority (1986), <i>Survey Among Overseas Visitors to London — Summer 1985</i> .
BTA/ETB(P) 10	<i>Bournemouth and South East Dorset Tourism Study (1986)</i> , for Bournemouth Borough Council, Dorset County Council, English Tourist Board, and Southern Tourist Board.
BTA/ETB(P) 11	English Tourist Board (1986), <i>Regional Tourism Fact Sheets</i> (twelve regional editions).
BTA/ETB(P) 12	English Tourist Board (1986), <i>Estimating the level of Tourism-Related Employment: An Assessment of Two Non-Survey Techniques</i> .
BTA/ETB(P) 13	English Tourist Board (1986), <i>Tourism in Cumbria: a Study of the Economic Impact</i> .
BTA/ETB(P) 14	British Tourist Authority and English Tourist Board (1986), <i>London's Tourist Accommodation in the 1990's</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 1987/88

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
<b>Recently Completed Research</b>				
BWB1	Omnibus Survey	To aid the monitoring of BWB's performance by repeating the 1984 Survey to produce an estimate of the numbers using the BWB's waterways for different activities.	Completed	Carried out by National Opinion Polls Market Research Ltd.
BWB2	Hire Boat Survey	To collect information on market characteristics, expenditure and user reactions from visitors using weekly hire boats.	Completed	Full report available June 1987.
BWB3	Project Officer Monitoring	Experimental appointment of temporary Project Officers was closely monitored and evaluated.	Completed	Some of the costs were met by the CC. As a result of the work the experiment has developed into longer term programmes.
BWB4	London Canals Tourism Study	To analyse use made of the canals, identify potential and draw up a programme for action.	Completed	Carried out by consultant.
<b>Current Research</b>				
BWB5	Boating and Angling Relationships	To investigate the relationships between boat traffic, waterway ecology and fisheries on canals.	Sept 1984/ Sept 1987	Carried out by a student at Liverpool University, funded by a CASE award/BWB sponsorship.
BWB6	Leeds and Liverpool Canal Cycling Experiment	To investigate usage and user attitudes before and after implementation of the cycling experiment.	1986/87	Research completed in-house before the experiment. An independent researcher engaged by CC will evaluate impact after experiment. The CC and TRRL are meeting most of the research costs.
BWB7	Leeds and Liverpool Canal Long Distance Group Study	A feasibility Study of the Leeds and Liverpool Canal towing path as a long distance route.	1986/87	BWB, with 50% grant aid from CC are employing Bradford University to carry out the study.
BWB8	Research into Private Boating	To draw up a marketing strategy to promote privately owned pleasure boats on inland waterways.	On-going	A draft marketing strategy was drawn up in 1986. Two questionnaire surveys on specific aspects of private boating have been completed.
BWB9	Caen Hill Development and Management Study	To study the development potential of a major lock flight at Devizes, Kennet and Avon Canal.	1987	Carried out by consultants and part funded by Kennet District Council.
BWB10	Lancaster Canal Plan and Research	To provide the basis of leisure development and management opportunities.	1986/87	Lancaster Canal Plan is completed in draft form. Research re walkers, anglers, hire and private boaters will be carried out in 1987.
<b>New Research</b>				
BWB11	Trip Boat Survey	To survey trip boat operators and users of trip boats.	1987/88	Carried out in-house.

BWB12	Day Hire Boat Market	To gain knowledge about the Day Hire Market and its potential.	1987/88	Carried out in-house.
BWB13	Information Centre and Retail Opportunities	Research will be carried out as identified through a marketing strategy currently being drawn up.	1987/88	Precise research requirements are not yet known.
BWB14	Jobs on Leisure Waterways	To estimate the number of jobs associated with leisure on the waterways.	1987/88	This will update estimate made in 1979 by the Inland Waterways Amenity Advisory Council.
BWB15	Angling in Fisheries	To investigate seasonal patterns of usage by anglers and the implications for future fishery management.	1987/88	Carried out in-house.
BWB16	Gloucester Museum	To investigate the potential market and other local attractions.	1987/88	Carried out in-house.
BWB17	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	To be carried out by consultants.
BWB18	Waterway Corridor	To identify the basic demographic characteristics of the population living within the waterway corridor.	1987/88	To be carried out by consultants.
BWB19	Interpretive Signs	To evaluate existing interpretive signs and produce recommendations for future signs.	1987/88	To be carried out in-house.
BWB20	Waterway and Reservoir Plans	A number of waterway and reservoir plans are being developed to help the allocation of resources, clarify the leisure requirements and potential and to produce a framework for the involvement of outside organisations.	On-going	To be carried out in-house.

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# COUNTRYSIDE COMMISSION

## Research Programme 1987/88

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
<b>Current Research</b>				
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, DC, NCC, FC.
CC2	New Forest Pony Premium Scheme	To help improve the overall management of the New Forest through encouraging good quality breeding stock. This scheme has been extended to using cattle for grazing the New Forest lawns.	1982/90	
CC3	Rural Data Base	To gather information and data relevant to rural change.	1986/87	Information includes human population, agriculture, natural environment.
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	Being carried out by Dartington Institute.
CC5	Demonstration Farms Programme Phase V	To promote advice and technical knowledge on all aspects of practical landscape conservation to farming interests via a demonstration farms programme on 9 farms, and to produce research findings of wildlife monitoring exercises.	Continuing	
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	
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	
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	
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 the BWB.
CC11	Monitoring Part III of the Wildlife and Countryside Act	To measure changes in rights of way and definitive maps following the new provisions of the Act.	1984/89	To be carried out by the Ramblers' Association.
CC12	Recreation Trends	Up-to-date information on countryside visiting obtained by repeating some questions from 1984 survey.	1985/87	

CC13	Wales Countryside Forum Access Project	Project in Wales to demonstrate how access arrangements might be improved and disputes resolved.	1985/89	
CC14	Catalogues of Common Land	A study of Common Land Registers to establish ownership and location, also the management of common land and its landscape and agricultural status.	1985/88	
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	Information on public attitudes to landscape conservation. Questions added to British Social Attitudes Survey.	1985/88	
CC17	Recreation Market Research	To establish public reaction to the facilities which have been provided since the 1968 Countryside Act and future trends.	Continuing	
CC18	Thames LDR Market Research	To investigate how the path will be used and how it should be promoted and managed.	1986/88	
CC19	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	
CC20	Access Land on OS Maps	To establish means of collecting data on open land where the public has a right of access.	1987/88	
CC21	Interpretation Advice	To provide, in conjunction with the Centre for Environmental Interpretation, a countryside interpretative advisory service.	Continuing	
CC22	Community Action Projects	To promote community action projects for conservation and recreation in the countryside.	1986/88	
<b>Committed New Research</b>				
CC23	The Retention of Water Meadows	To assess the financial and management implications and the possibility of financial assistance towards their purchase.	1987/88	
CC24	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	
CC25	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	
CC26	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.	1987	
CC27	Experimental Access Projects	To test new techniques for developing and managing rights of way with local authorities and others.	1987/90	
CC28	Bunkhouse/ Camping Barns Marketing and Advice Project	To provide farmers, landowners and agencies with advice on the development and marketing of low-cost accommodation for countryside users.	1987/88	

CC29	Experimental Information Projects	To meet the wider public need for information provision on many countryside interests and activities through information in libraries, urban countryside centres, visitor packs and local media.	1987/89	
CC30	Recreation Advice Services	To assist in the application and development of emergent policies on such issues as rights of way networks and farm-based recreation.	1987/89	
CC31	Monitoring Recreation 2000 Initiatives	To examine the progress and achievement of policies launched experimentally through Recreation 2000.	On-going	
CC32	Understanding Recreation Demands	To examine underlying recreation demand and countryside values and so enable advice and encouragement to be given to the CC's partners on the development of countryside facilities and opportunities.	On-going	
CC33	Commons Management Project	To bring together the existing dispersed experience of managing commons for recreational access and for wildlife, presented as a balanced picture in report form supported by seminars.	1987/88	To be carried out with the Royal Society for Nature Conservation.
CC34	Bulls on Footpaths	A short desk study to provide a clearer appreciation and account of the economic effects of the measures to limit the running of bulls on farmland crossed by public rights of way.	1987/88	
CC35	Recreation and Wildlife	A desk study to bring together existing research evidence showing the potential conflict between public enjoyment of the countryside and wildlife protection.	1987/88	Co-sponsored with the SC.
CC36	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	
CC37	Conservation Event at Stoneleigh	To demonstrate the way access and information for the public can be built into a conservation as a whole. The project will supply materials for the site and advice sources for the visitors.	1987/88	
CC38	Guidance Notes for Water Authorities	A review of the activities of these organisations with a water management function, and the production of technical guidance notes to extend the conservation and amenity action of these organisations.	1987/88	
CC39	Review of Countryside Advisers Policy	To assess the effectiveness of the CC's Countryside Advisers Policy in achieving practical conservation action on farms.	1987/88	
CC40	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	

CC41	Woodland Preferences of the General Public	To examine the future design, planting and management of woods and forests for public recreation needs and desires.	1987/88	Possibly joint with the FC and CCS.
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**RESEARCH PUBLICATIONS 1986/87**

- CC(P) 1      Ramblers' Association (1986), *Rights of Way legislation: 1st monitoring report*, CCP 202, (£2.75).
- CC(P) 2      Royal Agricultural Society (1986), *Management Plans*, CCP 206, (£5.00).
- CC(P) 3      *Common Land: the report of the Common Land Forum*, (1986), CCP 215, (£7.50).
- CC(P) 4      *Access Study: summary report*, (1986), CCP 216, (£3.50).
- CC(P) 5      Centre for Leisure Research (1986), *Access to the countryside for recreation and sport*, CCP 217, (£12.00).
- CC(P) 6      *The New Forest landscape*, (1986), CCP 220, (£5.00).
- CC(P) 7      *The use and management of bunkhouse barns*, (1986), CCP 22, (£3.75).

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# COUNTRYSIDE COMMISSION FOR SCOTLAND

## Research Programme 1987/88

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
<b>Current and Recently Completed Research</b>				
CCS1	Programme of Recreation Surveys in Lothian Region	Overview and final report.	1987	Final stage of a co-ordinated programme of recreation surveys, which is co-sponsored with Lothian Regional Council and East Lothian, Midlothian and West Lothian District Councils. Contracted to ASH Environmental Design Partnership.
CCS2	Day Trip Survey	To survey day trips by Scottish residents.	1987	Contracted to System Three (Scotland). Co-sponsored with STB, FC and Scottish Museums Council.
CCS3	Inventory of Gardens and Designed Landscapes	To compile a descriptive inventory of the main gardens and designed landscapes in Scotland.	1985/87	Co-sponsored with the Historic Buildings and Monuments Directorate of SDD. Contracted to Land Use Consultants.
CCS4	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.
CCS5	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.
CCS6	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.
CCS7	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 the NCC's National Countryside Monitoring Scheme.
CCS8	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.
CCS9	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.	1985/87	Landscape strategy now complete and proposals for promotion and implementation of this work are being developed.
CCS10	Landscape Setting of Buildings	To develop design advice in respect of site and setting of buildings in the landscape.	1986/87	Contracted to William Gillespie and partners.

## New Proposals

CCS11	Countryside Around Towns	It is expected that the current review of research opportunities in the countryside around towns will generate new Research and Development work in this field.		Consultation in progress on report prepared by Dartington Institute and published 1987.
CCS12	Public Awareness of Landscape	To survey public attitudes to issues in landscape conservation.	1987	Exploratory survey for future work on perception of landscape.
CCS13	Visitor Counts at Key Recreation Sites	To develop more reliable data about visitation to key countryside sites, especially country parks.	1987/88	Proposal being formulated.
CCS14	Accommodation for Walkers	To develop advice for low-cost accommodation along long-distance routes.	1987/88	Proposal being formulated.
CCS15	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.
CCS16	Great Glen Way Survey	Feasibility survey for new long-distance route from Fort William to Inverness.	1987/88	In collaboration with Highland Regional Council.
CCS17	Review of Landscape Designations	To review the range of designations used at a national, regional and local level for landscape conservation.	1987/88	
CCS18	Management of Gardens and Designed Landscapes	To prepare advice on the preparation of management plans.	1987	Follow on from Inventory of Gardens and Designed Landscapes. Contracted to LUC.

## RESEARCH PUBLICATIONS 1986/87

CCS(P) 1	<i>Visits to the Countryside and Coast in Lothian Region: Report No 5 Yellowcraig; Report No 6 Polkemmet Country Park; (1986), ASH Environmental Design Partnership, Glasgow, for The Commission.</i>
CCS(P) 2	<i>Halhead, AV (1987), Farm Woodlands in Central Scotland: The Experience of the Central Scotland Woodlands Project, The Commission, Perth.</i>
CCS(P) 3	<i>Dartington Institute (1987), Countryside Around Towns in Scotland: A Review of Change 1976-85, The Commission, Perth.</i>
CCS(P) 4	<i>Centre for Leisure Research (1987), Alternative Manpower for the Scottish Countryside: The Role of the MSC and the Voluntary Sector. The Commission, Perth.</i>
CCS(P) 5	<i>ASH Environmental Design Partnership (1987), Environmental Design and Management of Ski Areas in Scotland: A Practical Handbook, The Commission and Highland Regional Council.</i>
CCS(P) 6	<i>Centre for Leisure Research (1987), West Highland Way Survey 1986, The Commission, Perth.</i>
CCS(P) 7	<i>*Clyde-Calders Urban Fringe Management Project (1985), Third Annual Report, Strathclyde Regional Council, Glasgow.</i>
CCS(P) 8	<i>Cobham Resource Consultants (1987), An Environmental Assessment of Fish Farms, The Commission, Perth.</i>

\* Available in limited numbers only.

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DEPARTMENT OF THE ENVIRONMENT

Research Programme 1987/88

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
<b>Recently Completed Research</b>				
DOE1	Monitoring Landscape Change	To provide reliable information on rates of change in countryside features on a continuing basis.	1984/86	Co-sponsored with CC. Carried out by Hunting Technical Services.
DOE2	Countryside Implications of Possible Changes in the Common Agricultural Policy	To assess the main options for reform of the CAP, the probable response of farmers in England and Wales and the effects on employment, wildlife conservation and landscape.	1985/86	Co-sponsored with DC and undertaken by Centre for Agricultural Studies, University of Reading.
DOE3	Survey of Visitors to the National Garden Festival 1986 — Stoke-on-Trent	To provide information about the types of visitors attracted to the Festival and to help assess the initiative.	1986/87	Being undertaken by NOP Market Research Ltd. Report should be available from NOP by July 1987.
DOE4	Evaluation of the Derelict Land Grant Programme	To identify and assess the benefits and disbenefits of various types of project funded under the Derelict Land Grant Programme.	1985/86	Undertaken by Roger Tym and Partners. Report will be addition to Inner Cities Series published by HMSO. Should be available in July 1987.
DOE5	Arboricultural Research Phase III	To improve methods of producing, establishing and managing amenity trees; to improve measures aimed at the prevention and control of tree decay and disease; and to provide an arboriculture advisory and information service.	1984/87	Co-sponsored with FC. Carried out at FC Research Station, Alice Holt, Farnham, Surrey.
DOE6	Environmental Education and Training in Industry	To examine British Industry's knowledge of environmental data and assess the effectiveness and level of training available.	1985/87	Carried out by the Council for Environmental Education. Project substantially complete.
<b>Current Research</b>				
DOE7	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 MAFF, CC, DC, NCC, FC.
DOE8	Rural Analysis of Census Data	To produce an up-to-date definition of urban and rural areas and reanalyse 1981 Census Small Area Statistics accordingly, to show changes in rural areas since 1971.	1983/87	Carried out by Joint Unit for Research on the Urban Environment (JURUE), Aston University.
DOE9	Rural Data Archive	To establish a Rural Data Bank which will collect, hold and disseminate machine-readable rural data on population, agriculture and environment.	1986/88	Being carried out by the ESRC; co-sponsored with DC, CC, MAFF, FC, NCC, NERC. The project is expected to be self-financing after 3 years.
DOE10	Effect of Nitrogen Fertiliser on Natural Grassland on West Sedgemoor	To determine the effect of nitrogen fertiliser on species composition of natural grassland on West Sedgemoor and to measure agricultural production.	1986/90	Being undertaken by Animal Grassland Research Institute. Co-sponsored with MAFF and NCC.
DOE11	Arboriculture Phase IV	To continue Arboriculture Phase III and provide support for the FC's Arboriculture Research and Information Service.		Co-sponsored with FC. Carried out at FC Research Station, Alice Holt, Farnham, Surrey.

DOE12	Assessment of Environmental Education Techniques	To investigate the use and effectiveness of environmental education techniques.	1984/87	Being carried out by the Council for Environmental Education. Work in final stages.
DOE13	Leisure Statistics (GHS)	To provide, through the insertion of questions in the GHS on a three-yearly basis, a wide range of statistics on participation in leisure and countryside activities.	1987	OPCS.
DOE14	Environmental Standards for Freshwater Fish and Life	To provide information as to toxicity of various fish and invertebrates in connection with EC Directives.	1981/87 Phase IV 1987/90	Being carried out by Water Research Centre, Marlow.
DOE15	Analysis of Natural River Communities	To establish natural groupings of invertebrates in unpolluted rivers in relation to physical and chemical parameters.	Phase I 1979/81 Phase II 1981/84 Phase III 1985/87	Being carried out by Freshwater Biological Association. Phase II tests, extends and refines Phase I classification. Co-sponsored with NERC Science Vote. Assistance in kind WAs. Phase III will be production of a user manual.
DOE16	Water Resource Implications of Upland Management	To investigate change in water runoff resulting from afforestation, deforestation and conversion of bracken etc to pasture.	1981/88	Being carried out in Scotland by Institute of Hydrology. Co-sponsored with SDD, Water Research Centre, North of Scotland Hydroelectric Board, DEN, FC, BWB and NERC Science Vote. Local authority assistance in kind.
DOE17	Upland Management with Special Reference to Forestry and Water Quality	To monitor changes in water quality resulting from extensive clear felling and re-afforestation expected in the next 30-50 years.	1981/88	Being carried out at a number of sites in England and Wales by Freshwater Biological Association, Windermere with input from Institute of Hydrology and Institute of Terrestrial Ecology. Co-sponsored with Welsh Office (for work in Wales) and NERC Science Vote.
DOE18	Environmental Issues: Agriculture and Forestry	To build on existing modelling techniques; aim is to explore the interface between environmental factors and the economics of marginal agriculture or forestry.	1986/88	Being undertaken by Dartington Institute. Co-sponsored with MAFF, NERC and NCC.
DOE19	Ecological Consequences of Land Use Change	To develop guidelines for land management, to build on previous work highlighting the relationship of size and fragmentation of wildlife habitats to preservation of diverse species populations.	1987/90	Being carried out by Institute of Terrestrial Ecology.
DOE20	Remote Sensing Techniques for Rural Land Classification	To examine patterns of landscape and how these might be used to analyse existing databases on habitats/landscape features distribution.	1986/88	Programme administered by British National Space Agency.
DOE21	Co-ordinated Management Techniques for Small Woodlands 'Silvanus'	To monitor a project combining environmental conservation with development of wood industries, forestry employment and alternative sources of income to farmers.	1986/89	Co-sponsored with CC, MAFF, FC, NCC, DC. Dartington Institute carrying out preparatory work.

### Provisionally Committed New Research

DOE22	Mineral Workings and Amenity Restoration	To collate and evaluate existing information in order to provide appropriate guidance on requirements on initial restoration and subsequent aftercare where mineral workings are reclaimed for amenity use.	1987/88	Contractor to be decided. Relates to provisions in Town and Country (Minerals) Act for after-care of workings.
DOE23	Mineral Working in National Parks: Pilot Study	To gather information on, and evaluate the effects of, mineral working in and adjacent to National Parks and Areas of Outstanding Natural Beauty, and to assess likely trends and conflicts.	1987/88	Contractor to be decided.
DOE24	Cost-effective Management of Reclaimed Derelict Sites	To identify the methods of derelict land reclamation which lead to the most cost-effective maintenance of sites for a range of specific 'soft' after-uses.	1987/88	Contractor to be decided.
DOE25	Alternative Support Systems for Rural Areas	To utilise the lessons learnt in the Integrated Rural Development Programme, to suggest alternative systems of public support for rural areas.	1987/90	Contractor to be decided.
DOE26	Recreation and Nature Conservation	To examine in particular, disturbance and damage to wildlife.	1987/88	Contractor to be decided.
DOE27	Deer Stress in Royal Parks	To investigate causes and remedies of deer stress in Royal Parks.	1987/88	Contractor to be decided.
DOE28	The Effects of Ammonia on Fish	To investigate the effects of ammonia on fish.	1987/89	Contractor to be decided.

### RESEARCH PUBLICATIONS 1986/87

DOE(P) 1	<i>The changing countryside — monitoring landscape change, (1986)</i> , Huntings Technical Services Ltd, ten volumes, Vol 1 summary; Vol 2 technical appendices; Vols 3—10 detailed results.
DOE(P) 2	Essex Institute of Higher Education (Chelmer Institute) (1986), <i>Deprivation in Rural areas</i> .
DOE(P) 3	<i>Countryside implications for England and Wales of possible changes in the Common Agricultural Policy, (1986)</i> , available from the Centre for Agricultural Strategy, University of Reading.
DOE(P) 4	<i>Future of rural common land, (1985)</i> , available from Rural Planning Services.

Contact for Enquiries: R Ashman, Department of the Environment, Room 11/27 Tollgate House, Houlton Street, Bristol BS2 9DJ (0272 218871).

# FORESTRY COMMISSION

## Research Programme 1987/88

<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
<b>Current Research</b>			
<b>Recreation</b>			
FC1	Development of the Orienteering Map for Wayfaring	To revise the Wayfaring map to improve comprehension by the consumer and revise techniques for course layout.	1981/88 In-house at FC, Edinburgh; 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 awaited.
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 1987 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.	In-house with advice from Turnbull and Jeffries Partnership.
FC6	Forest Interpretation by Artists	To interpret the forest to the public from an artists point of view.	1984/86 Complete.
<b>Nature Conservation</b>			
FC7	Wildlife Survey of Newborough Forest	Survey of forest of high biological interest especially for sand dune flora and avifauna.	1985/86 Institute of Terrestrial Ecology contract, draft report received, publication due in 1987/88.
FC8	Blackgame	To identify reasons for decline in Blackgame population in Wales.	1985/86 Contract with RSPB. Report of survey published Spring 1986.
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.	1986/88 Joint project with RSPB. Draft report on Stage 1 received.
FC11	Woodlark Habitat Requirements	To identify the factors required to stimulate breeding of woodlarks in a major production forest (Thetford).	1986/88 Joint project with RSPB.
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 Institute of Terrestrial Ecology.
<b>Silviculture</b>				
FC14	Forestry Census of Trees and Woodlands	To enumerate trees and woodlands over the whole of Great Britain.	To mid 1983	In-house at FC, Edinburgh. Summaries of figures for Counties, Regions, Conservancies and Great Britain complete. Main report to be published Spring 1987.
<b>Arboriculture</b>				
FC15	Arboricultural Research	To continue a variety of research projects (see DOE programme for details).	1983/86	Co-sponsored with DOE. Carried out in-house at FC Research Station, Alice Holt, Farnham, Surrey.
<b>Tentative New Proposals</b>				
<b>Recreation</b>				
FC16	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.
FC17	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 currently being considered.
FC18	Paying for Recreation in the Forest	To investigate consumer attitudes to charges and taxes in relation to recreation in the forest.	1986/90	Joint with University of Edinburgh Dept of Business Studies.
FC19	Performance Indicators and Standard Costs in Recreation	To develop standard costs and performance indicators in relation to forest recreation planning, design and management.	1987/89	In-house at FC, Edinburgh.
<b>Conservation</b>				
FC20	Habitat Requirements of Bats in Forests	To study the habitat and food requirements of bats in forests with reference to management treatments required to sustain/improve the environment for this species.		Joint with Aberdeen University.
FC21	The Effect of Conifers on Broadleaved Sites	To study the ecological effects of conifers grown on broadleaved sites.		FC/NCC funding with NCC carrying out the work.

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**HISTORIC BUILDINGS AND MONUMENTS COMMISSION  
(ENGLISH HERITAGE)**

**Research Programme 1987/88**

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
<b>Properties in Care</b>				
EH1	Properties in Care Survey	Public Attitude Survey of selected sites.	On-going	Internal.
EH2	Maiden Castle Management Plan	Integration of archaeological natural history with public access.	1986	Published.
EH3	Archaeology as an Educational Resource	Study of future development possibilities.	On-going	With Southampton University.
EH4	Use of Fixed Education Facilities	Monitoring of education facilities at 9 sites.	On-going	Internal.
EH5	Education Resource Development	Secondment of 4 teachers for site work.	On-going	Internal.
EH6	YHA Link	To explore resource links with the YHA.	1987	
<b>Conservation</b>				
EH7	Historic Buildings Survey	Public Attitude Survey of certain Properties in Care.	Continuing	Internal.
EH8	Register of Parks and Gardens of Special Historic Interest in England	County by county register, imposing no new statutory controls, compiled under the provisions of the National Heritage Act 1983.	1987	Carried out in co-operation with the Garden History Society, National Trust and the Centre for the Conservation of Historic Parks and Gardens, University of York.
EH9	Inventory of Conservation Areas	A 'telephone directory' of conservation areas with basic details as to location, relationship to the settlement in which they occur, land uses, special features etc. Details are given where located in a National Park or Area of Outstanding National Beauty.	Continuing	Complete to April 1981, now being updated.
EH10	Ancient Monuments in the Countryside	Project to document the archaeological heritage in the countryside, the legislation covering its protection and exploitation, and the issues currently facing its proper management.	1987 start	
EH11	Channel Tunnel Presentation	To assist presentation of historic environment.	1987/88	With Eurotunnel.
EH12	Excavation Presentation	To improve public presentation of excavations.	1988	
EH13	Historic Landscape Assessment	To provide methodology for historical and amenity scoring.	1988	With Wiltshire and Hampshire County Council.
EH14	Historic Landscape Presentation	To improve public understanding and access.	1987	With CC and Wiltshire County Council.
EH15	Salisbury Plain Interpretation	To examine problems of access and interpretation.	1987	With CC and MOD.



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# MINISTRY OF AGRICULTURE, FISHERIES AND FOOD

## Research Programme 1987/88

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
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 by 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, DC, 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, DC and ESRC.
MAFF5	Peri-urban Agriculture	To identify the problems and costs of peri-urban agriculture and their causes.	To 1990	
MAFF6	The Costs to Farmers of Meeting Planning Conditions on Farm Buildings in National Parks	To evaluate the additional costs to farmers resulting from planning conditions on agricultural buildings in National Parks in Wales.	1987	
MAFF7	Heather Moorland Change on Exmoor	To examine the relationship between observed changes in heather cover and management factors.	On-going	
MAFF8	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.
MAFF9	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, DC, NCC, FC.
MAFF10	Landscape Treatment of Existing Hill Farm Roads	To investigate the effectiveness of different forms of hedgerow planting and embankments in reducing the visual impact of hill farm roads.	To 1987	
MAFF11	Hedge and Bank Maintenance	To examine various methods and materials for repairing banks on Exmoor.	On-going	
MAFF12	Coppice Management of Lancashire Woodland for Environmental Conservation	To improve present levels of management in some woodland areas for farm income and employment generation.	To 2000	
MAFF13	Drainage Improvement and Wetland Conservation	To determine if the integrity of a small wetland community can be maintained in close proximity to agricultural land subject to drainage and other improvements.	To 1988	Final MAFF report due in 1987. Continuing under NCC.

MAFF14	Effects 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.	1987	
MAFF15	Effect of Nitrogen Fertiliser on Natural Grassland on West Sedgemoor	To determine the effect of nitrogen fertiliser on species composition of natural grassland on Tealham and Tadham Moors and to measure agricultural production.	To 1990	Co-sponsored with DOE, and NCC.
MAFF16	Under-drainage Effectiveness when Restricted for Wildlife Conservation	To determine effects on species composition and agricultural production of natural grassland by partially restricting the drainage system of peat soils.	To 1990	Combined project with NCC.
MAFF17	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.
MAFF18	Common Bird Census	To investigate the usefulness of habitat data, collected during the Common Bird Census, for analysing changes in wildlife.	On-going	
MAFF19	National Census of Small Mammals in Hedgerows	To provide a standard methodology for studying small mammals in hedgerows and to provide baseline data on species and abundance for evaluation and advisory work.	To 1988	
MAFF20	Farm Conflicts and Display Monitoring	To assess the effectiveness of display material on visitors.	To 1987	Related to Operation Groundwork project.
MAFF21	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.
MAFF22	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	

## RESEARCH PUBLICATIONS 1986/87

MAFF(P) 1	<i>The Potential for Forestry on the Culm Measures Farms of South-West England</i> , (1986), Dartington Institute.
MAFF(P) 2	<i>A Tale of Two Villages: The Story of the Integrated Rural Development Experiment in the Peak District</i> , (1984), Published by the Peak Park Joint Planning Board on behalf of the Project Steering Group, (MAFF Project 9, 1987/88 register).
MAFF(P) 3	<i>Historic Farm Buildings Study — Sources of Information</i> (1985), Nigel Harvey, MAFF.
MAFF(P) 4	<i>Use of Colour Infra-red Aerial Photography in the MAFF Hills and Uplands Classification</i> , Draft report, MAFF.
MAFF(P) 5	<i>Evaluation of Simulated SPOT Satellite Data for Monitoring Land Use Change</i> , Draft report, MAFF.
MAFF(P) 6	<i>Observational Study — Biological Control of Aquatic Weeds in Lakes and Reservoirs using Grass Carp</i> , Draft report, MAFF.
MAFF(P) 7	<i>National List of Approved Investigations</i> , (1986), Central R&D Records Unit, MAFF.
MAFF(P) 8	<i>Operation Groundwork (North-West) Rossendale Project Area Agricultural Survey — Preliminary Report</i> , MAFF.
MAFF(P) 9	<i>Operation Groundwork (North-West) St Helens Project Area Agricultural Survey — Preliminary Report</i> , MAFF.
MAFF(P) 10	<i>Operation Groundwork (North-West) Oldham/Rochdale Project Area. Agricultural Survey — Preliminary Report</i> , MAFF.
MAFF(P) 11	<i>Operation Groundwork (North-West) Macclesfield Project Area. Agricultural Survey — Preliminary Report</i> , MAFF.

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# NATURAL ENVIRONMENT RESEARCH COUNCIL

## Research Programme 1987/88

	<i>Project Title</i>	<i>Summary</i>	<i>Timescale</i>	<i>Comments</i>
<b>Institute of Terrestrial Ecology</b>				
NERC1	Creating Attractive Grasslands	To review and quantify the use of wild flower seed in Britain; to establish plots of wild flower mixtures; to assess methods of introducing dicotyledons into existing grass-dominated swards.	To Dec 1987	Work at Monks Wood Experimental Station.
NERC2	Plant Species Establishment in Planted Woodland in New Towns	To study the natural and assisted colonization of woodland by herbaceous plant species.	To March 1993	Work at Monks Wood Experimental Station.
NERC3	Heathland Management Research	To study the long-term effect of management of bracken and heathland flora, and the ability of bracken to recover on cessation of management.	To April 1990	Work at Monks Wood Experimental Station.
NERC4	Long Term Studies of Vegetation Change on a Landfill Site	To monitor long-term experiments at Moor House National Nature Reserve investigating the effects of sheep grazing and burning on upland vegetation.	To 1992	Work at Monks Wood Experimental Station.
NERC5	Sand Dune Ecology in East Anglia	To investigate the effects of public pressure and different management techniques on sand dunes and the overall factors affecting change within dune succession.	To March 1988	Work at Monks Wood Experimental Station.
NERC6	Impact of Land Drainage on Wildlife	To determine how far wildlife communities have been affected by land drainage, as opposed to other forms of agricultural land use management.	To March 1987	Work at Monks Wood Experimental Station.
NERC7	Railway Resource Monitoring	To monitor railway vegetation with the intention of establishing rates and directions of succession, deterioration or loss, consequent on changing British Rail management policies.	To Dec 1987	Work at Monks Wood Experimental Station.
NERC8	Structure and Dynamics of Motorway Vegetation	To examine changes and development in motorway vegetation and to relate motorway verges to vegetation in other linear habitats, with a view towards establishing some general characteristics of linearity.	To Dec 1987	Work at Monks Wood Experimental Station.
NERC9	Monitoring at Stonechest	To estimate the rate and direction of changes in the ecosystem resulting from drainage, game management and woodland management.	To March 1991	Work at Merlewood Research Station.
NERC10	Recent Changes of Land Cover and Landscape Features	To obtain quantitative data for the occurrence of defined landscape and land cover categories for the ecological survey of Great Britain and to assess changes in these features from 1977/78 to 1984.	To Oct 1987	Work at Merlewood Research Station.
NERC11	Assessment of Amenity Tree Planting Schemes	To assess the success of the CC's scheme by estimating tree survival and by examining some of the factors affecting survival.	To Dec 1987	Work at Merlewood Research Station.

NERC12	Revegetation After Disturbance	To assess the ecological consequences of decontamination procedures on Gruinard Island, as a contribution to vegetation management following severe disturbance.	To Dec 1989	Work at Banchory Research Station. MOD Contract.
NERC13	Human Impact in the Cairngorms	To assess human impact by measuring the numbers and breeding success of hill birds near and far from ski lifts, by counting people in these areas and by measuring changes in ground damage on ski grounds.	To April 1990	Work at Banchory Research Station.
NERC14	Design and Environmental Management of Ski Areas	To produce guidelines for CCS to help achieve a high standard of design and environmental management during the siting, layout and operation of downhill ski areas.	To March 1987	Work at Banchory Research Station.
NERC15	Ecological Impact of Downhill Skiing	To review the ecological consequences of the construction and operation of downhill skiing facilities at and near to sites of value to nature conservation.	To March 1987	Funded by NCC Contract.
NERC16	Studies of Sand Dune Flora in Wales	To assess effects of sand dune vegetation from known grazing and mowing regimes.	To April 1987	Work at Bangor Research Station.
NERC17	Ecology of Arctic Alpines in Snowdonia	To investigate population dynamics of selected plant species of arctic-alpine affinities.	To April 1987	Work at Bangor Research Station.
NERC18	Scrub Succession in Aston Rowant	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.	To Dec 1987	Work at Furzebrook Research Station.
NERC19	Restoration of Heathland	To monitor the vegetational, faunal and chemical changes in heathland restored on disused ball clay workings.	To Sept 1988	Work at Furzebrook Research Station. Funded by English China Clays Contract.
NERC20	Hartland National Nature Reserve Survey	To survey each year the ant and plant species and relate them to soil characteristics and to establish a trend in post-burn regeneration.	To June 1987	Work at Furzebrook Research Station.
NERC21	Poole Harbour Saltmarshes	To survey the saltmarsh vegetation of Poole Harbour, particularly Holes Bay, and assess the pattern of change since 1965.	To March 1987	Work at Furzebrook Research Station.
NERC22	Furzey Island: Saltmarsh and Mudflat Monitoring	To survey the saltmarshes and mudflats surrounding Furzey Island, Poole Harbour and monitor changes in relation to oil development works.	To May 1987	Work at Furzebrook Research Station.
NERC23	Modelling Sports Turf Wear	To define the essential plant variables of a sports turf system, establishing the relationship between plant variables such as percentage cover, tiller density, shoot biomass, shoot productivity and root biomass, and thereby determining the information required to understand the results of sports turf trials.	To Dec 1987	
NERC24	Environmental and Socio-economic Effects of CAP	To isolate and evaluate potential changes in the CAP and resulting environmental change, with a special regard to the socio-economic consequences of such change.	To March 1987	

NERC25	Reconciliation of Conservation/Amenity with Production Forestry	To review relevant research work so that gaps in essential knowledge may be identified and projects initiated. To produce a simulation model expressing the development of forests over time, and paying particular attention to structural aspects of development as they influence conservation and amenity.	To June 1987	
NERC26	Development Plan for Aonach Mor	To write the ecological components of a development plan for Aonach Mor for Lochaber District Council.	To Sept 1987	Contract.
NERC27	Dorset Heathland Survey	To survey comprehensively the vegetation, extent and land use of the Dorset heathlands and establish a computerised data-base, comparable with that for 1978.	To Aug 1988	Contract with BP.
NERC28	Footpath Rehabilitation Studies for the Yorkshire Dales National Park	To survey the extent of damage to footpaths in the Yorkshire Dales National Park, devise and test rehabilitation techniques and advise on implementation and monitoring.	To March 1990	Contract with Yorkshire Dales National Park.
NERC29	Creation of Butterfly Habitats on a Landfill Site	To increase conditions suitable for butterflies and analyse the results.	To Dec 1987	Work at Monks Wood Experimental Station.
NERC30	Assessing Butterfly Abundance	To provide a simple method of monitoring the abundance of butterflies in Nature Reserves and to combine results to form a national census of butterflies.	To March 1987	Work at Monks Wood Experimental Station.
NERC31	Butterfly Habitat Management	Includes a number of projects investigating the Large Blue, the Black Hairstreak, the Brown Hairstreak, the Adonis Blue and Woodland Fritillaries. To create, maintain or improve habitats, monitor changes in population and mobility and organise a conservation programme.	To March 1990	Work at Furzebrook Research Station.
NERC32	Invertebrate Conservation in Plantation Woods	To prepare general management guidelines for the conservation of invertebrates, especially butterflies, in plantation woodlands and prepare management plans for 20 plantations of special interest.	To March 1988	Work at Monks Wood Experimental Station.
NERC33	Management of Grouse and Moorland	To follow up an experiment to increase grouse numbers in west Scotland by changes in land management and to continue to give advice on grouse management and land use.	To Dec 1987	Work at Banchory Research Station.
NERC34	Song Bird Density and Woodland Diversity	To study bird numbers in typical woods in Deeside and compare these bird numbers with the structure and management of the woods.	To March 1988	Work at Banchory Research Station.
NERC35	Lead Poisoning in Birds	To determine the effect of lead on birds, with particular reference to swans.	To Dec 1987	Work at Monks Wood Experimental Station.
NERC36	Monitoring Otters in Shetlands --- Phase II	To monitor otter numbers in areas that may be affected by oil pollution in Shetland.	To Oct 1987	Work at Banchory Research Station.
NERC37	The Status and Conservation of British Freshwater Fish	To assess the distribution and status of freshwater fish in National Nature Reserves and carry out research on the status and ecology of rare species as a background to conservation measures.		Contract with NCC.

NERC38	The Ecology and Conservation of Charr in Loch Doon	To study the status and ecology of charr in Loch Doon in relation to water chemistry and other factors as a background to conservation management.		Contract with NCC.
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**Institute of Hydrology**

NERC39	Conservation Management of Wetlands	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.	Continuing	Partly funded by NCC and MAFF.
NERC40	Modelling the Effects of Acid Deposition	To provide a comprehensive framework with which to assess the sensitivity of hydrological and chemical processes controlling catchment activity.	To 1989	Contract with BEC and Royal Society.
NERC41	Water Resource Implications of Upland Afforestation	To improve models to estimate evaporation from all upland vegetation types.	Continuing	Partly funded by North of Scotland Hydroelectric Board, BWB, DEu, Water Research Centre, DOE, and SDD.
NERC42	Water Resource Implications of Upland Afforestation Phase II	To determine the change in hydrological response to two catchments of afforestation and forest felling.	To 1991	Partly funded by DOE, SDD, Water Research Centre, DEu, North of Scotland Hydroelectric Board, FC and BWB.
NERC43	The 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.	Continuing	Funded by DOE, Welsh Office and FC.
NERC44	Practical Evaluation of Agricultural Drainage in Relation to Wetland Conservation	To provide independent evidence in contentious issues of wetland conservation in the face of agricultural reclamation by drainage.	Continuing	Contract with MAFF.

**Freshwater Biological Association**

NERC45	Effects of Land Management on Water Courses	To assess the impact of anthropogenically elevated sediment loads upon river and lake ecology.	Continuing	
NERC46	Factors and Processes Controlling Algal Populations	To study the composition and abundance of phytoplankton related to physical factors, geochemical cycling and nutrient regimes.	Continuing	
NERC47	Biology and Ecology of Aquatic Macrophytes	To study the factors controlling the growth of <i>Ranunculus calcarus</i> , using clones from fast, medium and slow flowing reaches of a river.	Continuing	Partly funded by Wessex WA.
NERC48	Management of Aquatic Macrophytes	To evaluate current methods and experimental weed cutting programmes on Dorset rivers, for control of weed growth in rivers.	Continuing	
NERC49	Taxonomy, Physiology and Natural History of Invertebrate Animals	To study the taxonomy and ecology of invertebrates, the effects of chemical factors, including acidification, upon them and their significance as food for fish.	Continuing	
NERC50	Population and Community Ecology of Invertebrate Animals	To study invertebrates; communities associated with macrophytes in lowland rivers, their population dynamics in upland streams, rivers and small lakes; their significance as indicators of polluted water.		Partly funded by DOE, SDD and Welsh Office.

NERC51	The Pathogenicity of the Saprolegniaceae to Fish	To understand the manner in which salmonid and coarse fish become infected and resist infection.	Continuing	
NERC52	Long Term Population Dynamics of Salmon, Trout and Other Fish in Chalk Streams	Analysis of data on stock recruitment and growth rate of salmon, trout and other fish in a South of England river.	To Dec 1987	Contract with MAFF.
NERC53	Salmon Counting in the River Itchen	To provide advice on fish counting techniques.	To March 1988	Partly funded by Southern WA.
NERC54	The Relationship Between Feeding and Growth in Salmonids and Other Fish Species in Salmonid Streams	To relate food consumption to fish metabolism and growth; construct energy budgets and growth models for trout.	To Dec 1987	
NERC55	Assessment of Invertebrate and Fish Communities in the River Axe	To carry out a baseline study of invertebrates and fish in the Axe and its tributaries.	To Dec 1987	Funded by South West WA.
NERC56	Assessment of Factors Influencing the Recruitment of Atlantic Salmon in the River Frome	To study numbers of adult salmon entering, and smolts migrating from, the River Frome and the effects of predation upon stocks.	To March 1991	Partly funded by MAFF.
NERC57	Migratory Behaviour of Salmon up the River Frome	To determine the long term trends in the status of salmon populations.	To Dec 1988	
NERC58	Effects of Trout Fry Population Density upon their Survival, Growth and Downstream Dispersal	To study trout density during their first season and estimate numbers of parr lost from headstreams.		
NERC59	Population Dynamics of Resident and Migratory Brown Trout	To study the variations in populations of Lake District Trout.		
NERC60	An Evaluation of Data on Fish Stocks in East Anglian Rivers	To study evidence for decline in fish stocks and relate to the causative effects.	To Dec 1987	
NERC61	Major Ions in Lakes and Streams Related to Input from the Atmosphere and Other Sources	To understand the impact of acid rain upon catchments within the Lake District and its possible effect upon river and lake fauna.	Continuing	
NERC62	Ecological Research on a Large Eastern River	To study coarse fish, invertebrates and plants in lowland rivers draining intensively managed agricultural land and the factors affecting their habitat.	Continuing	
NERC63	Biological Environments in Larger British Rivers	To relate the productivity of rivers to discharge-related variables.	Continuing	Partly Commissioned.



# NATURE CONSERVANCY COUNCIL

## Research Programme 1987/88

<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>	
<b>Survey</b>				
NCC1	Survey of the Smooth Snake	To assess the status and distribution of the smooth snake.	1984/88	British Herpetological Society.
NCC2	Distribution of Seabirds at Sea	To determine the distribution and abundance of seabirds around Britain throughout the year.	1979/90	In-house (supported by BP, Shell, Esso, Hydrocarbons GB, Chevron, DE, DTp and DOE (NI)).
NCC3	Invertebrate Site Register	To collect information on the distribution of rare invertebrate species for site selection, evaluation and defence.	1980/89	In-house.
NCC4	Entomological Survey by Specialists	To survey National Nature Reserves, SSSIs and sites of potential conservation importance for their invertebrate fauna.	Renewed Annually	Various specialists.
NCC5	Invertebrate Survey and Classification of Rivers for Conservation	To survey the invertebrate communities of rivers in England and Wales for the selection of SSSIs.	1983/88	Freshwater Biological Association.
NCC6	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.	1982/88	In-house.
NCC7	Upland Vegetation Survey	To make a descriptive survey, to select SSSIs and to produce standard upland survey methods.	1981/88	In-house.
NCC8	Inventories of Ancient and Semi-natural Woodlands	To identify ancient and semi-natural woodlands throughout Britain.	1981/88	In-house.
NCC9	Consultancy Work on Rivers	To provide specialist advice on the evaluation and management of rivers for nature conservation.	1984/88	N T H Holmes.
NCC10	Saltmarsh Survey of Great Britain	To collate survey information on British saltmarshes.	1981/88	In-house.
NCC11	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.	1984/88	Various university-based consultants.
NCC12	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	Field Studies Council.
NCC13	Peatland Survey in Scotland	To survey the peatlands of Scotland and to produce conservation recommendations.	1985/88	In-house.
NCC14	Survey of Freshwater Lochs in Northern Scotland	To survey the botanical interest of freshwater lochs in the Spey Valley, Orkney, Caithness and Sutherland.	1985/88	In-house and T O Robson Associates.
NCC15	National Survey of Badgers	To assess current numbers and distribution of badgers by means of a sample-based survey.	1985/88	University of Bristol.

NCC16	Phase 1 Survey of Cumbria, North Yorkshire and Durham	To map the location and distribution of wildlife habitats in these counties as a basis for nature conservation strategies.	1986/89	In-house.
NCC17	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.	1985/88	In-house (supported by BP).
NCC18	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 NCC71 and 80).	1985/88	In-house analysis; survey undertaken by Seabird Group.
NCC19	Moorland Bird Study	To identify moorland sites of major importance to birds and to assess relevant management factors.	1986/89	In-house.
NCC20	Survey of Sand-dunes in Great Britain	To produce an inventory of sand-dune habitats throughout Great Britain, according to the National Vegetation Classification (NCC172).	1986/90	In-house.
NCC21	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	In-house and various consultants and contractors.
NCC22	Status and Conservation of British Freshwater Fish	To assess the current status of freshwater fish in existing National Nature Reserves and of rare and endangered fish in Britain generally.	1986/91	NERC (Institute of Terrestrial Ecology) and P Maitland.
NCC23	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	In-house.
NCC24	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 environments.	1986/97	In-house and various consultants and contractors.
NCC25	Hydrography of Loch Obisary, North Uist	To survey the physical character, water chemistry and ecology of this unique brackish loch, where there is a proposal for a fish farm.	1986/87	Scottish Marine Biological Association.
NCC26	Survey of Amphibian Communities	To collect and collate data on sites for British amphibians other than the rare natterjack toad.	1986/89	Leicester Polytechnic.
NCC27	Survey of Marginal Hill Ground (Ffridd) in Wales	To survey the vegetation and bird fauna of the enclosed but semi-natural land between intensive farmland and moorland in Wales, which is vulnerable both to agricultural intensification and to afforestation (See also NCC46).	1986/88	RSPB.
NCC28	Birds in Shetland and Orkney in Relation to Agricultural Development Programmes	To investigate numbers and densities of waders breeding on in-bye land (agriculturally improved) in Shetland and to survey unprotected sites of likely ornithological importance in Orkney, as a basis for assessing the effects of further agricultural improvement.	1987	RSPB.

NCC29	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.	1987/90	In-house.
NCC30	Quantitative Breeding Bird Atlas (Pilot Study)	To develop methods of counting as a basis for a new atlas of breeding birds.	1987	British Trust for Ornithology.
NCC31	Survey of Status and Breeding Distribution of Dotterel	To assess the current status and distribution of this rare bird of mountain plateaux and developments affecting it.	1987	In-house.
NCC32	Survey of Vegetated Shingle Structures	To map the vegetation of shingle structures on the coast of Britain according to the National Vegetation Classification (NCC172).	1988/91	Girton College, Cambridge.
NCC33	Preliminary Survey of Sea-cliff Vegetation	To identify the resource implications and time-scale for a full review of sea-cliff vegetation in Britain.	1987/88	University of Lancaster.
NCC34	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.	1978/88	J D Peacock.
NCC35	Geomorphological Survey of Orfordness	To investigate the location, extent and composition of, and damage suffered by, the component features of the most important shingle spitcusate foreland in Britain.	1987/88	Royal Holloway and Bedford New College, London.
NCC36	Investigation of the Relationships Between Aquatic Plant and Invertebrate Animal Communities of Rivers	To investigate these relationships and establish a computer-based method of predicting the latter from surveys of the former.	1987/92	Freshwater Biological Association.
NCC37	Ecology of an Urban River	To survey and describe the plant and animal communities of the River Don and its banks and islands within Sheffield and to assess the value of an urban river in the dispersal of species (See also NCC57).	1987/88	Ecological Consultancy, University of Sheffield.
NCC38	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	University College of Wales, Aberystwyth.
NCC39	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	In-house.
NCC40	Air Photo Survey of Scotland	To obtain 1:25,000 black-and-white panchromatic aerial photographs of Scotland.	1987/89	Planning and Mapping Ltd (funded jointly with SDD, CCS and FC).
NCC41	Review of Metaliferous Plant Communities	To provide a national review of metalliferous sites and their vegetation as a basis for SSSI selection.	1987/88	University of Sheffield.
NCC42	Sublittoral Survey of Flamborough Head	To survey the shallow sublittoral communities of this northernmost coastal outcrop of chalk in Britain and assess their marine biological importance.	1987	Marine Conservation Society (funded jointly with the Flamborough Headland Heritage Coast Project).

NCC43	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 (about 0.6% of the British Coastline).	1986/88	British Museum (Natural History).
NCC44	Survey of the Pine Marten in England and Wales	To investigate the status of the small relict populations of this rare mammal in England and Wales.	1987/88	University of Exeter.
NCC45	European and World Distribution of Rare Plants	To collate information of international distributions of plants rare in Britain as a basis for defending sites where they occur.	1987/88	In-house.
NCC46	Britain's Marginal Hill Ground Resource (Pilot Study)	To develop in south-east Scotland a rapid-survey technique for this vulnerable and under-surveyed habitat (see also NCC27).	1987/88	In-house.
NCC47	Development of Phase 2 Woodland Survey	To develop a national programme of survey based on the National Vegetation Classification (NCC172) both to verify the inventories of ancient woodlands (NCC8) and to improve the selection of SSSIs.	1987/91	In-house.
NCC48	Survey of Chalk Grassland in England	To determine the extent and botanical quality of the remaining chalk grassland in England.	1986/89	In-house.
NCC49	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.	1986/88	In-house.
NCC50	Phase 2 Surveys of Grasslands in England	To survey more fully grasslands already identified as of some significance for conservation.	1986/88	In-house.
NCC51	Surveys of Ditches of Suffolk and Essex Grazing Marshes	To assess the botanical and invertebrate faunal interest of these ditches of coastal grazing marshes.	1987/88	In-house.
NCC52	Survey and Monitoring of Ditches of Derwent Ings	To survey and monitor the botanical interest of the ditches of these North Yorkshire grasslands.	1987/88	In-house.
NCC53	Resurvey of North-West Midlands Meres	To resurvey the botanical interest of about 20 meres in Cheshire, Shropshire and Staffordshire and to assess any recent deterioration.	1987/88	In-house.
NCC54	Assessment of the Invertebrate Fauna of Wirral Heathlands	To assess the invertebrate faunal interest of the heathlands of the Wirral Peninsula.	1987/88	In-house.
NCC55	Survey of Dersingham Bog, Norfolk	To survey the botanical and entomological interest of this SSSI as a basis for its management.	1987/88	In-house.
NCC56	Entomological Surveys in England	To survey the entomological interest of selected sites in Dorset, Hampshire and the West Midlands.	1987/88	In-house and amateur entomologists.
NCC57	Habitat Survey of Inner Sheffield	To identify and survey sites of wildlife interest in inner Sheffield for protection and enhancement under the Unitary Development Plan (see also NCC37 and 119).	1987/88	Sheffield City Wildlife Group.

NCC58	Woodland Surveys in Scotland	To survey semi-natural broadleaved woodlands and native pinewoods in various parts of Scotland, using the National Vegetation Classification (NCC172), and to survey the bryophytes of the Argyll woodlands.	1980/88	In-house.
NCC59	Survey or Resurvey 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 (NCC172).	1986/87	In-house.
NCC60	Botanical Survey of Culbin Forest	To survey the botanical interest of Culbin Forest as a basis for management recommendations.	1987/89	In-house.
NCC61	Survey of Dee and Spey River Shingle	To study the composition and succession of shingle plant communities of the Rivers Dee and Spey.	1987/88	In-house.
NCC62	Urban Nature Conservation in Aberdeen and Dundee	To identify and survey sites of wildlife interest in Aberdeen and Dundee for possible conservation and enhancement.	1987/88	Not yet settled.
NCC63	Upland Vegetation Survey of Wales	To survey the vegetation of all major upland blocks in Wales as a basis for SSSI selection and management.	1979/88	In-house.
NCC64	Survey and Evaluation of Wetlands in Wales	To survey, classify and evaluate 163 lowland wetlands/peatlands in Wales identified in an earlier survey.	1983/88	In-house.
NCC65	Survey of Welsh Upland Breeding Birds	To resurvey the breeding birds of sample upland areas of Wales because numbers and distributions are thought to have changed substantially.	1987/88	In-house.
<b>Monitoring</b>				
NCC66	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	In-house, Field Studies Council and others.
NCC67	Monitoring of Rare British Breeding Birds	To provide information on the breeding success of rare birds.	Renewed annually	Rare Breeding Birds Panel.
NCC68	Monitoring of the Peregrine Falcon	To monitor the status and distribution of the peregrine falcon in southern Scotland and Cumbria.	1977/90	In-house.
NCC69	Lead Poisoning in Mute Swans	To monitor the impact of lead poisoning on mute swans, in particular on the River Thames.	1983/88	Edward Grey Institute of Field Ornithology, University of Oxford (funded jointly with RSPB and Thames WA).
NCC70	Birds and Pollution	To monitor residues of toxic chemicals in birds' tissues and eggs and to study their effects.	1983/89	NERC (Institute of Terrestrial Ecology).
NCC71	Monitoring of Cliff-nesting Seabirds	To maintain long-term monitoring of cliff-nesting seabirds on the mainland of Orkney and on Skomer Island National Nature Reserve (see also NCC18 and 80).	1981/89	In-house and Edward Grey Institute of Field Ornithology, University of Oxford.
NCC72	Services in Wildfowl Research	To study the populations, distributions and migration of wildfowl (including the organisation and reporting of the National Wildfowl Counts).	1971/90	Wildfowl Trust.

NCC73	Research and Advice in 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	British Trust for Ornithology.
NCC74	Butterfly Monitoring	To monitor the status and distribution of butterflies on National Nature Reserves and some other sites.	1981/92	NERC (Institute of Terrestrial Ecology) and E Pollard.
NCC75	British Red Data Books on Invertebrates	To edit and prepare for publication British Red Data Books on insects and other invertebrates.	1983/89	In-house.
NCC76	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.	1983/88	In-house (funded jointly with CCS for Scottish districts).
NCC77	Biological Records Centre	To collect detailed records of the occurrence of wild plants and animals covered by recording schemes operating throughout the British Isles.	1982/92	NERC (Institute of Terrestrial Ecology).
NCC78	Monitoring of Changes in Semi-natural Woodlands	To monitor the development of stand structure and composition in selected unmanaged woodlands.	1985/88	In-house.
NCC79	Monitoring of Invertebrates of Roosecote Sands, Barrow-in-Furness	To assess the long-term damage to, or recovery of, the invertebrate communities of Roosecote Sands after sand-dredging to infill a dock at Barrow-in-Furness.	1983/88	University of Lancaster (funded by Vickers Shipbuilding & Engineering Ltd).
NCC80	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 NCC18 and 71).	1986/89	NERC (Institute of Terrestrial Ecology) and others (funded jointly with NERC).
NCC81	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	Anglian WA.
NCC82	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	Botanical Society of the British Isles (project officer assisted by members' voluntary survey).
NCC83	Monitoring the FC's Broadleaves Policy	To collect experience of the FC's new policy for broadleaved woodlands in action.	1986/87	In-house.
NCC84	Greylag Geese and Crofting in the Uists	To examine the population dynamics of greylag geese and management of feeding areas in North and South Uist.	1987	North of Scotland College of Agriculture (jointly funded).
NCC85	Rare Plant Monitoring in Scotland	To monitor populations of several rare plant species and to investigate their habitat requirements.	Long-term	In-house.
NCC86	Monitoring of New Woodland on Beinn Eighe National Nature Reserve	To record or re-record trees in experimental plots within planted and regenerating woodland on Beinn Eighe National Nature Reserve.	1985/88	In-house.

NCC87	Monitoring of the Red Kite in Wales	To monitor numbers and breeding success of the red kite in central Wales.	Long-term	In-house (jointly with RSPB and others).
NCC88	Monitoring of the Wetland Vegetation of Llangloffan Fen, South Pembrokeshire	To establish permanent quadrats in Llangloffan Fen on the basis of a previous survey, in order to monitor the vegetation for site management purposes.	1985/87	In-house.
NCC89	Monitoring of the Spread of Cord-grass in the Dee Estuary	To assess the spread of <i>Spartina anglica</i> on saltmarsh and mudflats in the Dee Estuary since 1978/79 from air photographs of 1986.	1987	In-house.
NCC90	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	In-house.
NCC91	Monitoring of Site Integrity and Quality in Wales	To establish two forms of monitoring for selected sites of nature conservation interest in Wales.	1987/89	In-house.
<b>Habitat/Site Management</b>				
NCC92	Breeding Waders of Machair	To study the relationship between changing farming practices and populations of breeding waders on machair in the Hebrides.	1985/87	Wader Study Group.
NCC93	Management of Woodland for Butterflies and Other Insects	To define the location of the best woodlands for butterflies and other insects and to draw up management proposals to counteract declines.	1985/88	NERC (Institute of Terrestrial Ecology).
NCC94	Review of Butterfly Conservation Priorities	To identify the most important butterfly sites and make proposals for their conservation and management.	1985/90	In-house.
NCC95	Sand-dune Management Studies	To examine the effects of various levels of grazing on sand-dune vegetation.	1985/88	NERC (Institute of Terrestrial Ecology).
NCC96	Effects of Grazing in Upland Woods	To provide information and advice on the impact of stock-grazing on upland woods.	1985/89	Hill Farming Research Organisation.
NCC97	Effects of Fertiliser Applications — Somerset Levels	To examine the effects of nitrogen fertiliser on herb-rich grasslands on peat soils.	1986/90	Animal and Grassland Research Institute (funded jointly with MAFF and DOE).
NCC98	Romney Marsh Management Studies	To assess the impact of various management techniques on ditch flora and fauna and water chemistry.	1985/90	University of Loughborough (funded jointly with Southern WA).
NCC99	Effects on Butterfly Populations of Pesticide-free Headlands	To assess the effects on butterfly populations of not spraying headlands around cereal fields with agricultural pesticides.	1985/90	Game Conservancy (funded jointly with NERC under special topic programme: NCC139).
NCC100	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	NERC (Institute of Hydrology).
NCC101	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	University of Lancaster.

NCC102	Conservation of Geological Features in Disused Quarries	To identify and analyse the key factors affecting the feasibility of conserving rock-faces in disused quarries and to prescribe appropriate solutions.	1986/88	Sir Alexander Gibb and Partners.
NCC103	Management of New Forest Heathland	To study the open forest communities of the New Forest and to develop a long-term management strategy.	1986/88	In-house.
NCC104	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	In-house.
NCC105	Peatland Management Handbook	To review relevant literature and management techniques currently employed on peatland nature reserves.	1986/87	In-house.
NCC106	Management of Hill Vegetation	To establish the limits of acceptable upland management from the point of view of nature conservation, as a basis for SSSI management agreements.	1986/89	In-house.
NCC107	Entomological Aspects of Scottish Pine and Birch Woods	To study the distribution and habitat requirements of the insects of native Scottish pine and birch woods and the implications for management.	1986/88	University of Aberdeen.
NCC108	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	NERC (Institute of Terrestrial Ecology) (funded jointly with FC).
NCC109	Geomorphological Survey of and Management Strategy for Morrish 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	University of Sheffield.
NCC110	Investigation of the Effectiveness of Straw Filters to Control Nutrient Input to the Loch of Harray	To assess the effectiveness of straw filters by chemical analysis of the water, and survey and monitoring of the beds of Canadian waterweed.	1987/88	NERC (Institute of Terrestrial Ecology) and T O Robson Associates.
NCC111	Quantification and Control of Fertiliser Run-off into Farm Ponds	To assess the effects of nitrogen fertiliser on pond water and vegetation and the effectiveness of such vegetation as a nutrient barrier.	1987/91	Cheshire College of Agriculture.
NCC112	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	NERC (Institute of Terrestrial Ecology).
NCC113	Design and Management of Urban Greenspace	To review published and unpublished information on the plant and animal communities of urban greenspace areas in relation to size, shape, location, structure and management, and to formulate further research.	1987	NERC (Institute of Terrestrial Ecology).
NCC114	Conservation Management of Cereal Field Borders	To test methods of managing grassy borders of cereal fields which reconcile agricultural and conservation objectives.	1987/92	University of Oxford (funded jointly with Co-op Bank).



NCC115	Ecology and Potential Uses of Disused Docks	To investigate the marine and brackish-water communities of a range of disused docks and make recommendations for their management for conservation and education.	1987	University of Manchester (jointly funded).
NCC116	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	University of Sheffield.
NCC117	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	Groundwork Trust.
NCC118	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	Midland Environmental Ltd.
NCC119	Coverage of Countryside and Nature Conservation Issues in Metropolitan Unitary Development Plans	To provide guidance to ex-Metropolitan District Councils on the countryside and nature conservation issues to be taken into account in their Unitary Development Plans (see also NCC57).	1987	Halcrow Fox and Associates (funded jointly with CC).

### Impact Studies

NCC120	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	NERC (Institute of Hydrology).
NCC121	Nutrient Assessment — Esthwaite Water	To examine the effects of eutrophication and of remedial action on water and mud chemistry and on flora.	1986/88	Freshwater Biological Association and University of Loughborough.
NCC122	Effects of Acidification of Lichens	To review the impact of acid deposition on corticolous lichens and to establish a monitoring programme.	1986/88	British Museum (Natural History).
NCC123	Effects of Acidification on Freshwater Plants and Invertebrates	To review the impact of acid deposition on freshwater plants and invertebrates in Scottish sites and establish a monitoring programme.	1985/87	NERC (Institute of Terrestrial Ecology).
NCC124	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.	1985/88	University of Dundee.
NCC125	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	NERC (Institute of Terrestrial Ecology) (funded by DOE).
NCC126	Impact of Marine Fish-farming	To examine the ecological impact of marine fish-farming and to establish guidelines for the selection and operation of fish-farming sites (see also NCC133 and 154).	1985/88	University of Stirling and Scottish Marine Biological Association (funded jointly with HIBD and Crown Estate Commissioners).
NCC127	Native Trees and Air Pollution	To undertake a two-year study of the effects of air pollution on woodland beech and heathland Scots pine.	1987/89	Imperial College, London (funded jointly with FC).
NCC128	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	University of Manchester.

NCC129	Land-use and Bird Habitats on Islay	To survey the use of habitats on Islay by birds listed in the EEC Birds Directive and to define land-use practices required to maintain their habitats and populations.	1986/87	In-house.
NCC130	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.	1987/89	Royal Holloway and Bedford New College, London, and NERC (Institute of Terrestrial Ecology).
NCC131	Impact of Fossil Collecting on Vulnerable Palaeontological Localities	To investigate the lateral extent of fossil beds vulnerable to collectors, as a basis for a consistent and justifiable long-term conservation policy.	1987/90	Not yet arranged.
NCC132	Effects of Shooting on Curlew Populations	To use a colour-ringing programme begun on the Tees Estuary in 1976 to assess whether mortality of curlews from shooting (now illegal under the Wildlife and Countryside Act 1981) was additive or compensatory to natural mortality.	1986/88	University of Durham.
NCC133	Shetland Fish-farming Impact Survey	To survey potential and existing fish-farming sites in the voes and sounds of Shetland, to assess their marine biological importance and suitability for fish-farming and to make recommendations (see also NCC126 and 154).	1986/87	Field Studies Council and others (funded jointly with Shetland Islands Council and Shetland Salmon Producers Association).
NCC134	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.	1986/90	University of Birmingham (funded jointly with Anglian WA and Broads Authority).
NCC135	Impact of Pesticide Drift	To study the effects of insecticide and herbicide sprays on a range of wild plants and invertebrate animals.	1986/90	NERC (Institute of Terrestrial Ecology).
NCC136	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 with a very diverse flora and fauna now threatened by increased algal blooms.	1986/88	NERC (Institute of Terrestrial Ecology).
NCC137	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	University of East Anglia.
NCC138	Mountain Plateau Ecology	To evaluate actual and potential impacts of ski developments and other recreational use on soil, vegetation and fauna in two Scottish mountain plateaux, one with an existing development, the other where development is proposed.	1986/89	In-house.
NCC139	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 NCC99).	1986/90	Special topic programme (funded jointly with NERC).
NCC140	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	NERC (Institute of Terrestrial Ecology).

NCC141	A Review of the Effects of Recreational Disturbance on Birds	To review existing information on this topic as a basis for wetland management.	1987/88	RSPB (jointly funded).
NCC142	Impact of Grazing and Turf-cutting on Saltmarshes in North-west England	To review the effects of grazing and turf-cutting on the saltmarshes of north-west England and how changes in their management might affect them.	1987/88	NERC (Institute of Terrestrial Ecology).
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	Manchester Polytechnic.
NCC144	Impact of Afforestation on Freshwater Habitats	To review published and unpublished data on sedimentation, nutrient enrichment, acidification and hydrological changes in freshwater habitats in afforested catchments.	1977/88	Various contractors.
NCC145	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	University of Bristol.
NCC146	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 NCC157).	1987/88	University of Aberdeen.
NCC147	Influence of Afforestation on Adjacent Peatland Ecosystems	To investigate the edaphic and biotic influences imposed on peatland ecosystems by adjacent forest blocks.	1987/90	University of Newcastle upon Tyne.
NCC148	Influence of Land-use and Acid Deposition on Erosion of Peat (Feasibility Study)	To investigate the feasibility of using lake sediment analysis to correlate the onset and progress of peat erosion with burning, grazing, acid deposition and climate.	1987	University College London.
NCC149	Impact of Afforestation on the National Distribution of Plants	To assess the past effects of afforestation on semi-natural plant communities and species as a basis for a balance sheet.	1987/88	In-house.
NCC150	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 NCC22).	1987/89	NERC (Institute of Terrestrial Ecology) and P Maitland.
NCC151	Evidence for Acidification of Sites for Natterjack Toads in Hampshire	To use diatom analysis of sediment and other techniques to investigate whether, to what extent and when ponds supporting one of only two surviving heathland populations of natterjack toads became acidified.	1987/88	Ensis Ltd.
NCC152	Effects of Restocking Broadleaved Woodland	To test the effects of different broadleaved silvicultural practices on ground vegetation.	1987/90	Not yet settled (funded jointly with FC).
NCC153	Water Pollution from Farm Sources	To assess the extent of the problem of water pollution by farm waste and to examine methods of prevention.	1987	W Roscoe Howells.

NCC154	Environmental Guidelines for the Development of Fish-farms in Scotland	To collate information on the environmental impact of fish-farms as a basis for guidelines on their siting and management (see also NCC126 and 133).	1987 start	Not yet settled.
NCC155	Possible Impact of Ski-related Development on Ben Nevis	To make a detailed survey of selected plants and animals and of existing land-use on Ben Nevis as a basis for assessing the possible impact of development for skiing.	1987/88	In-house.
<b>Autecological Studies</b>				
NCC156	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	In-house (formerly University of Cambridge).
NCC157	Population Ecology and Conservation of Bats	To monitor populations of rare bats and investigate conservation problems, including the effects of pesticides (see also NCC146).	1985/89	NERC (Institute of Terrestrial Ecology).
NCC158	Corncrakes in the Western Isles	To study the habitat usage and requirements of corncrakes as a basis for conservation measures.	1985/88	RSPB.
NCC159	Ecology of Woodland Fritillary Butterflies	To study the autecology of four or five species of fritillary and to test appropriate management techniques.	1985/89	NERC (Institute of Terrestrial Ecology).
NCC160	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	NERC (Institute of Terrestrial Ecology) (funded jointly with NERC).
NCC161	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	Royal Holloway and Bedford New College, London.
NCC162	Status and Distribution of the Wild Cat	To investigate the status and distribution of the wild cat in Scotland (see also NCC165).	1985/87	In-house.
NCC163	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	University of Glasgow (funded jointly with RSPB).
NCC164	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	Imperial College, London.
NCC165	Hybridisation of the Wild Cat	To investigate the extent and implications of hybridisation between wild and feral cats in Scotland (see also NCC162).	1987/88	Various contractors.
<b>Socio-economic Studies</b>				
NCC166	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	Peak Park Planning Board (funded jointly with CC and others).
NCC167	Socio-economic Studies in the Culm Measures etc	To appraise ways of integrating various land-uses in the Culm Measures and other Lowland areas in Devon.	1985/88	Darlington Institute (funded jointly with DOE and others).

NCC168	Rural Data-base	To develop a rural data-base at the University of Essex.	1986/89	ESRC (funded jointly with DOE and others).
NCC169	Local Authority Attitudes to Nature Conservation	To explore evidence of local authorities' attitudes, awareness and performance in the field of nature conservation (see also NCC179).	1987	Midland Environment Ltd.
NCC170	Development Potential of National Nature Reserves	To study the development potential of National Nature Reserves and to report on opportunities for exploiting it.	1987	L & R Leisure Consultants Ltd (funded jointly with DC).
NCC171	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.	1987	In-house.
<b>Miscellaneous</b>				
NCC172	National Vegetation Classification	To provide a complete description and classification of British plant communities for publication by Cambridge University Press.	1976/89	University of Lancaster.
NCC173	Entomological Bibliography	To provide an information base to support the Invertebrate Site Register (NCC3).	1985/87	In-house.
NCC174	Reintroduction of Sea-eagles	To reintroduce the white-tailed sea-eagle to Scotland from Norway.	1975/90	In house (in co-operation with RSPB, NERC (Institute of Terrestrial Ecology) and Scottish Wildlife Trust).
NCC175	Geological Guide to the Malverns	To prepare a geological guide-book to the Malvern Hills describing specially selected sites of lesser conservation value to divert educational use from SSSIs suffering damage.	1986/88	D Bullard.
NCC176	Landscape and Geological Conservation	To improve public awareness of the importance of geological conservation through interpretive material stressing the links between geology, geomorphology and landscape.	1987/88	Not yet arranged.
NCC177	Geological Conservation Manual for Teachers of the New GCSE Syllabus	To produce a manual for teachers of geology in GCSE courses, to increase their awareness of the importance of earth science conservation and to direct fieldwork to appropriate sites.	1987	University of Bath.
NCC178	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	IUCN Conservation Monitoring Centre.
NCC179	Guidelines on Local Authorities and Nature Conservation	To produce guidelines to assist NCC regional staff in their dealings with local authorities on nature conservation issues (see also NCC169).	1987	David Tyldesley and Associates.
NCC180	Study of the Effectiveness of Invertebrate Sampling Methods	To investigate the effectiveness of various methods of sampling invertebrate animals.	1987/88	In-house.
NCC181	Review of Survey Information for Scotland	To establish a data-base of published and unpublished information about the distribution of wildlife species and habitats in Scotland.	1986/88	In-house.

NCC182	Wales Terrestrial Data-base (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	University of Wales Institute of Science and Technology (jointly with Welsh Office and other Welsh countryside agencies).
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*Contact for Enquiries:* Derek Langslow, Nature Conservancy Council, Northminster House, Peterborough PE1 1UA (0733 40345).

# SCOTTISH DEVELOPMENT DEPARTMENT

## Research Programme 1987/88

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
SDD1	Potential of Disused Railway Paths as Cycle Routes	Assessment of feasibility of incorporating disused rail tracks in cycle route networks.	Recently completed	
SDD2	Factors Influencing Cycling in Scotland	Sample surveys to identify pros and cons of cycling in 6 study areas.	Recently completed	
SDD3	Tourist Route Signposting	Assessment of principles and standards.	Recently completed	
SDD4	Inventory of Historic Gardens and Landscapes	Survey of 250 selected areas to assess design, condition and use.	Recently completed	
SDD5	Monitoring Countryside Change	Complete aerial photographic survey of Scotland to provide basis for monitoring.	1987/89	With NCC, CCS and FC.
SDD6	Consumer Research for Ancient Monuments	To establish how facilities for visitors can be improved and more visitors attracted.	1986/87	
SDD7	Variations of Acid Deposition by Altitude	Monitoring of conditions in upland areas.	1984/88	
SDD8	Acidification of Inland Waterways	Monitoring of water condition.	1985/88	
SDD9	Natural River Communities as Indicators of Water Quality	Vegetation surveys in selected rivers.	1985/88	
SDD10	Effect of Afforestation on Water Catchment Yield	To assess the loss of water supply in forested areas.	1983/88	
SDD11	Evaluation of Tree Species for Shelter, Conservation and Ornamental Planting		1987 start	Carried out by DAFS.
SDD12	Study of Appropriate Land Uses Following Restoration of Open-cast Sites		1987 start	Carried out by DAFS.
SDD13	Improvement of Farm Building Design		1987 start	Carried out by DAFS.
SDD14	Practical Conservation on Farms		1987 start	Carried out by DAFS.

Contact for Enquiries: I R Duncan, Room 6/62 New St Andrew's House, Edinburgh EH1 3SZ (031 556 8400).

# THE SCOTTISH SPORTS COUNCIL

## Research Programme 1987/88

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
<b>Continuing Research</b>				
SSC1	Planning Data Management Service (PDMS)	To update computerised information for analysis of a range of planning problems.	Continuing	About 15,000 facility records.
<b>Current Research</b>				
SSC2	Survey of Use of Ice-Rinks	To provide information and planning advice, calibration of supply/demand model.	1985/87	System Three Scotland.
SSC3	Strathclyde Leisure Pools Study	To complete work on swimming pools and leisure pools for calibration of supply/demand model.	1986/89	System Three Scotland.
SSC4	Use of Indoor Bowling Facilities	To provide information and planning advice, and calibration of supply/demand model.	1986/88	System Three Scotland.
SSC5	Sports Participation Data	To obtain Scottish data on participation in sport on a pilot basis.	1987	System Three Scotland.
SSC6	Actionsport Scotland Monitoring	To monitor operation and impact of the sports development programme.	1987/89	Actionsport Scotland Staff.
SSC7	Sport, Physical Recreation and Young People	To provide a database for sports development policy in relation to this target group.	1985/89	Aberdeen University. Funded by Health Promotion Research Trust.
SSC8	Impact of Development Plan Process on Planning for Sport	Analysis of relation between structure plans and provision, to inform advice to and training for local authorities.	1985/87	SSC-sponsored research by graduate student at Dundee University.
SSC9	Viewdata Service	To provide and evaluate a pilot viewdata service for sport.	1986/87	Robert Gordon's Institute of Technology.
SSC10	Sports Provision in Schools	To study sports provision in schools in Grampian Region.	1987/88	Robert Gordon's Institute of Technology.
SSC11	Finish Time Processing for Orienteering	To devise a reliable accurate, low cost computerised system for recording finishing times.	1987/88	J Eades.
SSC12	Survey and Mapping Techniques for Orienteering	To produce computer aids to speed up the field survey and cartography required for orienteering maps.	1987/89	C Aust.
SSC13	Computer Registration of Mountain Accidents in Scotland	To collate and analyse data on mountain accidents in Scotland.	1987/88	A R MacGregor.
<b>New Proposals</b>				
SSC14	Constraints on Participation	To identify constraints on progress in the development of sport by voluntary and public sectors, particularly in the light of changing attitudes to school and post-school sport.	1987/89	



## RESEARCH PUBLICATIONS 1986/87

SSC(P) 1            *Sportslink: a practical guide to setting up a sports information system*, (March 1987).  
SSC(P) 2            *Voluntary Projects: Lessons for the Future* (Information Digest FM7), (December 1986).

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

# SCOTTISH TOURIST BOARD

## Research Programme 1987/88

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
<b>Annual Research</b>				
STB1	Accommodation Occupancy Survey	To determine occupancy rates in tourist accommodation.	Continuous	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 the previous year carried out in January to March. In-house survey and analysis.
STB3	National Survey of Tourism in Scotland (NSTS)	To monitor tourist trips undertaken by British residents in Scotland.	Continuous	Monthly survey of around 2,700 adults. Carried out 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 STB's Promotional Campaign.	Annual	Various surveys of consumers and the travel trade. Undertaken by Harris Research, Travel & Tourism Research and some in-house analysis.
<b>Current Research</b>				
STB7	'Ski Holiday Scotland' — Survey of Advertisers	To investigate response to advertisements in this brochure.	May 1987	Joint project of STB/HIDB.
STB8	'Surprising Scotland' — Survey of Advertisers	To investigate response to advertisements in this brochure.	July 1987	In-house STB project.
STB9	Leisure Day Trips Study	To determine the size and extent of the leisure day trip market in Scotland.	1986/87	Joint project with CCS, FC and Scottish Museums Council.
STB10	Tourist Routes Signpost Survey	To assess the extent to which signposting of tourist routes affects travel behaviour.	March 1987	A project in conjunction with SDD.
STB11	Timeshare Research	To assess the market for timeshare development.	April 1987	A survey of owners of UK timeshare units. The survey was conducted by the Tourism Advisory Group and jointly sponsored by the BTA and the National Tourist Boards.

STB12	Tube Car Advertising	To assess the effectiveness of advertising on the London Underground.	Nov 1986	Jointly sponsored by London Transport Advertising and conducted by Feedback Ltd.
STB13	Survey of American Travel Agents	To provide a base measurement for the growth of Scottish business through selected travel agents.	March 1987	Conducted by Davidson Paterson Associates of New York and analysed by Napier College.
STB14	The Conference and Exhibition Market in Scotland	To determine the size and extent of the conference and exhibition market for Scottish tourism.	March 1988	A series of studies conducted by Tourism and Development Services, and the Centre for Leisure Research.
STB15	The Effects of Rating Reform Proposals on Tourism in Scotland	To analyse the effects of recent Government rating legislation on Scottish tourism.	Feb 1987	Conducted by Leslie Lintott Associates.
STB16	Survey of Tourism Information Centres	To analyse consumer use of Tourism Information Centres in Scotland.	March 1987	Jointly funded with MSC, and analysed by Napier College.

### Tentative New Proposals

STB17	Edinburgh and London Travel Centres	To measure the provision of services at the two Travel Centres.	Late 1987	
STB18	The Effectiveness of Advance Holiday Booking System for Scotland	To determine consumer reaction to an advance Holiday Booking System for Scotland as a whole.	Early 1988	
STB19	Analysis of the STB's Classification and Grading System	To measure both trade and consumer reaction and use of the accommodation classification and grading system.	Late 1987	

### RESEARCH PUBLICATIONS 1986/87

STB(P) 1	<i>Research and Planning Information Handbook</i> , loose leaf binder containing factsheets and research summaries, updated on a quarterly basis, 50% 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 (1988)</i> , Bi-monthly summaries and annual report.
STB(P) 5	<i>National Survey of Tourism in Scotland 1984-1986</i> .

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

# THE SPORTS COUNCIL

## Research Programme 1987/88

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
<b>Research in Progress</b>				
SC1	Sports Centre Management Information System (MIS) Feasibility	To develop, install and monitor the effectiveness of computerised management information systems in large sports centres.	1983/86	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 Sports Council and Bovis, in terms of energy and Management performance.	1984/86	ECOTEC and NBA Tectonics Ltd. See SC(P)7.
SC3	Air and Water Motor Sports	To study problems of air and water motor sports throughout England.	1986/87	M Elson, Dept of Town Planning, Oxford Polytechnic.
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 (E region — Tolly Sports Line); SHIFTS, sport at the workplace (Leicester). Monitoring Sport for the Handicapped (Tyne & Wear) Phase 3.	1984/89	Monitoring by: Mike Fitzjohn, Malcolm Tungatt, North West Office. Phase 1 First year reports complete. Phase 2 First year reports in production (mimeo).
SC5	UK Sports Research	Fourth Register of Sports Research for Council of Europe.	1985/86	Compiled by J Hardy. See SC(P)8.
SC6	Standards for Constructing and Maintaining Sports Turf	To derive a specification for constructing pitches, base drainage and a surface.	1984/88	Sports Turf Research Institute, Bingley.
SC7	Monitoring Prototypes	To establish prototype pitches in different microclimates of selected modes of construction.	1984/87	University College of Wales, Aberystwyth.
SC8	Sports Turf Advice	To provide a general advice, information and education service.	1984/87	Sports Turf Research Institute, Bingley.
SC9	General Household Survey, 1983	Analysis of the 1983 Survey including ACORN residential types.	1984/85	Henley Centre for Forecasting, jointly with SSC, CC and CCS. See SC(P)9.
SC10	Public Sports Programmes for Disadvantaged Groups	To examine the objectives, methods and marketing of local authority programmes, Phase 1 for unemployed people.	1985/86	S Glypris, University of Loughborough. See SC(P)10.

SC11	The Economic Impact of Sport	In Phase 2 to evaluate the contribution of sport to job and income creation, in 2 or 3 localities (in conjunction with 7 other Council of Europe countries).	1985/86	Henley Centre for Forecasting. Phase 1 report. See SC(P)2.
SC12	Improved Public Income/ Expenditure Data	To see how public income and expenditure data on sport could be improved.	1985/86	In association with CIPFA.
<b>New Projects</b>				
SC13	Locating New Facilities	To test the need for facilities in the Northern Region using a supply-demand model.	1986/87	In-house plus Planning Data Management Services, University of Edinburgh.
SC14	The Changing Indoor Sports Centre	To see how long-established leisure centres have adapted their designs and management to changing leisure demands.	1986/88	W S Atkins.
SC15	Costs in Use of Sports Surfaces	To identify capital and maintenance costs of a range of artificial surfaces compared with natural turf.	1986/88	Not yet decided.
SC16	Recreation Impact of the Severn Barrage	To look at the market for water recreation and different scenarios for the impact of the barrage.	1987	In-house (for Severn Tidal Power Group).
SC17	Sport and Nature Conservation	To identify the range of interactions between sport and nature conservation.	1987	R M Sideway (jointly with CC).
SC18	Sport and Recreation in Rural Communities	To examine rural residents' views of adequacy of provision in Yorkshire Dales and Berkshire.	1986/87	S Glyptis, University of Loughborough. See SC(P)11.
<b>Sports Council/ESRC Joint Panel on Leisure and Recreation</b>				
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)1.
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, Dept of PE & SS, University of Loughborough. Complex sample survey of different house and household types in Nottinghamshire. See SC(P)3.
SC21	Leisure and Gender	To investigate the social and psychological constraints on adult women's leisure life-styles and how these are sustained.	1983/86	Carried out by E Green and D Woodward, Dept of Applied Social Studies, Sheffield City Polytechnic. Interview survey plus ethnographic work. See SC(P)4.
SC22	Research Methods in Leisure Studies	To review the use of different analytic methods.	1983/86	J Stockdale, LSE. See SC(P)5.

## RESEARCH PUBLICATIONS 1986/87

- SC(P) 1 Coalter, F; Long, J; and Sidaway, R (1986), *Rationale for the Public Sector in Leisure* (with ESRC).  
SC(P) 2 Henley Centre for Forecasting (1987), *The Economic Impact and Significance of Sport in the UK*.  
SC(P) 3 Glyptis, S and McInnes, H (1987), *Leisure and the Home* (with ESRC).  
SC(P) 4 Green, E; Woodward, D; and Hebron, S (1987), *Leisure and Gender* (with ESRC).  
SC(P) 5 Stockdale, J (1987), *Research Methods in Leisure Studies* (with ESRC).  
SC(P) 6 Centre for Leisure Research (1986), *A Digest of Sports Statistics for the UK* 2nd Edition.  
SC(P) 7 ECOTEC (1987), *SASH in Action*.  
SC(P) 8 Hardy, J (Ed), *Sports Research in the UK* 4th edition.  
SC(P) 9 Henley Centre for Forecasting (1987 forthcoming), *Sports and Countryside Activities in Great Britain*.  
SC(P) 10 Glyptis, S and Pack, C (1987), *Local Leisure Policies for Unemployed People*.  
SC(P) 11 Glyptis, S (1987), *Sport and Recreation in Rural Areas: a Case Study of Ryedale and Swatedale*, Yorkshire and Humberside Council for Sport and Recreation Leeds.

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

# WALES TOURIST BOARD

## Research Programme 1987/88

	<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
<b>Continuous/Annual Research</b>				
WTB1	British Tourism Survey (BTS)	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 tourist boards 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	Self Catering Occupancy Survey	To provide a monthly measure of demand among a representative sample of caravan, chalet, furnished accommodation and campsites of Wales.	Monthly	Agency to be decided. Survey design to be finalised.
<b>Current Research</b>				
WTB6	Survey of Holiday and Day Visitors to Wales	To provide detailed information on the characteristics, behaviour, motivations and product needs of holiday and day visitors to Wales. Research will be based on interviews with up to 4,000 visitors throughout Wales.	1987	Local Authority Sponsorship is being sought in order to boost local sample size and hence local data precision.
WTB7	Conwy Tourism Development Study	To prepare a detailed package of tourism development, environmental and conservation opportunities which are practically achievable and capable of implementation.	1987/88	With Aberconwy Borough Council, Gwynedd County Council, WTB, Cadw, Welsh Development Agency, National Trust, Conwy Town Council.

WTB8	Dinefwr Tourism Study	The aims of the study are to consider the tourism's potential at Dinefwr Borough and to prepare a detailed strategy for developing and marketing that potential in an integrated manner; to prepare detailed conservation and tourism development proposals for Dinefwr Park and Castle.	1987	With Dinefwr Borough Council, Dyfed County Council, WTB, Cadw, CC, NCC, Welsh Development Agency, National Trust, West Wales Trust for Nature Conservation, Dinefwr Tourist Association.
WTB9	Study of the Social, Cultural and Linguistic Impact of Tourism	The overall aim of the research is to examine and report upon the impact of tourism upon the social, cultural and linguistic life of host communities in Wales.	1986/87	Desk research, case studies at three locations in Wales and a programme of gathering information from key organisations and bodies in Wales.

#### RESEARCH PUBLICATIONS 1986/87

WTB(P) 1	<i>British Home Tourism Survey, (1985), with BTA, ETB.</i>
WTB(P) 2	<i>Hotel Occupancy in Wales 1986.</i>
WTB(P) 3	<i>Research factsheets.</i>
WTB(P) 4	<i>Marketing Planning Profiles.</i>

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



# WATER AUTHORITIES ASSOCIATION

## Research Programme 1987/88

<i>Project Title</i>	<i>Summary of Objectives</i>	<i>Timescale</i>	<i>Comments</i>
<b>Northumbrian WA</b>			
WAA1	An ecological survey of Northumbrian WA-owned reservoirs and their surrounding land holdings to provide a base for future recreational/conservation management.	April 1987/ March 1989	
WAA2	Botanical survey of scaling dam reservoir surrounds and Nature Reserve.	March 1986/ Sept 1987	
WAA3	River North Tyne — Corridor Survey	April 1987/ March 1989	
WAA4	Monitoring of impressions/attitudes of visitors to self catering forest cabins — Kielder Water.	Feb 1987/ Jan 1988	
<b>Severn-Trent WA</b>			
WAA5	Car Park Monitoring	Using data loggers developed by Severn-Trent, to monitor recreation traffic on a long-term basis.	1986 start
WAA6	Angler Match Monitoring	Catches of coarse fish from angling contests held on the Rivers Severn, Avon, Trent, Derwent and Soar are monitored by questionnaire to provide information on fishery quality.	1976 start
<b>Thames WA</b>			
WAA7	To identify and review sites of archaeological importance in the region.	Continuous	
WAA8	To identify and review sites of wildlife importance in the region.	Continuous	
WAA9	To establish the wildlife value of the New River and associated reservoirs and possible impact of change in flow etc.	1986/87	
WAA10	Appraisal of different techniques for protecting footpaths from river erosion.	Continuous	
WAA11	Monitoring of boat traffic through locks on River Thames.	Continuous	

WAA12		Monitoring use of reservoirs for angling and bird watching.	Continuous	
WAA13		To identify cost savings and conservation value of using various grass seed mixes on Thames Water Sites.	1987 start	
WAA14		Post-project appraisal of schemes intended to enhance wildlife conservation on rivers, reservoirs, etc.	Continuous	
WAA15		To methodically survey the wildlife habitats of those rivers in the Region subject to regular river engineering work.	1987 start	
<b>Welsh WA</b>				
WAA16	River Wye User Survey	A water based survey to provide improved user figures for this resource.	1987/88	
<b>Yorkshire WA</b>				
WAA17	River Corridor Surveys	To minimise the impact of engineering work on wildlife.	1987/88	With NCC.
WAA18	Soil Formation Using Sewage Sludge	Use of sewage sludge in reclamation of derelict land.	On-going	
WAA19	Effects of Gravel Extraction on River Ecology	To assess the effects of a scheme to improve the hydrology of a river by extracting gravel.	1983 start	
WAA20	Effects of Sewage Sludge Disposal on Soil Biomass	To determine whether additions of sewage sludge impair the long term fertility of soil.	Oct 1986/ Oct 1989	With Sheffield University.
WAA21	Invertebrate Survey of Yorkshire Watercourses	To assess river water quality in biological terms for management purposes.	On-going	
WAA22	Lead Mining in Swaledale	Effects of redistribution of sediments following Hurricane Charlie (Sept 1986) on river invertebrates.	1987/88 1 year	With Geography Dept, Newcastle University and Scarborough Sixth Form College.

## RESEARCH PUBLICATIONS 1986/87

WAA(P) 1      *The Water Heritage*, (1987), Water Authorities Association, London.

**FACILITIES AND PHYSICAL ENVIRONMENT**

**LEISURE FACILITIES**

- sports facilities
- active outdoor pursuits facilities
- touring facilities
- educational facilities

**PHYSICAL ENVIRONMENT**

- natural environment
- landscape

woodlands

grasslands

heathlands

wetlands

coasts

rivers and lakes

uplands

peatlands

flora and fauna

animal life

plant life

man-made environment

- common lands
- canals and reservoirs
- plantations
- urban parks
- rural parks
- gardens
- farmland

- visitor attractions
- housing and accommodation

ACC45, AMA12, AMA19, AMA50, CCS13, CCS16, NCC170, SC18, SDD3  
 AMA37, SC1-8, SC12, SC14-15, SSC1-4  
 ACC52, SC3, SC16  
 CCS14, SDD3  
 NCC156, NCC175, SC4  
 AMA7, AMA15, AMA21-22, AMA46-49, DOE20, FC7, WAA1-3  
 ACC1, ACC3, ACC6, CC7, CCS8, NERC24, SC17, SDD5  
 ACC9-10, ACC16, ACC25-26, ACC34-35, AMA1, AMA10, AMA14, CC5, CC14, CC25, CC40, CCS3, CCS7, CCS9-10, CCS12, CCS17-18, DOE23, MAFF8, MAFF10-11, MAFF21, NCC39-40, NCC76, NCC91, NCC119, NCC176, NERC10, SDD5, SDD12-13, WTB7-8  
 ACC5, ACC10, ACC25, AMA4, AMA32, CC41, NCC8, NCC47, NCC58, NCC78, NCC83, NCC86, NCC93, NCC96, NCC107, NCC127, NCC152, NCC159, NCC161, NERC25, NERC32, NERC34  
 AMA18, NCC48-50, NCC52, NCC59, NCC92, NCC97, NCC112, NCC117, NCC164, NERC4, NERC18, NERC23  
 AMA33, NCC54, NCC103, NCC151, NERC3, NERC19, NERC33  
 ACC3, ACC13, ACC16, AMA33, CC23, NCC23, NCC26, NCC51, NCC52, NCC64, NCC88, NCC98, NCC100, NCC118, NCC141, NCC144, NERC39, NERC44  
 ACC3, AMA18, NCC2, NCC10-12, NCC17-18, NCC20, NCC24, NCC25, NCC32-33, NCC35, NCC42-43, NCC51, NCC66, NCC71, NCC79-80, NCC89, NCC95, NCC101, NCC109, NCC115, NCC120, NCC125-126, NCC130, NCC132-133, NCC142, NCC163, NCC174, NERC5, NERC16, NERC21-22, NERC36  
 ACC12, ACC14, ACC15, ACC53, AMA32, DOE15, NCC5, NCC9, NCC14, NCC22, NCC25, NCC36-37, NCC53, NCC61, NCC69, NCC81, NCC110, NCC121, NCC123, NCC136, NCC137, NCC144, NCC150, NCC154, NERC35, NERC37-38, NERC40, NERC45-50, NERC52-63, SC3, SC16, WAA17, WAA19, WAA21-22  
 ACC7, ACC11, CCS4, CCS15, NCC7, NCC19, NCC27, NCC31, NCC46, NCC63, NCC65, NCC68, NCC90, NCC96, NCC106, NCC128, NCC138, NCC140, NCC155, NCC162, NCC165-166, NERC13-14, NERC17, NERC41-43, SDD11  
 NCC13, NCC19, NCC23, NCC55, NCC64, NCC97, NCC105, NCC116, NCC120, NCC124, NCC134, NCC147, NCC148  
 ACC2, ACC4-5, ACC9-10, AMA10, AMA14, AMA16, FC7, NCC11-13, NCC16-17, NCC24, NCC27, NCC36-39, NCC42-43, NCC51, NCC55, NCC57, NCC62, NCC66, NCC77, NCC83, NCC91, NCC98, NCC108, NCC113-115, NCC123, NCC135-136, NCC138, NCC145, NCC155, NCC181, NERC24, NERC27  
 CC2, CC34-35, DOE15, MAFF18-19, NCC1-5, NCC15, NCC18-19, NCC22-23, NCC26, NCC28-31, NCC44, NCC56, NCC65, NCC67-75, NCC79-80, NCC84, NCC87, NCC92-94, NCC99, NCC104, NCC107, NCC125, NCC128-129, NCC132, NCC140-141, NCC146, NCC150, NCC151, NCC157-165, NCC173-174, NCC178, NCC180, NERC13-14, NERC20, NERC22, NERC26, NERC29-38, NERC45, NERC49-50, NERC52-61, NERC63, SC17, WAA21-22  
 NCC6-7, NCC10, NCC14, NCC20, NCC32-33, NCC41, NCC45, NCC48-50, NCC52-54, NCC58-61, NCC63, NCC78, NCC82, NCC85-89, NCC103, NCC111-112, NCC116, NCC121-122, NCC127, NCC130, NCC137, NCC149, NCC152, NCC156, NCC172, NERC17, NERC21-23, NERC27, NERC45-48, NERC63  
 ACC20-21, DOE4, DOE24, NERC1-2, SDD4  
 CC14, CC33, NCC38, NCC54  
 ACC53, BWB1-20, CC10, CC38, NCC22  
 NCC60, NCC147, NCC149  
 ACC30, NCC113, NCC117, NERC2  
 ACC30, ACC40, CCS1  
 CCS18, NCC156, SDD4  
 ACC4, ACC8, ACC34, AMA1, CC5, CC39, NCC99, NCC111, NCC114, NCC135, NCC145, NCC153, NCC158, NCC167, SDD12-14  
 ACC37, BTA/ETB4-5, BWB9, BWB13, BWB16  
 SC20, STB1, STB5

urban fringe  
green belt  
geological features

linear routes

ACC1, ACC4-5, ACC20, ACC23, AMA7, AMA13, AMA20,  
AMA28-29, AMA34-35, CC9, CCS6, MAFF5, MAFF20, NCC37,  
NCC57, NCC62, NCC118-119  
AMA29,AMA34  
NCC21, NCC34-35, NCC102, NCC109, NCC131, NCC143,  
NCC175-177  
ACC11, ACC31, ACC33, ACC35, BWB6-7, CC18-19, NERC7-8,  
WAA10

## LEISURE AND SOCIETY

### RECREATIONAL ACTIVITIES

sports

outdoor recreation

active outdoor pursuits

casual outdoor pursuits

touring activities  
tourism

holiday making  
trip making

### GROUPS AND INDIVIDUALS

social classes

communities

families

people

children

young adults

male

female

employed

unemployed

socially handicapped people

disadvantaged people

### SOCIAL DETERMINANTS

economic status

mobility

AMA7, AMA19, CC12, CC30, CC32, CC41, DOE13, FC1, FC4,  
SC18, SDD1-2, WAA4, WAA11-12  
AMA37, NERC23, SC1-2, SC4-9, SC11-12, SC14-15, SDD11,  
SSC1-4, SSC10  
ACC23-24, ACC29, ACC41-42, ACC44-45, ACC53, AMA2, AMA7,  
BWB5, BWB9-10, CC10,CC15, CC17, CC26, CC33, CC35, CC1-2,  
WAA5-6  
ACC51-52, BWB2, BWB8, BWB17, CCS16, FC1, FC4, SC3, SC9,  
SC13, SC16, SDD1-2, SSC11-13, WAA12, WAA16, WTB4  
ACC4-5, ACC8, ACC26, ACC32-33, ACC35, ACC41, BWB6-7,  
BWB11-12, CCS13  
WTB4-6  
ACC29, ACC42-44, ACC46, ACC48-50, AMA17, BTA/ETB1-19,  
BWB4, DOE3, WAA4, WTB1-9  
BWB2, BWB8, WTB1-3, WTB5-6  
ACC47, BWB11-12, CCS1-2, CCS13, WAA11  
AMA5-6, AMA8, AMA41  
SC4, SC9  
AMA28, CC22, CCS6  
SC20-21  
AMA8, SC18  
AMA8, SSC7  
SSC7  
SC21  
AMA6, SC21  
BWB14  
SC10  
AMA5  
CC15  
AMA2  
CC15

## ATTRIBUTES AND PROCESSES

### HUMAN ATTRIBUTES AND PROCESSES

perception

health

### OPERATIONAL ATTRIBUTES AND PROCESSES

accessibility

level of participation

efficiency

safety

use

ACC42, FC16  
ACC42, CCS12, FC16, NCC169  
SC4  
AMA41, AMA44-45  
ACC47, AMA13  
AMA13, SSC5-7  
CC39, SC1-2, SC15  
SSC13  
NCC41, NCC79, NCC130, NCC134, NERC27, SSC2-4, STB1,  
WAA5, WAA16

## APPLIED DISCIPLINES AND TECHNIQUES

### DESIGN, CONSTRUCTION AND

#### MAINTENANCE

design process

construction process

maintenance

reclamation

### MANAGEMENT FUNCTIONS

management

recreational management

habitat management

project management

AMA21, AMA50  
CCS4-5, CCS10, CCS14, FC5, NERC15, SC2, SC6, SC14  
CCS4, NERC15  
CCS4, SC6, SC14, WAA13  
ACC19, ACC20, ACC50, CCS6, CCS15, DOE22  
AMA50, DOE25, FC2, WAA15  
ACC44, ACC52, AMA50, CC2, CC14, CC23-24, CC33, CC38,  
CCS14, CCS18, DOE25, FC2, SC1, SC3, WAA15  
ACC22-24, ACC33, ACC51, BWB3-4, BWB10, BWB15, BWB19-20,  
CC22  
ACC2, ACC14-15, ACC21, AMA16, AMA25, FC2, FC10-13, FC20,  
NCC9, NCC13, NCC38, NCC55, NCC60, NCC63, NCC66, NCC88,  
NCC93-95, NCC101-110, NCC112-115, NCC117-118, NCC126,  
NCC129, NCC131, NCC133, NCC137, NCC142, NCC154,  
NCC157-159, NCC160-161, NCC164, NCC174, NERC39, NERC44,  
SC17, WAA15, WAA17-21  
CC27, SSC6

development and training  
 management theories and organisation  
 policy development  
 appraisal and evaluation

policy development  
 monitoring and control

planning  
 marketing  
 market research

finance  
 information systems

database and statistics  
**RESEARCH TECHNIQUES**  
 fieldwork  
 surveys

questionnaires  
 interviews  
 case studies  
 feasibility studies  
 experimentation  
 research methods

CC32, CC36  
 CC24, CC38  
 ACC43, ACC54-58, SC19  
 BWB3, CC1, CC9, CC34, CC39, DOE3-4, DOE6, DOE23, SC14,  
 SC16, SC19  
 ACC43, ACC54-58, SC19  
 ACC6, ACC38-39, BWB1, BWB15, CC9, CC11, WAA6, WAA21  
 AMA15, AMA34, AMA55-58, CC26, SC13, SSC1, SSC8  
 AMA17, CC28  
 BWB2, BWB8, BWB11-12, BWB16-18, CC6, CC17-18, CCS1-2,  
 CCS13, NCC170, WTB1-6, WTB9  
 AMA18, SC11-12  
 ACC38, CC3, CC7-8, CC14, CC20, CC25, CC29-30, CC40, DOE8,  
 NCC168, NCC173, NCC181-182, SSC1, SSC9, SSC13  
 ACC46, AMA31, DOE20  
 DOE20  
 NCC7, NCC30, NCC46  
 ACC31-32, ACC37, ACC39, ACC41, ACC43-44, ACC51, BWB1,  
 CC12, CC16, CC19, NERC27-28, WAA16  
 ACC31, ACC37, ACC39, ACC41, AMA13, CC12  
 ACC40, ACC52  
 ACC34, CC5  
 ACC19, ACC27, ACC50, NCC33, NCC80, NCC110, NCC180  
 ACC20-21, CC29  
 CC36, SC22

## RELATED STUDY AREAS

### TOWN AND COUNTRY PLANNING

urban planning  
 rural planning

regional planning  
 waterway planning  
 development planning

### ECONOMICS

economic conditions  
 supply and demand

### LAW

access

### GEOGRAPHY

cartography  
 land classification

### BEHAVIOURAL SCIENCES

sociology of leisure

### EDUCATION

environmental education  
 environmental interpretation

### ENVIRONMENTAL SCIENCES

applied biology  
 ecology

botany  
 zoology  
 geology  
 hydrology

### AGRICULTURE

environmental impact of agriculture

environmental impact of fisheries  
 recreational use of farmland  
 habitats on farms  
 urban fringe agriculture  
 farm buildings  
 land drainage  
 farm woodlands

### FORESTRY

silviculture

arboriculture

AMA19, AMA36  
 AMA24, AMA26-33, NCC57, NCC62, NCC119, SC13  
 AMA4, CC3, CC24, CCS7, CCS9, CCS17, DOE7, DOE25,  
 MAFF6, MAFF9, NCC166-168, NCC171, SDD13  
 SC13, SC18, SSC8  
 ACC56, BWB9-10, BWB20  
 CC1, DOE6  
 DOE24  
 ACC7, ACC25, NCC166-168, NCC171  
 SSCI-4, STB5  
 AMA46, CC11  
 ACC25, ACC47, AMA13, CC11, CC13, CC20, CC27, CC33-34,  
 CC37

NCC16, NCC34, NCC76, SSCI2  
 AMA3, AMA15, CC8, CCS7, DOE1, NCC8, NCC16, NCC20,  
 NCC32, NCC40, NCC47, NCC58, NCC59, NCC64, NCC76,  
 NCC172

SC21, SSC7, SSC14, WTB9  
 ACC16, AMA50, FC3, NCC156, NCC175, SC4  
 ACC16-18, DOE11-12, NCC177  
 ACC18, AMA16, BWB19, CC21, FC3, FC6, NCC176  
 AMA18, AMA42-43, AMA48, FC2, FC8, SDD10, WAA9  
 BWB5, DOE28  
 ACC7, ACC12, AMA3, AMA14, AMA21, AMA36, DOE14,  
 DOE19, FC2, FC8-9, WAA9  
 NERC1, NERC3, NERC7-8, NERC12  
 DOE27  
 NCC21, NCC34, NCC102, NCC131, NCC143  
 DOE16-17, NCC100, NCC120, NCC124, NCC134, NERC39-44,  
 SDD10  
 AMA47-48, CC3, CC7, DOE2, DOE18, MAFF5, WAA20  
 ACC13, CCS9, DOE9, MAFF1-2, MAFF7-8, MAFF15,  
 MAFF21-22, NCC27-28, NCC46, NCC53, NCC70, NCC90-92,  
 NCC95-101, NCC106, NCC111, NCC116, NCC121, NCC125,  
 NCC129, NCC135-136, NCC142-143, NCC145, NCC148, NCC153,  
 NERC4, NERC6, NERC9, NERC16, NERC18, NERC24,  
 NERC39-40, NERC42-44  
 NCC25, NCC126, NCC133, NCC154, NCC163  
 CC28, CC34, SDD11  
 AMA1, MAFF11, MAFF15, MAFF18-19, MAFF22, SDD14  
 MAFF20  
 CC28, SDD13  
 MAFF13-14, MAFF16-17, NCC124, NERC6, NERC9  
 AMA4, MAFF3, MAFF12  
 AMA49, DOE18, FC5, FC14-15, NERC11  
 ACC21, CC4, DOE21, FC14, NCC83, NCC86, NCC140, NCC144,  
 NCC147, NCC149-150, NCC152, NERC25, NERC41-42  
 CC6, DOE5, DOE10, FC15

## CONSERVATION

conservation areas  
ancient monuments  
landscape conservation

nature conservation

environmental impact of leisure

## INDUSTRY

pollution

use of resources

environmental impact of industry  
INFORMATION

manuals and guidebooks

visitor centres

visual information

interpretation

registers and directories

ACC22, AMA9-11, AMA15, AMA21, AMA23, AMA42-43,  
AMA47-48, CC4-5, CC16, CC22, CC26, CC38-39, SSC3, CCS10,  
CCS12, CCS18 FC9-13, FC20-21, NERC5-7, NERC9, NERC15,  
NERC20, NERC25, NERK28-32, NERC37-38, SDD6, WAA1,  
WAA7-8, WAA14  
NERC20  
SDD6, WAA7  
ACC25-26, ACC35, CCS3, CCS7, CCS9, CCS17, DOE23, MAFF8,  
MAFF10-11, MAFF21, NCC119, NCC176, SDD12, WTB7-8  
ACC2, ACC7-8, ACC29, AMA3, AMA9, AMA11, AMA14,  
AMA20, AMA24-36, FC9-13, FC20-21, MAFF11, MAFF13-14,  
MAFF16-17, MAFF21-22, NCC1-182  
ACC28, ACC51, ACC55, DOE26, NCC17, NCC31, NCC69,  
NCC128, NCC132, NCC138, NCC141, NCC155, NCC160, NERC5,  
NERC13-15, NERC23, NERC26, NERC28, WTB7  
SDD7-9

NCC2, NCC70, NCC81, NCC122-123, NCC127, NCC148, NCC151,  
NCC153, NCC157, NERC12, NERC35-36, NERC45, NERC50,  
NERC61, SDD7-9

NCC41, NCC79, NCC130, NCC134

NERC8, NERC19

ACC38, AMA17, AMA46, AMA55-58, CC3, CC7-8, CC14, CC20,  
CC25, CC29-30, CC40, DOE8, MAFF4, NCC168, NCC173,  
NCC181-182, SSC1, SSC9, SSC13

NCC172, NCC175, NCC177, NCC179

BWB16

ACC56, CC37

BWB19

ACC17, ACC36, NCC3, NCC21, NCC24, NCC30, NCC41, NCC45,  
NCC75, NCC77, NCC173, NCC178

## ORGANISATIONS

CENTRAL GOVERNMENT

LOCAL GOVERNMENT

VOLUNTARY ORGANISATIONS

NCC29, NCC40, NCC178, NCC182, SC19

NCC169, NCC179, SC19

NCC1, NCC18, NCC28, NCC42, NCC56, NCC72-73, NCC77,  
NCC82, NCC87