

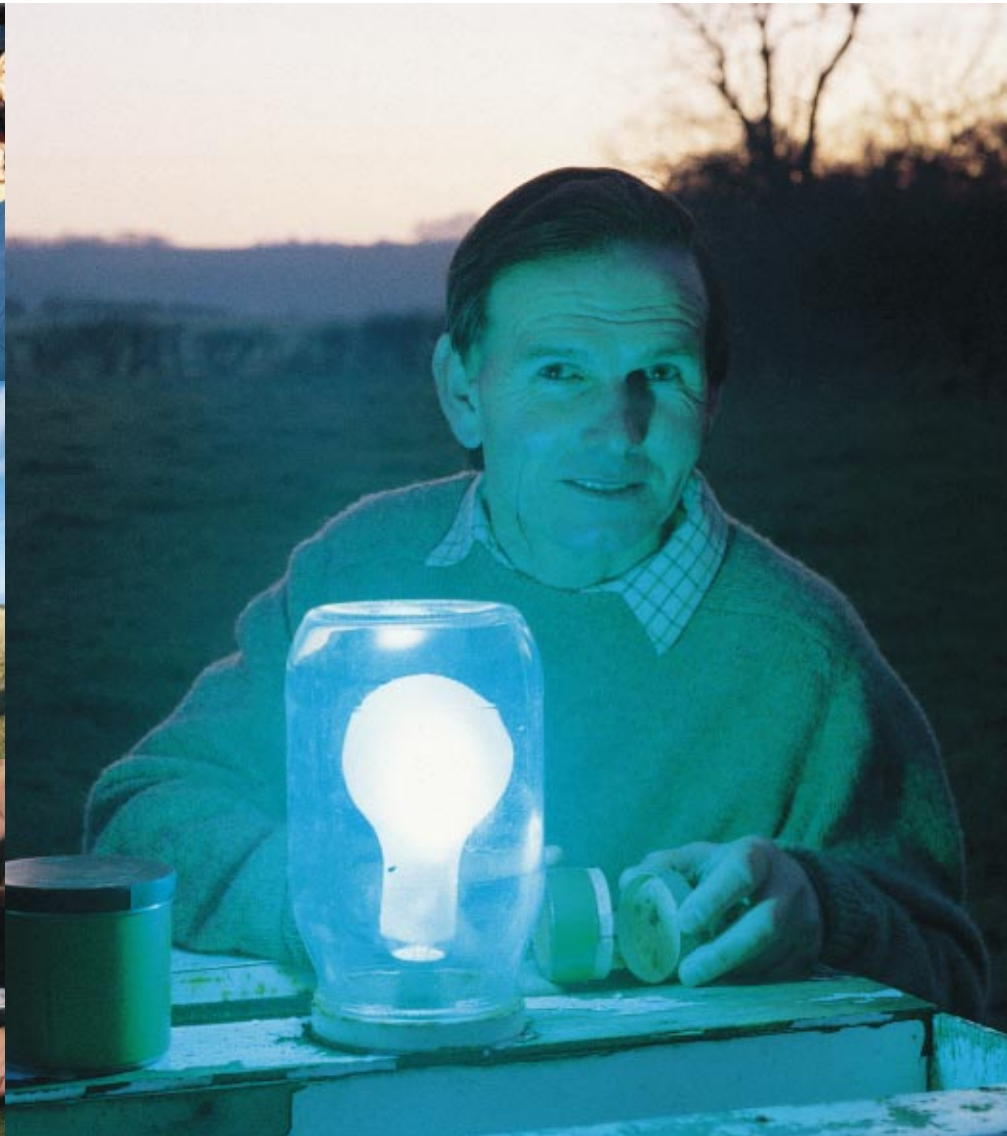


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Report Number
478

English Nature's Research Programme 2002/2003

English Nature Research Reports



working today
for nature tomorrow

English Nature Research Reports

Number 478

English Nature's Research Programme 2002/2003

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Edited by J J Hopkins

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1. Introduction

English Nature has a complex range of statutory duties, ranging from operational activities relating to protected sites, habitats and species, to advice to government on nature conservation policy, particularly for major sectors such as agriculture and fisheries. We also develop our own response to longer term issues such as sustainable development and climate change. As a consequence our portfolio of commissioned science research is diverse, and constantly being adapted to take account of new conservation issues, and opportunities for improved conservation actions due to new scientific developments, such as DNA sequencing.

Presented here is the research programme for the financial year 2002-3, with projects classified according to the research themes we recognise in our planning process.

These topics are not of equal weight in terms of their current spend. A small number of them account for a significant part of our total research and development spend, reflecting their importance to our work. Significant in this regard is work relating to statutory sites, for which we have very specific responsibilities, as well as our major contribution to work upon the habitats and species which the UK Biodiversity Action Plan focuses upon as a priority. Some areas of spend are ones where very little work has been done so far, and where investment could increase in the future. These include topics, such as Public Access and Invasive Exotic Species, where historically our research activities have been limited, but where there are now major new policy and operational needs to be met.

Classification of our research under topics is not a straightforward decision. Some of our research is narrowly focussed and easily classified. In other cases, research may cover a number of aspects. For example, in the case of widespread species and habitats, studies of status and ecology are often separated. However, in the case of rare habitats and species, which may occur at very few sites, survey, ecological studies and even management activities are often most efficiently carried out in a single contract. Projects are therefore classified here into the topics they most closely fit, but many have relevance under other headings, particularly those relating to surveys.

In this register, the projects are grouped under the following headings:

Climate change

Despite uncertainties about the precise degree to which it is due to anthropogenic impacts there is increasing evidence that our climate is changing, although the long term direction and extent of change is not yet clear. Climate is one of the most important factors influencing plant and animal distribution, and research is required to understand more clearly the way in which climate change may impact on the distribution and abundance of wildlife. We particularly lack information about how the marine environment might be affected by climate change, and are seeking to address this through work jointly funded with others.

Coastal processes

There is a growing recognition of the importance of natural processes of erosion and deposition in the maintenance of coastal biodiversity and Earth heritage. Some of this work has been stimulated by observed sea level change, and Government's reassessment of the cost-benefit of engineered coastal defences. In addition, the coast is a preferred area for certain specific types of development, particularly relating to recreation and transport infrastructure. Significant research has therefore been commissioned to allow English Nature to respond to these policy and operational needs, with mathematical models beginning to significantly influence the way in which we address coastal issues, particularly in estuaries.

Diffuse pollution

Pesticides, other synthetic chemicals, and nutrients are now widespread in the biosphere. Their effects upon wildlife are predominantly adverse. Research continues to be required to allow our advice to Government to be formulated. Research is also required to allow us to understand better the local effects of diffuse pollution, not least in aquatic systems and on designated sites.

Earth heritage

English Nature has significant statutory duties relating to the conservation of geological and geomorphological heritage, one of our most distinctive public sector roles. Our current research work is focussed on techniques for protection and management of Earth heritage sites, the value of the geological record in allowing us to interpret contemporary changes, and the way in which Earth heritage features and processes provide the template for biodiversity to develop.

Habitat and area survey

Included here are single habitat surveys aimed at determining the biodiversity resource in England, and also combined habitat and species survey covering discrete geographical areas often at county or Natural Area level.

Habitat management

A significant proportion of our statutory and advisory work is aimed at the management of habitats. Even in the case of rare species, habitat management is often the conservation action required. A range of studies are programmed to explore the science of current conservation management practice. Further work is being developed to promote new management methods using innovative machinery and novel management approaches.

Hydrology

Water and wetlands are a highly managed and heavily exploited resource in England. We need to respond to a wide range of policies and to site related casework. Understanding hydrology is also a key element of planning and delivering habitat restoration, particularly in the case of bogs and floodplains.

Impact studies

Commercial and other exploitation of natural systems, for example fisheries and peat extraction, often has complex impacts upon ecosystems. Research is therefore required into the ways in which some of the interactions operate, so that opportunities for amelioration can be identified.

Invasive exotic species

The recently published *New Atlas of the British and Irish Flora* identifies an increase in non-native species as the most significant change taking place in the British flora. Invasive exotic animals and micro-organisms, particularly diseases, have also had a profound effect upon terrestrial and aquatic systems in England. Our current focus is upon methods for the control and eradication of species which are already established. This may require follow up on selected species where currently there are no effective control strategies. In 2002 a working group was set up to advise Government on the current unsatisfactory arrangements for exotic species regulation and management, and it is expected that this will identify requirements for further research.

Landscape ecology and restoration

Effective biodiversity conservation requires action at a range of geographical scales. Traditional conservation practice has placed heavy emphasis upon site based activity. Our research aims to understand how larger scale processes such as dispersal and colonisation influence biodiversity, and also to integrate these and other findings into tangible plans for action at a landscape scale, including restoration of habitats which have become depleted or degraded in the landscape.

Natural heritage information systems

Collecting information about habitat, species and Earth heritage features is a very large part of our science activity. Included here are projects which invest in the information systems required to effectively store and utilise the information collected.

Public access

In 2001 English Nature acquired a responsibility to advise Government on the ecological impacts of access rights to open land under the Countryside and Rights of Way Act. This is an issue on which we have had limited past advisory responsibilities, and research is required to ensure that our advice is based on sound current knowledge. However, new access areas will be adopted over a number of years, so that the full research requirement may not be clear for some time.

Remote sensing and telemetry

As the area covered by protected sites increases we need to develop more efficient ways of monitoring changes to them. Aerial photography continues to be an important technique, and part of our research spend covers the acquisition of such photography. Increasingly, we are investigating the potential for remote sensing methodologies to make significant contributions to survey and monitoring work.

Risk assessment

The way in which science is used in public policy and similar contexts has become increasingly controversial in recent years. The outcome has been a recognition that often science cannot predict precisely, but that it can quantify the risks and uncertainties associated with a series of options. In contexts such as pesticide use, health, and industrial plant design and management, a more structured approach to such risk analysis has developed, and we are investigating ways in which these might be adapted to natural heritage conservation. Rapid progress in development of risk assessment means that in future all our impact studies may have a risk assessment component, and risk assessment may be deleted as a discrete research topic.

Site survey

In order to inform site specific conservation we need up to date information on the distribution and abundance of species and habitats within individual sites. Work in this area is largely carried out through the commissioning of external specialists, and generally reflects local operational need.

Socio-economics

Understanding the way in which social and economic factors drive impacts on natural heritage conservation is a valuable adjunct to natural science studies, not least in the formulation of advice on economic and other policy instruments. In recent years we have put particular emphasis upon the value society places upon wildlife and sustainable development.

Species recovery projects

The English Nature Species Recovery Programme aims to secure a future for England's most threatened wildlife. The mechanism for delivering these goals is ultimately through planned practical action. However, survey, ecological research, monitoring and the development of new conservation methods, such as genetic analysis and breeding in captivity to boost native populations, form a significant part of the work.

Species survey

Not all species of interest to English Nature and others are covered by the species recovery programme, and a range of additional species research is included in our programme.

The information for each entry is laid out as follows:

1. The project title is listed.
2. The contractor is named immediately beneath the project title. Work may be done in-house, via an independent consultant, or via an external organisation.
3. The project end date is given.
4. The cost of the work during 2002/2003 is shown.
5. The English Nature officer responsible for managing the project is identified, followed by the team managing the work.

We have also included within this document listings of publications produced by English Nature staff since April 2001.

I would like to thank all those organisations and individuals who have contributed to English Nature's research effort, as contractors, consultants, research managers and partners. Your efforts in maintaining action for nature through sound scientific information are valued greatly. Thank you all for your help.

A handwritten signature in black ink, appearing to read 'K L Duff', with a stylized flourish at the end.

Dr K L Duff
Chief Scientist

November 2002

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Lowlands	(01733) 455260
Maritime	(01733) 455226
Strategic Development & Reporting (SDRT)	(01733) 455118
Species Recovery Programme	(01733) 455266
Uplands	(01733) 455260

NB As of 1 October 2002, Uplands and Lowlands Teams have merged to form the Terrestrial Wildlife Team

Addresses of English Nature's Local Area Teams

Bedfordshire and Cambridgeshire	Ham Lane House Ham Lane Nene Park Orton Waterville Peterborough PE2 5UR Telephone: (01733) 405850
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Cornwall and Isles of Scilly	Trevint House Strangways Villas Truro Cornwall TR1 2PA Telephone: (01872) 265710

Cumbria	<p>Juniper House Murley Moss Oxenholme Road Kendal Cumbria LA9 7RL Telephone: (01539) 792800</p>
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Dorset	<p>Slepe Farm Arne Wareham Dorset BH20 5BN Telephone: (01929) 557450</p>
Eastern Area	<p>The Maltings Wharf Road Grantham Lincolnshire NG31 6BH Telephone: (01476) 584800</p>
Essex, Hertfordshire and London	<p>Harbour House Hythe Quay Colchester Essex CO2 8JF Telephone: (01206) 796666</p>
Hampshire & Isle of Wight	<p>1 Southampton Road Lyndhurst Hampshire SO43 7BU Telephone: (02380) 286410</p>
Herefordshire and Worcestershire	<p>Bronsil House Eastnor Nr Ledbury Herefordshire HR8 1EP Telephone: (01531) 638500</p>
Humber to Pennines	<p>Bullring House Northgate Wakefield West Yorkshire WF1 3BJ Telephone: (01924) 334500</p>

Kent	The Countryside Management Centre Coldharbour Farm Wye Ashford Kent TN25 5DB Telephone: (01233) 812525
Norfolk	60 Bracondale Norwich Norfolk NR1 2BE Telephone: (01603) 598400
North and East Yorkshire	Genesis Building 1 Science Park University Road Heslington York Y10 5ZQ Telephone: (01904) 435500
North Mercia	Attingham Park Shrewsbury Shropshire SY4 4TW Telephone: (01743) 282000
Northumbria	Stocksfield Hall Stocksfield Northumberland NE43 7TN Telephone: (01661) 845500
Peak District and Derbyshire	Manor Barn Over Haddon Bakewell Derbyshire DE45 1JE Telephone: (01629) 816640
Somerset and Gloucestershire	Roughmoor Bishop's Hull Taunton Somerset TA1 5AA Telephone: (01823) 283211
Suffolk	Regent House 110 Northgate Street Bury St Edmunds Suffolk IP33 1HP Telephone: (01284) 762218

Sussex and Surrey

Phoenix House
32-33 North Street
Lewes
East Sussex BN7 2PH
Telephone: (01273) 476595

Thames and Chilterns

Foxhold House
Thornford Road
Crookham Common
Thatcham
Berkshire RG19 8EL
Telephone: (01635) 268881

Wiltshire

Prince Maurice Court
Hambleton Avenue
Devizes
Wiltshire SN10 2RT
Telephone: (01380) 726344

2. Project groups

2.1 Climate change

International climate change and wildlife conference

In-house
M Harley, Environmental Impacts

May, 2003
£ 5,000

A contribution to planning, organisation and management of a conference, co-sponsored by English Nature, RSPB, UNEP-WCMC, WWF-UK and the Tyndall Centre (UEA).

Marine effects of global warming, MARCLIM

The Marine Biological Association
D Laffoley, Maritime

April, 2006
£ 40,000

This project aims to assess and predict the influence of climate change upon intertidal biota, and the implications for the conservation, management and protection of the marine environment in Britain and Ireland.

MONARCH 2

Environmental Change Institute, University of Oxford
M Harley, Environmental Impacts

March, 2004
£ 28,000

This multi-partner study of the effects of climate change on biodiversity takes forward recommendations of the MONARCH 1 project. Completion of methodological development (Module 1) of MONARCH 2, and testing of outputs in case study areas (Module 2).

Nature conservation and climate change

Tyndall Centre, University of East Anglia
M Harley, Environmental Impacts

June, 2003
£ 2,000

A joint inter-agency research studentship with Tyndall Centre on the role in nature conservation of mitigating climate change. Conservation partners include English Nature, Countryside Council for Wales, Environment Heritage Service, Scottish Natural Heritage, and the Woodland Trust.

2.2 Coastal processes

Beneficial use of dredged material in Chichester harbour

Chichester Harbour Conservancy
H Davies, Hampshire & Isle of Wight

February, 2003
£ 10,000

An investigation into the beneficial usage of dredgings within Chichester harbour, to include modelling, practical experiment and monitoring.

Coastal change and local communities

To be decided
M Cork, Maritime

March, 2003
£ 5,000

A study to enable English Nature, and others, to engage in a better way with local communities when addressing issues of coastal change and changes in coastal development options.

Coastal flooding event : Conservation response

To be decided
M Cork, Maritime

March, 2003
£ 5,000

To clarify English Nature's response to a future major tidal surge event in the North Sea, which results in multiple seawall failures, as occurred in 1953. This information will be fed through to Shoreline Management Plans.

Coastal geomorphology advice

Various
T Collins, Maritime

March, 2003
£ 20,000

Advice to English Nature staff on the development and implementation of Shoreline Management Plans and on site specific items of casework, in particular understanding and interpreting coastal geomorphology.

Fowey contribution

Fowey Harbour Contribution
W Smyth, Cornwall & Isles of Scilly

June, 2002
£ 2,000

Assist in the encouragement and promotion of the coordinated approach to management of the estuary through the implementation of the revised management plan, and help in establishing a Voluntary Marine Conservation Area (VMCA).

Modelling oystercatcher and cockle fishery interactions on the Dee Estuary

Countryside Council for Wales
M Bailey, Cheshire to Lancashire

March, 2003
£ 5,000

Aerial survey of coastal and estuarine birds in Liverpool Bay. To carry out an aerial survey of the coast between Gt Ormes Head and the Ribble Estuary. This will assist in the monitoring of coastal processes and assessment of saltmarsh accretion.

River Camel managed retreat

Environment Agency
D Hazlehurst, Cornwall & Isles of Scilly

September, 2002
£ 2,000

Evaluation of the proposals for the re-engineering of Camelford branch railway line and Sladesbridge flood defences to assess their effects, both individually and in combination, on the geomorphology of the River Camel candidate SAC.

Shoreline conservation opportunities

To be decided
C Pater, Maritime

March, 2003
£ 20,000

The project will identify potential sites for the restoration and improvement of coastal habitats, using the framework of English Nature Natural Areas.

2.3 Diffuse pollution

Air pollution information system

Centre for Ecology and Hydrology
M Harley, Environmental Impacts

March, 2003
£ 10,000

Contribution as partners in the Joint Nature Conservation Committee to this inter-agency project, including training event and further product development.

Diffuse pollution advice to farmers

Herefordshire FWAG
M Wilkinson, Herefordshire & Worcestershire

March, 2003
£ 13,800

Provide advice to farmers in catchment of candidate Special Area of Conservation (cSAC) rivers on nutrient budgets and management plans. Project includes trial of soil erosion risk maps. Advice will be given to farmers and the summary report will identify a range of practices which reduce nutrient input levels and other changes as a result of advice given.

Fal/Cober diffuse pollution

To be decided
A McDouall, Cornwall & Isles of Scilly

March, 2003
£ 4,000

Diffuse pollution, from land-use within riverine and estuarine catchments, represents a significant source of nutrient and contaminant inputs. This project will analyse the Fal/Cober catchment areas and provide advice to farmers on reducing inputs to the environment, through simple changes in farming practices.

Impact of rodenticide use on residues in wildlife

Centre for Ecology and Hydrology, Monks Wood
A Burn, Environmental Impacts

March, 2003
£ 10,000

Additional funding of the "Wildlife and Pollution" project run by JNCC, to increase sample of Barn owls examined for rodenticide contamination.

Non-target effects of Asulam

University of Manchester
A Burn, Environmental Impacts

September, 2003
£ 1,500

An extension of previous work funded by English Nature and Scottish Natural Heritage, to define the risks to non-target plants from aerial applications of Asulam.

Review of tissue nitrogen as a biomonitoring tool

To be decided
M Harley, Environmental Impacts

June, 2003
£ 10,000

A study of the value of data about plant tissue nitrogen in the development of conservation policy and practice.

Stover Lake, investigation of biota as evidence of eutrophication

To be decided
S Dunsford, Devon

To be decided
£ 5,000

To investigate the eutrophication of Stover Lake by assessing its planktonic and other biota.

2.4 Earth heritage

Dorset Coast World Heritage Site

Dorset County Council
J Larwood, Environmental Impacts

December, 2003
£ 3,000

A contribution towards Dorset County Council Geological Project Officer linked to the Dorset World Heritage Site. The Project Officer is to develop a geological sensitivity map for the local authority.

Geological 'rescue' dig at Aylesford Pit SSSI, Kent

RIGS
A Gundrey, Kent

December, 2002
£ 5,000

To remove from context, record and preserve geological finds from Medway gravel deposits at Aylesford Pit SSSI. This is to take place during commercial extraction of sand from the Folkestone Beds underlying the gravels.

Geological site management and biodiversity case studies

To be decided
J Larwood, Environmental Impacts

December, 2003
£ 15,000

A study to further investigate the link between geological diversity and biological diversity. In particular, looking at the relationship between geology and priority species and habitats, developing simple guidance on habitat and species management for geological sites, and providing a number of case studies highlighting the detailed link and dependency between geology and biodiversity.

Geological site management review report

To be decided
C Prosser, Environmental Impacts

February, 2003
£ 25,000

To update geological site management guidance using research undertaken in 2001-02 and to publish a new 'Guide to the management of geological and geomorphological sites'.

Learning from the past

To be decided
C Prosser, Environmental Impacts

October, 2002
£ 10,000

To carry out case studies from the geological record, which illustrate the dynamic nature of climate and environmental change, and to use these to help understand and inform future environmental decision making.

Local Geodiversity Action Plan work

Various
J Larwood, Environmental Impacts

December, 2004
£ 15,000

To carry out three Local Geodiversity Action Plan pilot studies, building on a completed feasibility study. The studies are to be undertaken in partnership between a Regionally Important Geological Sites (RIGS) group, a Local Authority and a commercial company.

2.5 Habitat and area survey

Assessing change in the biodiversity of British woodland 1971-2001

CEH; various consultants on survey work
K Kirby, Lowlands

December, 2004
£ 30,000

English Nature, on behalf of a partnership including DEFRA, Forestry Commission, CCW and Woodland Trust, is repeating a survey of 103 sites first carried out in 1971, based on 16 randomly placed 200m² plots per wood. Records made will cover tree and shrub layers, ground vegetation, soils and general habitat information.

Birmingham and Black Country Biodiversity Action Plan

Walsall MBC
H Griffiths, North Mercia

January, 2003
£ 3,000

Contribution to funding a Biodiversity Action Plan officer, to promote biodiversity in Birmingham and the Black Country.

Bryophyte conservation in Cornwall

To be decided
B Tonkin, Cornwall & Isles of Scilly

March, 2003
£ 8,500

To provide advice and specialist input into English Nature's interpretation material on bryophyte conservation in Cornwall.

Developing a usable definition of 'old growth' in a UK context

Ancient Tree Forum
K Kirby, Lowlands

December, 2002
£ 4,000

There is increasing interest in the value of old trees and old stands of trees, but there is no agreed definition of what is included as 'old growth' in the UK or listing of where it occurs. This project is intended to explore how these issues might be addressed.

East Riding Sites of Interest for Nature Conservation (SINC) survey

East Riding County Council
S Morley, North & East Yorks

March, 2003
£ 1,500

Review status of SINC sites and help develop criteria for site selection.

Evaluation of Specialist Survey Method (SSM) for Veteran Tree recording

Treeworks Ltd
K Kirby, Lowlands

February, 2003
£ 7,000

A system for recording veteran trees was developed as part of the Veteran Tree Initiative. This system has been used to varying degrees in different parts of the country over the last few years. As a consequence various people have identified ways in which the guidance and presentation of the method could be improved.

Floristic survey of open rides of Woodland SSSIs in Bedfordshire, Cambridgeshire, Northamptonshire and Leicestershire

To be decided
T Barfield, Beds, Cambs & Northants

January, 2003
£ 10,000

A survey of floristic interest of woodland rides within SSSIs, so that management resources can be targeted.

Grassland survey call off contract

Wild Works and Ecotech
J Bingham, Herefordshire & Worcestershire

April, 2004
£ 4,264

Grassland survey to be carried out at selected sites in Herefordshire & Worcestershire for site safeguard, management and monitoring purposes.

Herefordshire commons survey

Wild Works
H Stace, Herefordshire & Worcestershire

September, 2002
£ 5,500

A survey of acid grasslands and heathlands of the Herefordshire commons so as to map NVC types and carry out condition assessment, including classification of bracken habitats for management targeting.

Herefordshire Millenium Map

Hereford Nature Trust
H Stace, Herefordshire & Worcestershire

March, 2005
£ 5,000

Continuation of the Phase 1 habitat survey of Herefordshire by Natural Area, and the transfer of data to Herefordshire Local Records Centre for analysis.

Humber Estuary data review

To be decided
K Jennings, Humber to Pennines

December, 2002
£ 20,000

Collate and review all relevant data on habitats and species of the established or proposed statutory sites of the Estuary.

London green roofs survey

R Jones
P Massini, Essex, Hert's & London

December, 2002
£ 3,000

A sample survey of green roofs in London to determine their biodiversity value, particularly their invertebrate interest.

Lower Derwent project

Various
S Woolven, North & East Yorks

March, 2003
£ 47,500

Joint project with Environment Agency, Yorkshire Water and three Internal Drainage Boards, investigating the ecology of the Lower Derwent Valley in Yorkshire, in order to develop sustainable management options. Current work this year includes NVC survey, soil survey, and hydrological modelling.

Macrophyte survey, Lake District lakes

University of Hertfordshire
S Clarke, Environmental Impacts

January, 2003
£ 2,500

To establish the status of aquatic plant communities in nine Lake District lakes and compare the results with surveys undertaken by Pearsall in the 1920s.

Meres and Mosses site surveys, Cheshire

Whild Associates
C Walker, North Mercia

September, 2002
£ 13,000

To produce NVC vegetation maps and descriptions for 13 wetlands in the West Midlands and produce a complete vascular plant list for each site. To compile historical plant records to illustrate recent changes to the sites.

Monitoring of grassland Biodiversity Action Plan targets

Just Ecology Environmental Consultancy Ltd
H Robertson, Lowlands

March, 2004
£ 38,799

Collection of baseline information on grassland condition and extent at a sample of non-statutory Grassland Inventory sites in England, against which to monitor the achievement of BAP targets for the five priority grassland types. The survey will also provide information on the role of agri-environment schemes in meeting grassland BAP targets.

National Biodiversity Network : UK BAP habitat inventory development

Various
M Burke & B Totterdell, Strategic Development & Reporting

March, 2003
£300,000

To produce GIS data relating to UK BAP priority habitats and develop and test the methodologies for doing so. These datasets will be derived from best current information and will be made available to English Nature and others through the NBN Gateway.

NVC survey on further non-woodland sites in Essex, Herts and London

Quadrat
E Simmonds, Essex, Hert's & London

March, 2003
£ 14,000

To gather NVC data on non-woodland sites in Essex, Herfordshire and London, to assess condition.

NVC survey, condition assessment and digitisation of Natura 2000 sites

Wessex Environmental Associates, Ecological Planning and
Research, Karl Crowther
C Chatters, Hampshire & Isle of Wight

March, 2003
£ 33,000

To provide digitised NVC habitat maps and condition assessments for Natura 2000 sites in Hampshire and Isle of Wight. To assist with preparation of conservation objectives and other conservation targets.

South Pennine fringe heathlands

Penny Anderson
B Davies, Humber to Pennines

December, 2002
£ 10,000

To carry out NVC survey of known heathlands to identify areas that meet the SSSI selection criteria.

South Pennines in-bye survey

West Yorkshire Ecology
P Duncan, Humber to Pennines

December, 2002
£ 3,000

To carry out a desktop survey using air photos to identify the potential areas of unimproved grassland on the enclosed land (in-bye) of the South Pennine fringe.

The distribution and abundance of veteran trees in North-west Europe

Ancient Tree Forum
K Kirby, Lowlands

December, 2002
£ 9,000

The UK is notable for the abundance of its veteran trees. To set the UK resource in perspective, we need information about the overall European distribution and abundance of veteran trees. This project is designed to produce an initial assessment and identify contacts.

Wildlife audits in North Yorkshire

North Yorkshire County Council
A Craven, North & East Yorks

March, 2003
£ 3,000

To compile information and complete drafting of Local Biodiversity Action Plans for local authority districts within North Yorkshire.

Woodland resource survey

Forest Research
K Kirby and E Goldberg, Lowlands

December, 2002
£ 20,000

There are two major national inventories of woodland: i) the Ancient Woodland Inventory and ii) the National Inventory of Woodland and Trees. The combination of these two data sources allows broad scale analysis of woodland but an initial analysis identified various discrepancies between the two data sets and this project aims to resolve them.

Woodland SSSI surveys for Native Woodland Plans

Various
M July, Herefordshire & Worcestershire

August, 2002
£ 10,400

A Phase 2 survey of selected SSSIs in Herefordshire & Worcestershire, as the basis for Native Woodland Plans required under the Forestry Commission Woodland Grant Scheme.

2.6 Habitat management

Braunton Burrows cSAC grazing trials

P Robinson
S Bates, Devon

March, 2004
£ 1,500

To assess the suitability of cattle and sheep grazing to restore vegetation on Braunton Burrows to favourable condition.

Cannock Chase cSAC breeding birds survey

West Midlands Bird Club
G Walker, North Mercia

October, 2002
£ 1,200

A survey of breeding birds on Cannock Chase cSAC, and adjoining areas of forestry managed by Forest Enterprise. This forms part of repeat monitoring at five year intervals to investigate how heathland birds are responding to positive management.

Darwin's House and neighbourhood World Heritage Site project contribution

London Borough of Bromley
R Hamilton, Essex, Hert's & London

March, 2004
£ 5,000

Contribution towards preparation for Darwin's House World Heritage Site nomination and associated management plan.

Deer Initiative, England

Deer Initiative
K Kirby, Lowlands

July, 2004
£ 15,000

Deer browsing and grazing has been identified as one of the biggest issues affecting the achievement of conservation objectives in British woodland, particularly in lowland England. Fencing deer out is difficult, and culling is only effective if carried out on a landscape scale. The Deer Initiative is a partnership of organisations whose aim is to gather information about deer and improve the management of deer in England.

Development of grazing risk assessment manual

Damian Offer, Hampshire Grazing Project
I Alonso, Lowlands

February, 2003
£ 6,551

To develop a risk assessment protocol for invertebrate at grazed sites, and to investigate such an approach for reptiles.

Ecologically sustainable grazing management of lowland semi-natural grassland

Institute of Grassland and Environmental Research
R Jefferson, Lowlands

October, 2004
£ 10,000

The main objective is to identify optimum grazing management for semi-natural grassland based on sward structural criteria, to enhance and maintain its ecological value and to quantify the impact of this management on the growth of commercial beef cattle. The project will provide information that will underpin grazing management practices on protected sites and agri-environment scheme agreements.

Farmland bird demonstration project

Norfolk Farming & Wildlife Advisory Group
M Rooney, Norfolk

March, 2003
£ 15,000

Farmland bird Public Service Agreement (PSA) target delivery through agri-environment schemes. Agriculture sector demonstration project.

Forest friendly farming

New Forest Committee
R Ekins, Hampshire & Isle of Wight

December, 2002
£ 3,000

To identify sustainable land management, particularly extensive grazing, which maintains the special qualities of the New Forest cSAC.

Grassland monitoring in raised water level area on the Somerset Levels and Moors SPA

Ecological Surveys (Bangor) Ltd
M Jones, Somerset & Gloucestershire

December, 2002
£ 5,200

A repeat botanical monitoring at three sites - Southlake Moor, King's Sedgemoor and Moorlinch within the Somerset Levels and Moors Special Protection Area (SPA). To assess the influence that raised water-level management may be having on the botanically important flood pasture and fen-meadow communities.

Guidance on the use of herbicides in nature conservation sites

ADAS Consulting Ltd
A Burn, Environmental Impacts

November, 2002
£ 7,500

Completion of a guidance manual on the safe use of herbicides for nature conservation management.

Habitat requirements of grazing marsh invertebrates

Environment Agency
L Solly, Kent

March, 2003
£ 10,000

To identify key elements of habitat structure, management, water quality and water availability required by rare or notable invertebrates within coastal grazing marshes.

Impacts of grazing on lowland heathlands

To be decided
I Alonso, Lowlands

February, 2003
£ 13,400

To design a large scale experiment to respond to questions on the impacts of grazing on heathlands, such as: impacts on invertebrates, reptiles, vegetation structure; impacts of different livestock grazing at different times of the year (summer vs. winter vs. all year grazing); comparison of grazing with other management methods such as cutting or burning.

Influence of livestock experience and breed on foraging behaviour in unimproved grasslands, and its impact on biodiversity

Institute of Grassland and Environmental Research
R Jefferson, Lowlands

January, 2007
£ 10,000

To determine the influence of livestock breed and experience during rearing on foraging behaviour. To identify the effects of any differences in foraging behaviour on the structure and biodiversity interests of semi-natural grassland. The results of this work will be used to help achieve sustainable grazing management systems for semi-natural grasslands.

Influence of water meadow management upon invertebrates

M Drake
J Swain, Wiltshire

October, 2002
£ 4,000

To assess whether traditional management at Britford Water Meadows SSSI and Lower Woodford Water Meadows SSSI Wiltshire, has resulted in interesting invertebrate assemblages.

Long Mynd Environmentally Sensitive Area (ESA) management project

National Trust
E Steer, North Mercia

February, 2003
£ 3,000

To monitor moorland management and sheep husbandry on Long Mynd and the effectiveness of the Environmentally Sensitive Area (ESA) management plan. Recommendations for future management of the moorland will be made.

Lyme Bay, Devon, reefs project

Devon Wildlife Trust
C Davis, Devon

December, 2002
£ 5,000

Agreements were made in 2001 with the local fishermen closing two areas in Lyme Bay to mobile fishing gear. The project this year aims to survey and monitor the closed areas, to ensure that the agreements are achieving the aims of maintaining and enhancing biodiversity.

Monitoring impact of mulching management

R Moyse
P Harvey, Kent

August, 2002
£ 1,200

To monitor the impact of a self-propelled mulcher as a method of ride clearance in Orlestone Forest SSSI. Comparisons of floristic diversity following this form of management are being made with rides cleared by hand.

Mussel bed restoration project

University of Hull
C Donnelly, Eastern Area

March, 2004
£ 11,500

A study of mussel beds and bird populations of The Wash European Marine Site intertidal flats, and identify good practice for mussel bed restoration.

Norfolk Broads cSAC biomanipulation : fish surveys

To be decided
A Stewart, Environmental Impacts

November, 2002
£ 5,000

To determine the composition and biomass of the fish community in Barton Broad SSSI and Cockshoot Broad SSSI, prior to commencing biomanipulation under the Nation for People Lakes Restoration Project. Both sites are components of The Broads cSACs and Ramsar site.

Restoration of Cumbrian lakes

UCL-ENSIS
A Stewart, Environmental Impacts

February, 2003
£ 18,931

To carry out baseline investigations on four Cumbrian lake SSSIs, and recommend options for restoration to favourable condition.

Review of lake restoration techniques

Posford Haskoning
A Stewart, Environmental Impacts

June, 2002
£ 13,000

To review techniques for lake restoration, including their costs, and identify best practice.

Solent European Marine Site management scheme: management of bait digging

D Foster
W McKenzie, Hampshire & Isle of Wight

March, 2003
£ 2,000

Production of a bait digging code of conduct within the Solent European Marine Sites management scheme. The code will raise awareness of conservation value and provide environmental education.

Sustainable grazing project

ADAS Consulting Ltd
M Rebane, Uplands

March, 2007
£ 10,000

To identify environmentally sustainable grazing patterns to restore, and thereafter maintain, upland moorland vegetation.

The impact of moorland vegetation burning on biodiversity

Game Conservancy Trust
M Rebane, Uplands

March, 2012
£ 30,000

To determine the impacts of burning upon higher and lower plants, invertebrates and soil structure and hydrology and identify non-damaging burning systems.

The impact of organic manures on semi-natural grasslands

Consortium led by Institute of Grassland and Environmental Research
R Jefferson, Lowlands

March, 2005
£ 10,000

To determine optimum rates of farmyard manure application to semi-natural meadows through the conduct of experimental research in the field. To test whether equivalent nutrient supply by inorganic fertilisers and other slow-release fertilisers can substitute for farmyard manure. The results of this work will be used to develop best conservation management practices.

Yorkshire Dales limestone country LIFE project

To be decided
P Evans, North & East Yorks

March, 2007
£ 5,000

To assess the interaction between 'traditional' land management regimes and key limestone habitats and species of the Yorkshire Dales.

2.7 Hydrology

Abstraction sustainability appraisal for River Tweed cSAC : River Till catchment study

G Dodds, FWAG
B Cussen, Northumbria

August, 2002
£ 7,000

A study of actual volumes of water abstracted by each farmer from the River Till, Northumberland, a tributary of the River Tweed cSAC, so that this resource can be utilised sustainably.

Duddon Mosses cSAC hydrological study

To be decided
J Ogden, Cumbria

October, 2002
£ 3,500

To carry out hydrological survey work to inform restoration management of Duddon Mosses cSAC.

Extension to the Anglian Region's Wetland Framework study

Environment Agency
R Meade, Environmental Impacts

March, 2003
£ 20,000

To extend to the whole of England the existing Wetland Framework for Anglian Region, documenting how wetlands work, with particular respect to their ecohydrological mechanisms and vegetation characteristics.

Heath Lake SSSI hydrological survey

To be decided
S King, Thames & Chilterns

November, 2003
£ 1,250

Heath Lake SSSI appears to be getting increasingly eutrophic, possibly due to increased development within the catchment. This survey looks at water quality in terms of the overall hydrology of the catchment and the influences acting upon it.

Hydrological research upon South Solway and Duddon Mosses cSACs

To be decided
W Williams, Cumbria

March, 2004
To be decided

Carry out detailed hydrological research to inform the restoration management of South Solway Mosses and Duddon Mosses cSACs, under the Nature for People project.

Hydrological survey of land adjacent to Newham Fen cSAC

M Newsome
P Davey & S Coles, Northumbria

September, 2002
£ 7,000

To examine the potential for managing the watertable at Newham Fen cSAC and on surrounding grazing land, and the likely impacts of doing this on land beyond Newham Fen cSAC.

Hydrological survey of Moccas Park NNR

To be decided
H Stace, Herefordshire & Worcestershire

To be decided
To be decided

To review hydrological processes operating within the ditch and pond system of Moccas Park NNR including the recent NNR extension, and to make recommendations for management.

Hydrological survey of Moseley Common SSSI, Herefordshire & Worcestershire

To be decided
H Stace, Herefordshire & Worcestershire

To be decided
£ 4,000

An investigation of the hydrology of Moseley Common SSSI, Herefordshire & Worcestershire, to inform the review of the water level management plan.

Hydrological survey of woodland, Hampstead Heath SSSI

To be decided
A Machin, Essex, Hert's & London

March, 2003
£ 5,000

An investigation of the long term water level of woodlands at Hampstead Heath SSSI, to ensure favourable condition is maintained.

Investigation as to the current water quality of Hornsea Mere SPA

Environment Agency
J McNish, Humber to Pennines

April, 2003
£ 5,000

To obtain information on the current water quality of both Hornsea Mere and its catchment streams over a period of one year. The objectives are to form a major part of the appropriate assessment required in the review of consents for discharges and abstractions, and obtain water quality information to use as a baseline for the assessment of any new application made to the Environment Agency.

Minsterworth Ham restoration options

To be decided
P Holmes, Herefordshire & Worcestershire

February, 2003
£ 8,000

Modelling of flood alleviation options for Gloucester City has shown that reducing floodbanks and restoring the floodplain at Minsterworth Ham could take half a metre off flood levels in the city. This project will examine the hydrological result, and consequent ecological benefits of a variety of flood defence reduction scenarios.

Testate *Amoebae* of degraded raised bogs

University of Plymouth
R Meade, Environmental Impacts

December, 2002
£ 2,300

To develop a method for estimating the hydrological status of a degraded raised bog by looking at the species composition of testate *Amoeba* populations.

Wall Farm hydrological survey

RSPB
C Hogarth, North Mercia

October, 2002
£ 2,000

A full hydrological survey of Wall Farm, Kynnersley; as part of a feasibility study for wetland habitat restoration.

Water quality monitoring, Cotswold Water Park SSSI

To be decided
H Ward, Somerset & Gloucestershire

August, 2003
£ 4,000

To establish water quality of Cotswold Water Park SSSI lakes, as a basis for defining ways to restore favourable condition to those which have declined.

Wetland Framework development

Dr B D Wheeler
R Meade, Environmental Impacts

August, 2003
£ 10,000

To extend the Wetland Framework beyond East Anglia, so as to understand the relationship between geo-hydrology and surface interest features, such as plant communities. This work will inform the Environment Agency (EA) review of water abstraction consents affecting bogs and fens.

Wilden Marsh and Meadows SSSI, Herefordshire & Worcestershire, hydrological feasibility study

M Harding
P Holmes, Herefordshire & Worcestershire

November, 2002
£ 5,000

To examine the feasibility of restoring water levels to Wilden Marsh and Meadows SSSI, which suffered long-term damage from river engineering works in 1979, and of re-creating further habitats on surrounding land.

2.8 Impact studies

A strategic framework for the assessment of water resource related impacts on sites designated under European Union legislation

Environment Agency
J McNish, Humber to Pennines

November, 2002
£ 5,000

A review of the effects of activities which adversely impact upon fresh waters of sites designated under European legislation. To produce a framework for guidance on how to carry out an appropriate assessment of activities likely to have an affect on the water resources.

A30 Goss Moor transport study - advice note on butterflies and roads

Spalding Associates
W Smyth, Cornwall & Isles of Scilly

July, 2002
£ 3,660

A review of the past and current research on the impact of roads on butterfly populations. Particularly the significance of any impacts on adult dispersal and mortality.

An assessment of the effect on over-wintering ducks of recreation at the Wraybury and Thorpe Park Pits, South West London Waterbodies SPA

Wildfowl and Wetlands Trust
R Hobbs, Sussex & Surrey

April, 2003
£ 15,100

To research the effects of disturbance by amenity interests such as sailing, fishing, water-skiing, birdwatching etc., on gadwall, shoveler and other wintering wildfowl species at the Wraybury Gravel Pits and Thorpe No.1 Gravel Pit within the South West London Waterbodies SPA.

Biomarkers as longterm monitoring tools

To be decided
M Coyle, Environmental Impacts

To be decided
£ 15,000

To investigate the potential use of biomarkers, that is specific physiological or behavioural responses of organisms to stress, as a longterm monitoring tool in assessing environmental stress in marine and terrestrial wildlife.

Bran Sands, Teesmouth and Cleveland Coast SPA, bait collection project : Phase 2

To be decided
M Leakey, Northumbria

February, 2003
£ 3,000

To collect, collate and disseminate relevant information on bait species biology, potential environmental impacts of bait collection, and threats to populations of bait species at Bran Sands, Teesmouth and Cleveland Coast SPA.

Construction Industry Environment Forum project support

CIRIA
H Doran, Environmental Impacts

May, 2002
£ 5,000

To develop a biodiversity indicator for the construction industry.

Development of a water quality model for the Mersey Estuary SPA

Environment Agency
T Ganncliffe, Cheshire to Lancashire

March, 2003
£ 15,000

A review of the existing Mersey Estuary model of water quality, in particular to carry out an appropriate assessment of certain consented discharges, both singly and in-combination. The results will be used to develop an improved model. A comprehensive user manual for the water quality model will be produced and, training provided as appropriate.

Establishing practical measures for the assessment of eutrophication risks and impacts in estuaries

Environment Agency
J Burt, Environmental Impacts

July, 2003
£ 10,000

To test and further develop approaches to assessing the risks and impacts of eutrophication in estuaries to allow appropriate assessments of impacts on habitats and species as required by the Habitats Directive, Water Framework Directive and the Oslo and Paris Convention (OSPAR).

Fisheries advice contract

University of Hull and S Lockwood
A Carew, Maritime

March, 2003
£ 20,000

To provide specialist advice on fisheries which supports English Nature's work relating to the Common Fisheries Policy.

Foot and Mouth Disease audit of disposal sites

To be decided
A Burn, Environmental Impacts

December, 2002
£ 5,000

An assessment of the overall scale of the potential impact of Foot and Mouth Disease control measures on SSSIs in England.

Impact assessment modelling in relation to Flamborough Head Marine cSAC

Environment Agency
J McNish, Humber to Pennines

March, 2003
£ 5,000

To evaluate the transport, dispersion and fate of pollutants from coastal outfalls that may adversely affect the Flamborough Head cSAC and aid decisions relating to discharge licensing.

Investigation into foot and mouth disease impact on lichens at Moccas Park NNR

To be decided
H Stace, Herefordshire & Worcestershire

February, 2003
£ 7,000

To re-monitor the lichen transects within and adjacent to Moccas Park, to determine whether or not there has been an impact from local foot and mouth disease pyres. To carry out a more general review of the lichen interest and establish a new baseline for future monitoring.

Lindisfarne waterfowl refuge projects

S Percival
S Coles, Northumbria

To be decided
£ 7,715

Further analysis of the effectiveness of the waterfowl refuge in relation to wilfowling and site condition.

Local Authorities Handbook

David Tyldesley Associates
C Simms, Environmental Impacts

March, 2003
£ 4,000

The provision of updates to the Local Authorities handbook, a resource used by local teams to guide them when dealing with planning applications.

Modelling oystercatcher and cockle fishery interactions on the Dee Estuary SPA/cSAC

RSPB and Environment Agency Wales
M Bailey, Cheshire to Lancashire

December, 2005
£ 15,000

To construct an ecological model that will clarify the impact of the cockle fishery upon feeding aggregations of waders, in particular, oystercatchers.

No Take Zones

To be decided
M Hoskin, Cornwall & Isles of Scilly

March, 2003
£ 25,000

There is growing support within the fishing industry in the South-West of England that no take zones (where all collection or harvesting of marine life is stopped) can be a valuable tool for fisheries and biodiversity recovery. This joint project with the Cornish Fish Producers Organisation, and fishermen of the south-west aims to collect information on possible recovery options for South-West fish stocks, including the potential role of no-take zones.

North Kent Marshes grazing marsh project

Environment Agency
L Solly, Thames & Chilterns

December, 2002
£ 10,000

To define the water level and water quality requirements of habitats and species on the grazing marshes of The Swale SPA, Medway Estuary and Marshes SPA and Thames Estuary and Marshes SPA, and to carry out an appropriate assessment of any Environment Agency licences that are likely to have a significant effect upon them.

Pink seafan *Eunicella verrucosa* research

Reef Research
R Covey, Cornwall & Isles of Scilly

March, 2004
£ 5,000

Collection of data regarding settlement, growth rates, reproductive strategies and resilience to human induced damage of the pink seafan *Eunicella verrucosa* which will enable conservation efforts on the species target to be better targeted.

Planning and ancient woodland

To be decided
K Kirby, Lowlands

February, 2003
£ 5,000

To explore with a selection of planning authorities in Southern England, ways of improving the collection of information about planning impacts on ancient woodland.

Research on the direct and indirect effects of human activity on turnstone

K Webb
D Pound, Kent

December, 2003
£ 10,000

An assessment of the effects of different human activities on the survival rate of wintering turnstone and to provide information to guide management.

Reviewing the impact of Environment Agency permissions and activities on bird populations in the Anglian Region

Environment Agency
Z Masters, Beds & Cambs

March, 2003
£ 10,000

To improve knowledge and understanding of the effect of Environment Agency permissions and activities on bird populations on Anglian Region's SPAs, through use of 'alerting' mechanism developed by the British Trust for Ornithology.

Severn Estuary pSAC/SPA : amphipod response to beach cleaning regimes

T Smith
K Jeffreys, Somerset & Gloucestershire

October, 2002
£ 2,200

To determine amphipod response to beach cleaning regimes, and to use this information in the management of valuable strandline habitat, including birds using the Severn Estuary.

Site characterisation of the River Avon cSAC/Avon Valley SPA, the River Camel cSAC and the River Axe cSAC, for the purposes of the Environment Agency Review of Consents

Environment Agency
M Taylor, Somerset & Gloucestershire

March, 2003
£ 10,000

A desk-based review to collate and integrate information relevant to these sites, for the purposes of managing and protecting them under the Habitats Directive and, in particular, to inform the appropriate assessments under the Environment Agency Review of Consents project.

Solway Firth SPA bird disturbance survey

To be decided
K Slater, Cumbria

July, 2003
£ 15,000

To identify and map the sources of disturbance to the passage and wintering wildfowl and wader populations of the Solway Firth SPA. The frequency, type and effects of disturbance will be established, and measures suggested that can be employed to prevent disturbance.

Species Protection Guide for the construction industry

To be decided
H Doran, Environmental Impacts

To be decided
£ 11,000

A guide aimed at improving knowledge and awareness of species protection and licensing in the construction industry.

Suffolk Coast and Heaths deer impact study

RSPB
B Williamson, Suffolk

March, 2003
£ 1,000

To investigate the impact of the local deer population on woodland and farmland within the Suffolk Coast and Heaths Natural Area and evaluate the perceptions by visitors of the impacts and attributes of deer, in particular, considering whether deer attract visitors to the area.

Sustainable fisheries indicators

To be decided
A Carew, Maritime

March, 2003
£ 10,000

A review of published information in order to identify gaps in research relating to fisheries indicators.

To assess the value of bioassays in site characterisation, for the purpose of informing assessments under the EU Habitats Directive

Environment Agency
M Wills, Somerset & Gloucestershire

June, 2003
£ 15,000

To trial on two pilot sites, the Tees Estuary and the Solent, a risk-based approach for the use of bioassays in decisions under the Habitats Regulations. To assess the contributions that bioassay use can make to decision-making during the on-going Environment Agency Review of Consents.

Upland waders and foot and mouth disease

RSPB
A F Brown, Uplands

March, 2006
£ 25,000

To compare information on the distribution, numbers and habitat use of waders in Northern England, after the foot and mouth disease of 2001, by comparison with the situation before the disease outbreak.

Workshop on the impact of agri-chemicals on lower plants

British Lichen Society
P Lambley and C Borges, Lowlands

April, 2003
£ 5,000

To organise a workshop to review current state of knowledge concerning the impact of agri-chemicals on lower plants.

2.9 Invasive exotic species

Advice on control of invasive aquatic plants (1)

Centre for Aquatic Plant Management
S Clarke, Environmental Impacts

March, 2003
£ 15,000

To provide advice to local teams on invasive aquatic plants control options in designated sites.

Aquatic macrophyte survey of Hatchet Pond, New Forest cSAC, Hampshire

Centre for Aquatic Plant Management
A Stewart, Environmental Impacts

December, 2002
£ 5,000

To carry out an aquatic macrophyte survey of Hatchet Pond, New Forest cSAC, and clarify the control options for New Zealand pygmyweed *Crassula helmsii*.

Control of aquatic invasive plants (2)

Centre for Aquatic Plant Management
S Clarke, Environmental Impacts

March, 2003
£ 23,000

The aim is to investigate control options for invasive aquatic plant species at selected trial sites by monitoring the efficacy of various control and eradication approaches.

Problem exotic species management

Professor R Marris, University of Liverpool
J Hopkins, SDRT

October, 2002
£ 16,400

Compilation of current knowledge concerning the management and control of those introduced species which cause damage to biodiversity in Britain. A methodology for decision making about management will be developed, and species specific data found will be published on web pages.

Native oyster

To be decided
A Carew, Maritime

March, 2003
£ 20,000

An investigation into the natural immunity of the native oyster to the parasitic protozoan *Bonamia*.

2.10 Landscape ecology and restoration

Barnby Broad and Marshes SSSI/Sprats Water and Marshes SSSI, Suffolk : restoration survey

To be decided
P Robinson, Suffolk

March, 2003
£ 30,000

An initial survey in preparation for mud pumping and restoration work at Barnby Broad and Marshes SSSI and Sprats Water and Marshes SSSI, Suffolk.

Monitoring of 'unmanaged' upland vegetation

To be decided
A Crowle, Uplands

March, 2003
£ 20,000

This study builds on earlier research which identified upland areas in England that have been taken out of management. The contract will identify a sample of the sites which form part of a national monitoring programme, and establish appropriate demonstration sites to exhibit vegetation changes that occur over time, following a release of grazing and/or burning.

Peak District Biodiversity Initiative: Vision project

Peak District National Park Authority
J Stewart, Peak District & Derbys

March, 2003
£ 5,300

A Local Biodiversity Action Plan (BAP) has been written for the whole of the Peak District including areas outside the National Park and identifies a number of conservation priorities. The aim of this project is to take an integrated approach to conservation and the area chosen is a part of the White Peak Natural Area that will allow all the Natural Area biodiversity priorities to be considered.

Restoration of Holme Fen NNR and Woodwalton Fen cSAC/NNR

K Gilman
R Meade, Environmental Impacts

July, 2002
£ 5,800

A study to prioritise management works and acquisitions to re-instate raised bog at Holme Fen and effectively manage fen habitats at Woodwalton Fen.

Review of bog restoration, Greater Manchester

T Dargie
R Meade, Environmental Impacts

October, 2002
£ 8,600

A review of the success of different restoration techniques applied to four degraded raised bogs in Greater Manchester.

Actions to achieve recovery of farmland birds

ADAS Consulting Ltd
A Burn, Environmental Impacts

March, 2006
£ 10,000

English Nature contribution to multi-partner investigation into methods for enhancing farmland biodiversity by integrating novel habitat management approaches within the crop and non-crop margins.

Scoping bog and fen creation, Somerset

To be decided
R Meade, Environmental Impacts

December, 2002
£ 6,000

To identify the most appropriate locations in the Somerset Levels for the re-establishment of active raised bog and fen habitats.

Waders of wet meadows

RSPB
G Walker, North Mercia

January, 2003
£ 5,000

To achieve restoration of lowland wet grassland in Cheshire, Staffordshire and Shropshire.
To target habitats for lapwings and other wading birds in particular.

2.11 Natural heritage Information Systems

Birmingham and Black Country Local Records Centre

Birmingham & Black Country Wildlife Trust
H Griffiths, North Mercia

To be decided
£ 2,000

Support to the Local Records Centre in order to provide a basis for biodiversity information exchange.

Derbyshire and Peak District Local Records Centre feasibility study

To be decided
J Stewart, Peak District & Derbys

September, 2003
£ 10,000

To appraise, advise and cost options for delivering a local biodiversity information system for the Peak District and Derbyshire area.

Derbyshire and Peak District woodland and other habitat : information system

Peak District National Park Authority & Forestry Commission
J Stewart, Peak District & Derbys

March, 2004
£ 6,000

A Geographical Information System (GIS) based project to enable the efficient targeting of incentives for New Native Woodland creation and restoration in Derbyshire and the Peak District

GIS support for Lifescapes project

Suffolk Biological Records Centre
B Williamson, Suffolk

March, 2004
£ 20,000

To provide habitat "potential" maps that identify the optimal locations for the restoration and creation of key habitats within the Suffolk Coast and Heaths Natural Area, to enable other organisations to make better informed choices about land use and acquisition.

Herefordshire Local Records Centre development

Herefordshire Council
V Cooper, Herefordshire & Worcestershire

December, 2004
£ 10,000

Establish and maintain a Local Records Centre for Herefordshire to National Biodiversity Network (NBN) standards.

Humber Estuary bibliography

Institute of Estuarine and Coastal Studies, Hull University
K Jennings, Humber to Pennines

June, 2002
£ 10,000

The updating of an existing bibliographical database to create a comprehensive bibliography of information (both published and grey literature) on the biological and physical characteristics of the Humber Estuary, its tidal rivers and surrounding coast (Scarborough to Skegness) and on land use within this area. To launch this as a website with access and search facilities available to all.

Lowland Wood-Pasture and Parkland Information System (LPWIS)

Blue Bag and others
R Watson, Lowlands

March, 2003
£ 7,000

Collation of existing information on the distribution of wood-pasture and parkland sites in England, to be stored electronically in the Lowland Wood Pasture and Parkland Information System (LPWIS) application and made available via the internet.

Service level agreement with Environmental Records Centre, for Cornwall & Isles of Scilly

Cornwall Wildlife Trust
J Clitherow, Cornwall & Isles of Scilly

March, 2003
£ 10,000

To support the development of the Environmental Records Centre for Cornwall and Isles of Scilly, so that they are able to respond to consultations from planning authorities concerning protected species and habitats, and other wildlife enquiries.

Shropshire Local Records Centre

Shropshire County Council
E Steer, North Mercia

January, 2003
£ 3,000

A feasibility study to investigate the potential to develop a Local Records Centre in Shropshire.

Staffordshire Local Records Centre

Staffordshire Eco Record
J Blowers, North Mercia

To be decided
£ 4,000

To provide support to the Staffordshire Local Records Centre and provide a basis for the exchange and provision of biodiversity information.

Suffolk Biological Records Centre development

Suffolk Biological Records Centre
R Rafe, Suffolk

March, 2003
£ 8,000

Support for the ongoing development of the Suffolk Biological Records Centre.

Thorne and Hatfield Moors biodiversity project

To be decided
A Graham-Smith, Humber to Pennines

December, 2002
£ 5,000

To update an existing species and habitat database to create a comprehensive dataset for i) Thorne Moors SPA/cSAC, and ii) Hatfield Moor pSAC. To locate this database where those with an interest in the Moors can access and search it.

Threatened bryophytes database

Biological Records Centre
R Porley, Lowlands

April, 2005
£ 10,000

To maintain and develop a database of rare and threatened bryophytes.

Upland habitat inventory

Part 1-Geodata; Part 2 To be decided
A Crowle, Uplands

March, 2004
£ 70,000

Establish baseline areas for key upland habitats (e.g. wet heath, dry heath, blanket bog) using a combination of aerial photographs overlain by GIS software, and where required confirmed by ground truthing.

Warwickshire Local Biodiversity Action Plan

To be decided
A Irving, North Mercia

To be decided
£ 3,000

To support and promote a Local Biodiversity Action Plan in Warwickshire.

Wetland Habitat Action Plan Website

To be decided
Y Hill, Environmental Impacts

June, 2002
£ 3,000

To create a website of wetland data to support the work of the Wetland Habitat Action Plan Steering Group.

Worcestershire Local Records Centre development

Worcestershire Wildlife Trust
D Heaver, Herefordshire & Worcestershire

March, 2004
£ 10,000

To establish and maintain a Local Records Centre for Worcestershire to NBN standards.

2.12 Public access

Access and Woodlarks

University of East Anglia
A F Brown, Uplands

January, 2004
£ 15,000

An EN-funded PhD studentship to relate woodlark numbers, distribution and breeding success to habitat character, predation rate and disturbance, in order to build population models predicting the effects of increased levels of public access.

Impact of access on breeding birds

RSPB
A F Brown, Uplands

March, 2005
£ 45,000

To evaluate and predict the population-level impacts of recreational disturbance on selected bird species characteristic of mountain moor, heath and down: Dartford warbler, golden plover, dunlin and stone curlew.

Studies of the effects of human disturbance on heathland birds of the Dorset heaths

RSPB/CEH
A Nicholson, Dorset

November, 2002
£ 15,400

An investigation of the impact of urban development and human disturbance on the numbers of heathland bird species on the Dorset heaths using existing data. In addition, the success of nightjar nesting attempts on sites where there is a range of human access will be studied.

Upland birds and access to the countryside

Game Conservancy Trust
A F Brown, Uplands

March, 2004
£ 32,000

To determine whether increased levels of recreational disturbance, which may be brought about by the implementation of the Countryside and Rights of Way Act 2000, is likely to have an impact on lapwing and black grouse, key species associated with the upland fringe.

2.13 Remote sensing and telemetry

Compact Airborne Spectrographic Imager (CASI) survey

To be decided
I Pearson, Hampshire & Isle of Wight

March, 2004
£ 30,000

Compact Airborne Spectrographic Imager (CASI) survey of coastal and intertidal Natura 2000 sites on the coast of Hampshire and the Isle of Wight (excluding South Wight Maritime cSAC). Survey data collection over two years will produce NVC habitat maps of Natura 2000 sites, thus informing English Nature on type and extent of habitats.

Remote sensing of raised bog condition

To be decided
R Meade, Environmental Impacts

November, 2002
£ 8,600

The development of a method for assessing condition categories on raised bogs, using remote sensing. To relate these to the Lowland Peatland Resource Inventory and Habitats Directive categories.

2.14 Risk assessment

Anthelminthics and dung fauna : Phase I

Silsoe College
A Burn, Environmental Impacts

June, 2002
£ 8,300

A review of evidence of risks to nature conservation sites, and biodiversity more widely, from the use of anthelminthics, with a focus on effects on dung fauna and dependent predatory species. To identify a potential modelling approach to enable risk assessments for use of anthelminthics in SSSIs.

Anthelminthics risk assessment, Phase II

To be decided
A Burn, Environmental Impacts

June, 2003
£ 16,600

To further develop output from Phase I of this work so as to develop a modelling approach to risk assessment for anthelminthics and dung fauna.

Organic enrichment impacts on SPAs, Phase II

To be decided
A Burn, Environmental Impacts

June, 2003
£ 20,000

To carry out a modelling exercise on selected estuarine SPAs, to determine likely changes and risks to bird populations following organic loading reductions as a result of sewage effluent improvements.

Rodenticides and Red kites

University of Leicester
A Burn, Environmental Impacts

September, 2004
£ 2,000

A contribution to a PhD project, to examine routes of exposure of Red kites to rodenticide residues.

Water quality model of the River Mersey

To be decided
T Ganniccliffe, Cheshire to Lancashire

December, 2002
£ 15,000

To develop a water quality model of the River Mersey to aid appropriate risk assessment under the Habitats Regulations.

2.15 Site survey

Acid grassland survey and condition assessment on The Malvern Hills SSSI

Countryside Consultants
H Stace, Herefordshire & Worcestershire

August, 2002
£ 3,300

To carry out a Phase 2 NVC survey of the acid grassland habitats of The Malvern Hills SSSI, and provide a condition assessment using English Nature national criteria.

Aquatic vegetation survey of Chesterfield Canal SSSI, Nottinghamshire

British Waterways
S Clifton, Eastern Area

December, 2002
£ 5,000

To survey and evaluate the aquatic vegetation communities of the Chesterfield Canal SSSI, Nottinghamshire and assess the condition of the site.

Arachnid survey of Birklands and Bilhaugh cSAC

Entotax Consultants
S Clifton, Eastern Area

March, 2003
£ 3,000

To survey and review the arachnid fauna associated with veteran trees and ancient woodland within the Birklands and Bilhaugh cSAC.

Assessment of habitat condition and management status of units in Sites of Special Scientific Interest (SSSIs) within the Peak District and Derbyshire

J Frith
J Stewart, Peak District & Derbys

December, 2002
£ 2,000

To carry out condition assessments and recording of management within selected SSSI according to conservation agencies common standards.

Avon Gorge cSAC botanical survey

L Houston, Bristol City Council
S Lee, Somerset & Gloucestershire

February, 2003
£ 3,000

To monitor 15 key rare plant species, some endemic to the Avon Gorge, in relation to their response to management work. Continue ongoing survey to determine complete distribution within the Gorge, of both rare plants and important Whitebeam *Sorbus* spp.

Baseline survey of the habitats and species of European interest on the River Lambourn cSAC, Berkshire

Environment Agency
J Smith, Thames & Chilterns

December, 2002
£ 10,000

To gain a better understanding of the extent and health of the Water crow-foot *Ranunculus* communities and populations of brook lamprey and bullhead along the length of the river. To enable representative river stretches to be selected for monitoring, to enable condition assessment to be reported on.

Berwickshire and North Northumberland Coast European Marine Site: Condition monitoring of intertidal rocky reef communities

To be decided
M Quigley, Northumbria

February, 2003
£ 7,000

To monitor rocky shore transects on the Berwickshire and North Northumberland Coast European Marine Site, as part of condition monitoring for features upon which European Marine Site status is based.

Berwickshire and North Northumberland Coast European Marine Site: Extent and distribution of sand flats, mud flats and mussel beds

To be decided
M Quigley, Northumbria

February, 2003
£ 6,000

Condition monitoring of those interest features upon which the Berwickshire and North Northumberland Coast European Marine Site designation is based.

Botanical survey of Catcott, Edington and Chilton Moors SSSI and Tealham and Tadham Moors SSSI, Somerset

Somerset Environmental Records Centre
M Jones, Somerset & Gloucestershire

September, 2003
£ 12,100

To provide qualitative and quantitative data on grasslands on the Catcott, Edington and Chilton Moors SSSI and Tealham and Tadham Moors SSSI. To compare the data collected during the survey with baseline data previously collected in 1996, in order to determine the nature of vegetation change, if any, within the SSSIs.

Broadmoor to Bagshot Woods & Heaths NVC survey

To be decided
S Brocklehurst, Thames & Chilterns

December, 2002
£ 5,000

Production of a baseline NVC habitat survey of the Broadmoor to Bagshot Woods and Heaths SSSI, part of the Thames Basin Heaths Special Protection Area (SPA).

Breeding birds survey at Knebworth Woods SSSI, Hertfordshire

To be decided
A Muller, Essex, Hert's & London

March, 2003
£ 1,500

To provide comprehensive data on the importance of woodlands of the Knebworth Woods SSSI, Hertfordshire, for birds.

Characterisation of intertidal invertebrate communities on Medway Estuary and Marshes SPA and The Swale SPA

Environment Agency, Natural History Museum and University
of Greenwich
L Solly, Kent

March, 2004
£ 10,000

To provide information on invertebrate communities as food supply for birds within the Medway Estuary and Marshes SPA and The Swale SPA. The study will relate invertebrate abundance and distribution to physico-chemical properties of intertidal sediments.

Churnet Valley SSSI, Staffordshire woodland survey

Nicol Jones & Lomax
J Blowers, North Mercia

September, 2002
£ 7,000

A woodland survey of the Churnet Valley SSSI, Staffordshire woodlands to the standard required by the Native Woodland Plan (NWP) pilot scheme. To identify management recommendations for long term nature conservation objectives and complete a baseline survey of SSSI features.

Condition assessment of canal plant communities

To be decided
S Clarke, Environmental Impacts

December, 2002
£ 40,000

A survey to establish the status of aquatic plant communities in selected canal SSSIs.

Condition assessment of South Pennine Moors SPA, Thorne & Hatfield Moors cSAC and Humber Estuary European Marine Site.

To be decided
B Fleming, Humber to Pennines

March, 2004
£ 10,000

To determine the condition of internationally important features for which the i) South Pennine Moors SPA, ii) Thorne & Hatfield Moor cSAC complex and iii) Humber Estuary European Marine Site are selected.

Condition monitoring of lake cSACs

To be decided
A Stewart, Environmental Impacts

June, 2003
£ 10,000

A baseline aquatic macrophyte survey and water chemistry sampling on three lake candidate SACs - Littlesea (Hampshire), Roman Wall Loughs (Northumberland), and Woolmer/Cranmere Pond (Hampshire).

Craven limestone cSACs NVC survey

Bullens
P Evans, North & East Yorks

December, 2002
£ 40,000

To carry out NVC survey to inform setting of conservation objectives and support LIFE project development within the cSACs selected on The Craven Limestone of North Yorkshire.

Evaluation of the dead wood fauna at Blenheim Park SSSI, Oxfordshire

Mosaic Mapping
K Payne, Thames & Chilterns

November, 2002
£ 1,800

Completion of mapping of dead wood features of over 900 veteran trees within High Park, Blenheim Park SSSI, Oxfordshire; including digital photography of the trees, and assessment of their invertebrate fauna.

Fal and Helford European Marine Site, maerl bed monitoring

To be decided
M Hoskin, Cornwall & Isles of Scilly

March, 2003
£ 10,000

This project aims to assess the condition of maerl beds within the Fal and Helford cSAC. Maerl beds are an extremely rare habitat in England, and the Fal supports the best developed maerl bed in England.

Hatchet Pond fish survey, New Forest cSAC, Hampshire

To be decided
A Stewart, Environmental Impacts

November, 2002
£ 5,000

Determine the composition and biomass of the fish community in Hatchet Pond prior to commencing biomanipulation under the Nature for People Lakes Restoration Project. Hatchet Pond is part of the New Forest SAC.

Humber Estuary proposed SAC : site characterisation

Environment Agency
J McNish, Humber to Pennines

March, 2003
£ 7,000

This site characterisation study aims to gain better understanding of ecological structure and function of the Humber Estuary pSAC, the effects of anthropogenic activities, and the distribution and sensitivities of interest features.

Invertebrate survey of swamp and marsh sites in Nene Valley near Oundle, Northamptonshire

To be decided
T Barfield, Beds, Cambs & Northants

December, 2002
£ 3,000

To carry out a comparative survey of three sites in the Nene Valley near Oundle, Northamptonshire, for various invertebrate groups.

Invertebrate surveys of Dartford and Crayford marshes

L Wells
P Massini, Essex, Hert's & London

December, 2002
£ 5,500

A survey of ditches at Dartford and Crayford Marshes to determine the interest for aquatic invertebrates, to inform possible SSSI notification.

Isle of Wight soft cliff survey

Ecological Survey and Assessment
A Gordon, Hampshire & Isle of Wight

September, 2002
£ 4,000

To survey, classify and map at Phase 1 level the distribution of vegetated sea cliff habitat found along the cliff tops and slopes between Castlehaven and Binnel Point, Isle of Wight.

Itchen cSAC sustainability study

Environment Agency
A Newsome, Hampshire & Isle of Wight

September, 2002
£ 15,000

To undertake a survey and condition assessment of the wetland habitats within the River Itchen cSAC.

Kennet Valley Alderwoods SSSI: NVC survey

Wessex Environmental Associates
H Whetter, Thames & Chilterns

August, 2002
£ 2,779

Produce a baseline NVC survey of the Kennet Valley Alderwoods SSSI.

Lake District High Fells NVC survey

Rigby Jerram and Quadrat Scotland
I Slater, Cumbria

February, 2003
£ 35,120

To carry out a full NVC survey of the features of international importance within 9 of the 10 SSSIs within the Lake District High Fells cSAC.

Landscape survey at Moccas Park NNR

To be decided
H Stace, Herefordshire & Worcestershire

February, 2003
£ 3,000

Production of a landscape assessment of the extension to Moccas Park NNR and review past tree planting within the park to provide new proposals for tree planting over the next ten years.

Loe Pool management plan

The National Trust
A McDouall, Cornwall & Isles of Scilly

December, 2002
£ 1,000

Review progress to date against objectives and actions detailed in the 1998 management plan, to inform revision of the Loe Pool Management Plan.

Low tide bird counts of the Wash SPA

Centre for Ecology and Hydrology
C Donnelly, Eastern Area

March, 2004
£ 10,000

To gather data on feeding areas and distribution of internationally important bird populations within the Wash SPA.

Mapping of Cord-grass *Spartina* in the Solway Firth

D Hawker
K Slater, Cumbria

August, 2002
£ 2,937

To map the distribution of Cord-grass *Spartina* in the Solway Firth European Marine Site, Cumbria.

Mapping of intertidal habitats in the Medway and Swale

Kent County Council
L Solly, Kent

March, 2004
£ 5,000

To provide information on the extent and distribution of intertidal habitats to support monitoring and reporting within the Medway and Swale European Marine Sites, Kent.

Monitoring Fal and Helford subtidal

To be decided
M Hoskin, Cornwall & Isles of Scilly

December, 2002
£ 28,000

Extensive areas of the Fal and Helford European Marine Site consist of areas of sediment permanently below the water. This project aims to survey the extent of broad habitat types within the area using acoustic techniques, with ground truthing by remote video.

Monitoring of Essex Estuaries, The Wash and North Norfolk Coast European Marine Sites

Posford Haskoning
E Hill, Maritime

March, 2003
£ 44,000

NVC survey of saltmarsh and other habitats in The Wash, North Norfolk Coast and Essex Estuaries, European Marine Sites to establish monitoring baseline.

Monitoring of subtidal sediment of the Fal and Helford, Isle of Scilly

University of Hull
E Hill, Maritime

December, 2002
£ 42,500

To establish on the Fal and Helford and Isles of Scilly European Marine sites, monitoring sites and baseline values for i) particle size distribution within the sand banks, ii) species composition of gravel and sand communities, and iii) species composition of the mixed sediment communities.

Monitoring subtidal habitats

Aquatic Environments
E Hill, Maritime

March, 2003
£ 45,000

An NVC survey of saltmarsh and other habitats in the i) Wash, ii) North Norfolk Coast and iii) Essex Estuaries, European Marine Sites.

Moors for the Future - sustainability baseline and interpretation

Peak District National Park Authority
J Stewart, Peak District & Derbys

March, 2007
£ 11,000

To contribute towards the collection of baseline data, in particular moorland bird survey and on site interpretation which supports the Moors for the Future project.

NVC habitat survey of the Woolhampton Reed Bed SSSI, Berkshire

To be decided
H Whetter, Thames & Chilterns

November, 2002
£ 1,500

A baseline NVC habitat survey of the Woolhampton Reed Bed SSSI, Berkshire.

NVC survey of a number of component SSSIs of the Breckland cSAC

Environment Agency
N Sibbett, Suffolk

December, 2002
£ 10,000

To undertake an NVC survey of a number of component SSSIs of the Breckland cSAC, to gain a better understanding of the extent of the habitats and species for which the cSAC is selected, as part of the site characterisation work being undertaken for the appropriate assessment for the Environment Agency's Review of Consents.

NVC survey of Rame Head and Whitsand Bay SSSI

Spalding Associates
M Beard, Cornwall & Isles of Scilly

December, 2002
£ 5,859

NVC survey of the Rame Head on Whitsand Bay SSSI, Cornwall and digitisation of results, which will be used to guide future management and other conservation actions.

Pagham Harbour SSSI, Sussex : reed bed survey

Pagham Harbour Local Nature Reserve
J Curson, Sussex & Surrey

October, 2002
£ 2,500

To get baseline data on reed bed invertebrates, especially moths and in particular rare and red data species, so that damage to rare and vulnerable species can be avoided or minimised when planning management to reed beds within the SSSI.

Pagham Harbour SSSI, Sussex : vegetated shingle survey

Pagham Harbour Local Nature Reserve
J Curson, Sussex & Surrey

October, 2002
£ 4,400

To get baseline data on invertebrates associated with vegetated shingle, so that the effect of future management and of future potential changes in coastal defence policy in this area can be better assessed.

Review of habitats and species on the Black Mountains SSSI, Herefordshire

To be decided
H Stace, Herefordshire & Worcestershire

January, 2003
To be decided

A review of the distribution, status and condition of the habitats and species on the Black Mountains SSSI, Herefordshire for which the site is designated.

Review of status of Esthwaite Water SSSI, Cumbria

Posford Haskoning
A Stewart, Environmental Impacts

June, 2002
£ 5,500

A comprehensive review of the condition of Esthwaite Water SSSI and Ramsar site, which has suffered from eutrophication, focussing on the key attributes of water chemistry, transparency, aquatic macrophytes and sediment load. To identify the next steps to achieve favourable condition.

Richmond Park cSAC ancient tree survey

Royal Parks Agency
N Radford, Essex, Hert's & London

March, 2003
£ 7,500

To complete the ancient tree survey of the Richmond Park cSAC, and devise an appropriate programme of restorative works.

River Blythe SSSI, Warwickshire/West Midlands : aquatic macrophyte re-survey

To be decided
H Griffiths, North Mercia

To be decided
£ 2,000

To undertake a survey of aquatic macrophytes of the River Blythe SSSI, Warwickshire/West Midlands, by repeating a 1997 survey. This is to gather information on the nature and distribution of river types along the water course, and ascertain changes since the last survey.

Severn Estuary pSAC/intertidal biotope survey

To be decided
M Wills, Somerset & Gloucestershire

March, 2004
£ 15,000

To survey the biotopes of the intertidal areas of the Severn Estuary, to help inform casework and develop Habitats Regulation 33 advice.

South Wight European Marine Site management scheme

Isle of Wight Council, Environment Agency
W McKenzie, Hampshire & Isle of Wight

August, 2004
£ 3,000

To produce a single scheme of management for the South Wight European Marine Site based upon existing site data. The management scheme will be written and administered by the Isle of Wight Council.

Solent Maritime European Marine Site : Medina Estuary, Isle of Wight, sustainability study

Isle of Wight Council
C Lambert, Hampshire & Isle of Wight

January, 2003
£ 5,000

This study will look at sustainable use of the Medina Estuary, which forms part of the Solent Maritime European Marine Site, as a further development of the Medina Estuary Management Plan.

Stiperstones NNR grassland survey

Dr K Thorne
T Wall, North Mercia

September, 2002
£ 2,000

A survey of grasslands on Stiperstones NNR which will map NVC types, assess grassland condition and make recommendations for future management.

Subtidal macrobenthos survey of the Wash

Environment Agency
C Donnelly, Eastern Area

March, 2004
£ 20,000

An assessment of the condition of the subtidal interest features of The Wash European Marine Site.

Teesmouth and Cleveland Coast European Marine Site: Assessment of food availability for birds within the North Tees mudflat

To be decided
M Quigley, Northumbria

February, 2003
£ 3,000

To assess the food availability to SPA bird interests within the North Tees mudflat.

The Wash European Marine Site : Intertidal benthic habitat monitoring project

Ecomaris
C Donnelly, Eastern Area

March, 2004
£ 14,000

Gathering of data about intertidal benthic habitat to support ecological monitoring of the Wash Marine European Marine site.

Thursley, Ash, Pirbright and Chobham cSAC, habitat survey

Ecological Planning Research
C Kerr, Sussex & Surrey

September, 2002
£ 3,500

An NVC survey of the Chobham Common SSSI, a component site of Thursley, Ash, Pirbright and Chobham cSAC.

Tweed Estuary European Marine Site : Mapping of sand and mudflat biotopes

To be decided
M Quigley, Northumbria

February, 2003
£ 6,000

Sand and mudflats are two of the interest features for which the Tweed Estuary has been proposed as a European Marine Site. Mapping of these habitats is required to set targets for their conservation.

Veteran pollard management at Northaw Great Wood SSSI, Hertfordshire

To be decided
G Wyatt, Essex, Hert's & London

March, 2004
£ 2,000

To assess the level of recent management Northaw Great Wood so that further management can be planned.

Veteran tree mapping at Brampton Bryan Park

J Smith, Mosaic Mapping
H Stace, Herefordshire & Worcestershire

June, 2003
£ 3,000

Global Positioning System (GPS) survey and tagging of veteran trees at Brampton Bryan Park, together with gathering information on key attributes of the trees.

Veteran tree mapping at Windsor Forest and Great Park cSAC

To be decided
S King, Thames & Chilterns

November, 2003
£ 4,000

To GPS map, digitally photograph and tag the dead wood features within Windsor Forest and Great Park cSAC.

Wenlock Edge SSSI management survey

National Trust
E Steer, North Mercia

December, 2002
£ 1,500

To collect data on the woodland interest of Wenlock Edge SSSI which will guide future management and other conservation actions.

Woodland survey of the Malvern Hills SSSI

Countryside Consultants
H Stace, Herefordshire & Worcestershire

June, 2002
£ 4,534

To provide a definitive view on the status of woodland in the Malvern Hills SSSI as part of the stock of Ancient Semi-Natural Woodland, and classify woodland and scrub edge by type, to assist in formulating further management proposals.

2.16 Socio economics

Agricultural baseline survey of farm holdings in the Mid Cornwall area

ADAS Consulting Ltd
J Traill Thomson, Cornwall & Isles of Scilly

July, 2002
£ 11,667

To identify ways in which farmers can improve farm incomes from farming in an area of high natural value. To recommend how English Nature can work with farmers and related businesses to enable them to benefit further from their conservation activities.

Business and biodiversity guidance

To be decided
H Doran, Environmental Impacts

To be decided
£ 4,500

To produce a simple, easy to understand guide on company Biodiversity Action Plans.

Cornwall Biodiversity Action Plan Community Officer contribution

Cornwall Wildlife Trust
S Warman, Cornwall & Isles of Scilly

March, 2004
£ 20,000

Employment of a project officer to embed principles and practices for the achievement of Biodiversity Action Plan targets into Community Strategies, (and other vehicles for community engagement). To promote examples of best practice locally and nationally, through maintenance of a web-site and paper publications.

Economics - Participation process and nature conservation

University College, London
J Burney, Environmental Impacts

March, 2003
£ 2,000

To complete the CASE PhD studentship, investigating how participative process could be used in English Nature's work.

Economics habitat accounts (Phase 4)

NERC
J Burney, Environmental Impacts

May, 2002
£ 2,000

To complete the work on developing environmental accounts for habitats, using Countryside Survey 2000 and other data.

Extensification of moorland sheep grazing

GFA-RACE Partners Ltd
I Dickie, Environmental Impacts

May, 2002
£ 6,200

The project aims to model the economics of removing grazing rights from upland areas in Northern England, and understand farm business impacts of restricting grazing and necessary compensation levels.

Internal guidance on sustainable development

To be decided
H Doran, Environmental Impacts

To be decided
£ 10,000

A review of planning and Habitats Regulations casework, to advise on how responses could be improved in the future, by using sustainable development arguments.

Peak District Environmental Quality Mark

Peak District National Park Authority
J Stewart, Peak District & Derbys

March, 2004
£ 5,000

To develop the Environmental Quality Mark for the Peak District, making the benefits to nature conservation clear and explicit.

Quality of Life Capital

Countryside Agency
H Doran, Environmental Impacts

To be decided
£ 4,500

To maintain and promote the Quality of Life Capital project, which aims to promote sustainable development, taking account of social and commercial factors. A joint agency project led by the Countryside Agency.

Revealing the Value of Nature - BAP habitats

To be decided
J Burney, Environmental Impacts

To be decided
£ 5,000

To provide further interpretative material relating to English Nature's recent report on "Revealing the Value of Nature". To continue research in relation to the social benefits of conserving BAP habitats and designated sites.

Sea fisheries economics

To be decided
J Burney, Environmental Impacts

To be decided
£ 16,000

To evaluate from an environmental perspective, current research on policy options for capacity reduction, and examine the economics of additional options to ensure environmental objectives are met.

Social inclusion and biodiversity

To be decided
H Doran, Environmental Impacts

To be decided
£ 8,000

Using case studies to develop a policy which relates biodiversity conservation to wider social values, as identified in the English Nature publication 'Revealing the value of Nature'.

Socio-economic value of geology

Institute of Rural Studies, Aberystwyth
J Burney, Environmental Impacts

March, 2005
£ 25,500

To evaluate, using qualitative and quantitative techniques, the social benefits from conservation of our geological heritage.

Sources of plants grown peat free

Dove Associates
R Meade, Environmental Impacts

July, 2003
£ 5,000

To provide the horticultural industry with a directory of where they can obtain plants grown in peat-reduced or peat-free media. This is an integral part of progressing the "Peaterring Out" policy initiative.

Sustainability audit for South West ports

To be decided
B Greenwood, Devon

February, 2004
£ 10,000

To assist in the development of the British Ports Association's sustainability criteria by application to a selection of South West ports.

The protective function of forests

To be decided
K Kirby, Lowlands

March, 2003
£ 10,000

An investigation of whether the protective functions of forests, particularly in soil and water conservation, are significant in a UK context, and hence the opportunities for applying relevant sections of the Rural Development Regulation to UK conditions.

Transport and biodiversity toolkit

To be decided
D Markham, Environmental Impacts

September, 2002
£ 10,000

The purpose of this project is to produce a transport and nature conservation 'toolkit'/handbook, aimed at English Nature regional and local staff. The expectation is that these staff will use and refer to the toolkit when dealing with a range of transport casework issues or proactively engaging with key external bodies.

World Trade Organisation (WTO) Phase 2 research contract

ICTSD
J Burney, Environmental Impacts

March, 2003
£ 16,000

To provide a political briefing service on the World Trade Organisation (WTO) trade negotiations for agricultural products, to ensure that environmental considerations are being taken account of.

2.17 Species recovery projects

Action for plants

Plantlife
J Sutcliffe and I Taylor, Lowlands

April, 2003
£120,000

To enhance the capacity of a VCO to deliver BAP targets by employing technical staff and supporting their work programmes, including significant elements of survey, monitoring and management trials.

Autecological study of Lesser silver water beetle *Hydrochara caraboides*

D Boyce
M Jones, Somerset & Gloucestershire

January, 2003
£ 3,900

A survey and autecological study of the Lesser silver water beetle *Hydrochara caraboides* within the Brue Valley, Somerset.

Barbastelle bats at Holnicote Estate, Exmoor

Greena Ecological Consultancy
P F Ulf-Hansen, Somerset & Gloucestershire

April, 2003
£ 10,300

To investigate wintering and other habitat requirements of the barbastelle bat, to help fulfil requirements of the Habitats Directive. To contribute to implementation of the UK Biodiversity Action Plan by maintaining the known range and population of the barbastelle bat.

Bittern monitoring

RSPB
A F Brown, Uplands

March, 2005
£ 27,000

To make annual determinations of the numbers of breeding Bitterns in England, and so help assess effectiveness of ongoing conservation efforts under the Biodiversity Action Plan.

Bittern monitoring in Lee Valley, London

To be decided
G Wyatt, Essex, Hert's & London

March, 2003
£ 1,000

Observation of Bittern behaviour and feeding preferences.

Black Tor Copse National Nature Reserve, Devon rare lichen recovery

To be decided
S Bates, Devon

March, 2003
£ 3,000

Fieldwork in 1999 highlighted the loss of rare lichens from Black Tor Copse National Nature Reserve, Devon. A full lichen survey is required, together with translocation of rare lichens from trees affected with honey-fungus *Armillaria*, and an oak bark pH-monitoring programme.

Conservation genetics

Royal Botanic Gardens, Kew
I Taylor, Lowlands

April, 2003
£ 10,000

To investigate genetic variability of Biodiversity Action Plan priority plant species in order to support their sustainable conservation.

Creeping marshwort *Apium repens*

Oxon Rare Plants Group
W Fojt and J Sutcliffe, Thames & Chilterns and Lowlands

April, 2005
£ 2,500

To survey and monitor Creeping marshwort *Apium repens* and to liaise with relevant interested groups and individuals concerning the conservation of this plant, protected under the Habitats Directive.

Dormice in atypical habitats in South West England

Somerset Mammal Group, P Chanin and M Woods
D Appleton, Devon

July, 2003
£ 4,000

A study using volunteers to assess the use of atypical habitat by dormice, concentrating on conifer woodlands, hedgerows in various states of management, heathland, scrub and grassland. The results will be used to inform developers, planners and conservationists of the need to consider dormouse habitat requirements.

Ex-situ bryophyte project

Royal Botanic Gardens, Kew
R Porley, Lowlands

April, 2003
£ 17,000

The development of ex-situ methods for the conservation of bryophytes.

Eyebright species *Euphrasia* spp

Edinburgh University
I Taylor, Lowlands

April, 2003
£ 3,000

To conduct research into five Eyebright *Euphrasia* species in order to understand their classification and ecology.

Fen violet *Viola persicifolia*

Oxon Rare Plants Group
W Fojt and J Sutcliffe, Lowlands and Thames & Chilterns

April, 2004
£ 1,000

To monitor grassland site at Otmoor SSSI, Oxford.

Fenland rare plants

Bugle Ecological Services
J Sutcliffe, Lowlands

December, 2002
£ 9,165

Monitor sites supporting Ribbon-leaved water plantain *Alisma gramineum*, Fen ragwort *Senecio paludosus* and Fen violet *Viola persicifolia*, with a view to establishing self sustaining populations.

Fumitory species *Fumaria* spp

To be decided
I Taylor, Lowlands

April, 2004
£ 5,000

To undertake a literature review of fumitory *Fumaria* species.

Fungus research exhibit

Oxford University Research Department
J Sutcliffe, Lowlands

April, 2003
£ 2,000

To design and exhibit a display showing the outcome of university research on fungal conservation.

Grass-wrack pondweed *Potamogeton compressus* survey

Whild Associates
C Walker, North Mercia

July, 2002
£ 2,800

To establish the status of grass-wrack pondweed *Potamogeton compressus* in England and report on the abundance of the species at each extant locality. To establish the physical and chemical conditions at sites where this species has disappeared and assess likely reasons for its disappearance and the feasibility of re-introduction to historic sites.

Greater horseshoe bat radio tracking

Greena Ecological Consultants
J Diamond, Devon

March, 2004
£ 20,000

Identify foraging areas and migration routes used by Greater horseshoe bats at cSAC and SSSI roost sites in Southwest England.

Heath fritillary butterfly

To be decided
M Davey, Cornwall & Isles of Scilly

March, 2003
£ 2,000

This project aims to draw together existing knowledge into a conservation strategy for the Heath fritillary in the Tamar Valley.

Hen harrier recovery project

In-house
R Saunders, Uplands

March, 2005
£ 56,000

Determine the factors limiting the breeding success of English hen harriers, and identify ways to deter acts of illegal persecution.

Killarney fern *Trichomanes speciosum*

To be decided
I Taylor, Lowlands

April, 2003
£ 1,500

To continue a monitoring programme of Killarney fern *Trichomanes speciosum*, a species protected under the Habitats Directive.

Lagoon sandworm *Armandia cirrhosa*

Natural History Museum
P Gilliland, Maritime

November, 2002
£ 7,000

The survey will investigate the sites at which lagoon sandworm *Armandia cirrhosa* was found in 2000, and will also extend into the infralittoral zone of Portland Harbour.

Lichens: re-survey of Biodiversity Action Plan species

To be decided
P Lambley, Lowlands

April, 2003
£ 4,000

To re-survey the Biodiversity Action Plan listed lichens in order to assess their current status.

Lichens: survey of metaliferous sites

V Giavarini April, 2004
P Lambley, Lowlands £ 5,000

A survey of metaliferous mine sites to determine the status of lichen species listed in the Biodiversity Action Plan.

Marsh saxifrage *Saxifraga hirculus*

To be decided April, 2003
I Taylor, Lowlands £ 3,000

To complete a research report on the status and ecology of Marsh saxifrage *Saxifraga hirculus*.

Millennium seedbank

Royal Botanic Gardens, Kew, Wakehurst Place April, 2003
I Taylor, Lowlands £ 15,000

Work to supplement the British Seed Bank with a bio geographically based sampling of UK plants.

Monitoring of behaviour of Barbastelle bats, Paston Great Barn cSAC, Norfolk

Bat Conservation Trust March, 2003
P Lambley, Norfolk £ 15,000

The observation of bat behaviour and use of the Paston Barn cSAC roost, including analysis of infra red and time lapse photography. To understand in more detail the behaviour of Barbastelle bats at Paston Great Barn cSAC.

North Pennines black grouse recovery project

Game Conservancy Trust March, 2006
J Barrett, Northumbria £ 11,000

A partnership project involving EN, RSPB, Game Conservancy Trust, MoD and Northumbrian Water to deliver the objectives of the English Biodiversity Action Plan for black grouse. Key aspects include provision of advice on land management practices, monitoring of population changes and policy instruments.

Oblong woodsia *Woodsia ilvensis*

Royal Botanic Gardens, Edinburgh
I Taylor, Lowlands

April, 2003
£ 2,000

To monitor re-introduced populations of the Oblong woodsia *Woodsia ilvensis*, and initiate small scale experimental work to identify key factors affecting the plant's failure to reproduce.

Orchid micropropagation

Royal Botanic Gardens, Kew
I Taylor, Lowlands

April, 2005
£ 5,000

To aid the conservation of rare orchids, by the use of micropropagation techniques.

River Wharfe crayfish study

Yorkshire Dales National Park Authority
R Wilson, North & East Yorks

March, 2003
£ 1,500

To assess interactions between native and non-native cray fish in the River Wharfe, North Yorkshire river, as yet unaffected by introduced cray fish plague, and to develop strategies for effective intervention.

Rock sea lavender *Limonium* spp. technical illustrations

To be decided
S Leach, Lowlands

April, 2003
£ 2,000

To compile an illustrated identification guide of the rock sea lavenders *Limonium* spp, to aid recording of the rare species.

Small pearl bordered fritillary *Boloria selene* butterfly survey

J Joy
E Steer, North Mercia

December, 2002
£ 1,500

To compile a dossier of current and recent sites for the Small pearl bordered fritillary, and assess habitat requirements by field visits to sites; and set up a monitoring scheme to be repeated in future years.

Survey for Desmoulin's whorl snail *Vertigo moulinsiana* at Stodmarsh SSSI, Kent

To be decided
C Chambers, Kent

December, 2002
£ 2,000

To establish and map the distribution of Desmoulin's whorl *Vertigo moulinsiana* at Stodmarsh SSSI, Kent in order to inform habitat management decisions. This builds on an earlier survey for the snail at Stodmarsh.

Survey of Medicinal leech *Hirudo medicinalis* in the Wye Valley

M Drake
H Stace, Herefordshire & Worcestershire

November, 2002
£ 1,500

To establish whether or not medicinal leech *Hirudo medicinalis* occurs in any of approximately c70 ponds in the Wye floodplain, other than the only existing known site at Moccas Park NNR.

Water voles in urban areas project

To be decided
J Mason, North Mercia

To be decided
£ 4,000

To identify extent of existing populations of water voles in urban areas of i) Birmingham and the Black Country and ii) the City of Stoke, and to identify key areas for their conservation. To devise management proposals to recreate and enhance water vole habitat.

White-clawed crayfish *Austropotamobius pallipes* surveys at two Staffordshire sites

To be decided
J Blowers, North Mercia

To be decided
£ 5,000

Survey White-clawed crayfish *Austropotamobius pallipes* populations in two sites in Staffordshire to assess the health of the populations in order to make site condition assessments.

Widewater Lagoon : Ivell's sea anenome *Edwardsia ivelli* survey

Brighton University
J Curson, Sussex & Surrey

September, 2003
£ 1,500

A three year survey to determine whether Ivell's sea anenome is still extant at Widewater Lagoon. This species is recorded nowhere else in the world and is widely believed to be extinct, but no long-term, systematic searches for it have been carried out until now.

2.18 Species survey

Batscapes

Wilts & Swindon BRC and Wiltshire Wildlife Trust
J Swain, Wiltshire

March, 2003
£ 7,000

To assess areas adjoining candidate Special Areas of Conservation (cSACs) of importance for bats in terms of their function in bat conservation.

Breeding bird survey of the Avalon Marshes, Somerset

RSPB
M Jones, Somerset & Gloucestershire

July, 2002
£ 5,000

To provide up-to-date information on the breeding wetland birds using active, worked-out and restored peat pits, including the nature reserves, within the Avalon Marshes, an area of former peat workings in the Bure Valley, Somerset. To identify the extent of habitat suitable for use by breeding waterfowl and therefore assist responses to future planning consultations relating to peat extraction.

Chasmophytic vegetation survey

A Orange, National Museum of Wales
A Crowle, Uplands

March, 2004
£ 2,574

An inter-agency project to identify important Chasmophytic plant communities in the uplands of England, Scotland and Wales.

Cryptogam officer

Natural History Museum
R Mitchell, R Porley, P Lambley, Strategic Development &
Reporting and Lowlands

September, 2003
£ 25,000

To support and coordinate the work of the lower plant societies, in order to deliver Biodiversity Action Plan targets.

Eelgrass *Zostera* populations survey

Just Ecology
M Rooney, Norfolk

September, 2002
£ 1,500

To survey and map location and extent of all Eelgrass *Zostera* populations on the North Norfolk coast.

Ephemeral bryophytes of reservoirs survey

N Hodgetts
R Porley, Lowlands

April, 2004
£ 3,475

To survey ephemeral bryophytes of reservoir draw down zones.

European status of UK vascular plants

To be decided
J Sutcliffe, Lowlands

April, 2003
£ 2,000

To establish the status of rare UK plants in a European context.

Exmoor lichens survey 2002

S Coppins
P F Ulf-Hansen, Somerset & Gloucestershire

November, 2002
£ 4,390

To survey and identify lichen communities in woods not recently surveyed and make area or tree specific management recommendations to enhance the current lichen interest of the woodlands. To assess the condition of the lichen interest in relation to relevant conservation objectives for Exmoor Woodlands.

Exmoor moorland breeding bird survey 2002

RSPB/Exmoor National Parks Authority
P F Ulf-Hansen, Somerset & Gloucestershire

October, 2002
£ 5,000

To repeat the previous 1992/3 survey to establish current breeding populations and distribution of priority birds within the Exmoor National Park. This will contribute to the implementation of the Exmoor Biodiversity Action plan for Upland and Lowland Heathland and targeting of the Exmoor Environmentally Sensitive Areas Scheme.

Fly *Diptera* spp. survey in Moccas Park NNR

M Drake and A Godfrey
H Stace, Herefordshire & Worcestershire

January, 2003
£ 4,858

A survey to fill recording gaps in Fly *Diptera* spp. records for Moccas Park NNR, and evaluation of their conservation significance and management requirements.

Folly Bog invertebrate survey

Surrey Wildlife Trust
C Kerr, Sussex & Surrey

November, 2002
£ 1,000

The Folly Bog project was established in 1998, with the aim of restoring the hydrology of the site. This invertebrate survey will be a repeat of work undertaken in 2000, in order to assess the effects of management upon invertebrates.

Fungus survey in Moccas Park NNR

J Weightman
H Stace, Herefordshire & Worcestershire

January, 2004
£ 1,300

A survey to fill gaps in fungal records for Moccas Park NNR.

Gilkicker weevil project

Hampshire and Isle of Wight Wildlife Trust
A Gordon, Hampshire & Isle of Wight

December, 2002
£ 3,800

To enhance the population of Gilkicker weevil *Pachytychius haematocephalus* at Gilkicker Point, Hampshire.

Golden plover survey at Thanet and Sandwich Bay SPA

To be decided
S Peckham, Kent

March, 2003
£ 5,000

To establish the distribution and abundance of wintering golden plover in and around the Thanet Coast and Sandwich Bay SPA. To use this information to establish whether proposed removal of golden plover from the SPA citation is appropriate.

Habitat requirements of Spined loach, *Cubitis taenia*

Environment Agency
D Isaac, Eastern Area

March, 2004
£ 5,300

To evaluate the effects of ditch management on the spined loach, *Cubitis taenia*, a species protected under the EC Habitats Directive.

Invertebrate survey of Woolhampton Reedbeds

To be decided
H Whetter, Thames & Chilterns

November, 2002
£ 3,500

To ascertain the level of invertebrate interest in the reedbeds so as to assess the level of managed reedbed restoration that should be attempted.

Low tide bird distributions in the Severn Estuary SPA/pSAC, including data and monitoring review

British Trust for Ornithology
K Jeffreys, Somerset & Gloucestershire

May, 2003
£ 15,000

A joint project led by the Countryside Council for Wales. To clarify current low tide bird distribution throughout the Severn Estuary SPA/pSAC/Ramsar, including intertidal areas at a distance to the shore. To review and refine the bird monitoring programme on the estuary as appropriate to the development of Regulation 33 advice.

Monitoring of breeding Annex 1 bird species on the Thames Basin Heaths SPA

To be decided
S Brocklehurst, Thames & Chilterns

October, 2002
£ 5,000

Record and monitor the number of breeding territories of wood lark, nightjar and dartford warblers on the Thames Basin Heaths SPA.

Night-time use of the Somerset Levels and Moors floodplain by waterfowl: interim report 2001/2002

D Chown
M Jones, Somerset & Gloucestershire

July, 2003
£ 6,000

To understand the relative importance of grassland and arable management systems as night-time feeding areas for waterfowl on the Somerset Levels and Moors, and to investigate the inter-relationship between nocturnal dispersal and environmental and habitat factors such as: flooding, season, temperature, moon phase, proximity of refuge pools, sward composition and structure.

North Kent marshes sea wall botanical survey, Phase 2

To be decided
L Solly, Kent

December, 2002
£ 4,000

To provide information on the relationship between physical characteristics of sea walls, their management, and the distribution of rare and scarce plants within the North Kent marshes status. To inform the Environment Agency maintenance programme and help to achieve favourable management for habitats and species upon which the SSSI and Ramsar designations are based.

North Norfolk coast ringed plover and oystercatcher survey

Just Ecology
M Rooney, Norfolk

July, 2002
£ 2,000

Complete a survey of all ringed plovers and oystercatchers on the North Norfolk coast.

Northumbria Coast European Marine Site: To establish count data necessary for the production of five year peak mean data for bird interest features

To be decided
M Quigley, Northumbria

February, 2003
£ 2,000

Count data for designated species on this area of coastline is patchy and not well collated. This project will collate existing data, identify gaps and generate an action plan for ensuring complete coverage in the future.

Sand martin survey in gravel workings

Lower Ure Conservation Trust
R Wilson, North & East Yorks

December, 2002
£ 1,500

To identify major sand martin nesting colonies and integrate these into site restoration plans.

Severn and Avon Vales breeding wader survey

Environment Agency
P Holmes, Herefordshire & Worcestershire

August, 2002
£ 6,000

To undertake a survey of the numbers and distribution of breeding waders, as a baseline for evaluating the success of wetland recovery and recreation, through the Severn and Avon Vales Wetlands Project.

Suffolk Coast and Heaths Natural Area farmland bird survey

Suffolk Ornithologists Group
B Williamson, Suffolk

March, 2004
£ 2,500

Collect data on declining farmland birds in 50 1km² squares, to assess their populations within the Suffolk Coast and Heaths Natural Area.

Swan damage literature review

Chalkhill Environment Consultants
S Grinsted, Wiltshire

September, 2002
£ 2,500

To gather and assess existing information relating to mute swan damage to conservation and fishing interests on the River Avon System SSSI/cSAC in Wiltshire.

The dynamics of invertebrate populations associated with Juniper *Juniperus communis* scrub at Porton Down, Salisbury Plain cSAC/SPA

Dr G Holloway, Reading University
S Davis, Wiltshire

January, 2006
£ 5,000

To gain an understanding of the invertebrate populations of juniper *Juniperus communis* at Porton Down, the largest lowland England population. This will inform the future management strategy for this species, and complement essential management work being undertaken under the Salisbury Plain LIFE Project.

Waders of wet meadows

British Trust for Ornithology
A F Brown, Uplands

March, 2003
£ 15,000

To repeat the 1982 Waders of Wet Meadows survey which covered a wide geographical range of meadows with important concentration of waders. To quantify changes in the extent of grassland and the distribution and numbers of breeding waders associated with them.

Winter bird survey

Just Ecology
M Rooney, Norfolk

March, 2003
£ 4,000

This is a pilot winter bird survey. The project involves development of a survey methodology to input into work on farmland bird PSA target delivery, through agri-environment schemes.

Wren's Nest NNR bat project

To be decided
T Coleshaw, North Mercia

To be decided
£ 2,000

To investigate use of stone mines at Wren's Nest NNR by bats.

Annex 1. Species Recovery Programme – definitions of terms and criteria

What species qualify for consideration under Species Recovery Programme?

- a. Species of international importance for which the UK has a responsibility. Those species are detailed within:
 - i. International conventions
 - ii. European Union Habitats Directive (92/43/EC)
 - iii. European Union Birds Directive (79/409/EC)
 - iv. Berne Convention
 - v. Bonn Convention
- b. Endemic species, near endemics and endemic sub-specific taxa
- c. Priority species identified under the UK Biodiversity Action Plan
- d. Red-list species for which England has a particular responsibility
- e. Nationally Scarce species or others where a rapid decline in population or distribution **can be demonstrated** such that they would meet the criteria for consideration under the UK BAP

When is a species part of the Species Recovery Programme?

- a. A species is considered to be part of SRP when **resources** managed by the programme manager are **directly contributed to projects** within the Recovery Phases structure (defined below). Resources may be considered as either staff time or finances for this purpose.
- b. A species becomes part of the programme once resources are committed. The entry date for the species shall be deemed to be **the financial year in which the resources where first committed.**
- c. Each financial year of subsequent resource investment shall be recorded

What is the SRP Species List?

- a. A species will be classed as **ACTIVE** from its entry date into the SRP. The **SRP Species List will comprise all those species classified as ACTIVE.**
- b. A species will no longer considered part of the SRP Species List when **CIS** (see below) is recorded against it.

Critical Investment Stopped (CIS)

- a. Critical Investment Stopped (CIS) is the stopping rule of the SRP. The decision to stop SRP investment in a species may be permanent or temporary. In either case the

decision will be based on scientific evidence and does not preclude further investment at a later date in light of new evidence.

- b. When CIS decision is taken a record of the reason and date must be held. Key scientific evidence informing the decision should also be indicated.

Recovery Phases

The SRP effectively has three key phases of work for any given species, plus underpinning work and a final implementation phase where a species is passed on to other mechanisms and SRP work is finished. These phases and indicative measures of success are set out below. It is assumed that monitoring is an indicative part of any phase.

Phase	Example of project type	Example success measure
Underpinning	Genetics, taxonomic, ex-situ	eg ex-situ breeding technique developed; taxonomic uncertainties addressed
1A	Survey, autecological research	Baseline autecological knowledge sufficient for confident management developed; distribution and population determined
1B	Holding management to halt decline of extant populations	Decline halted for 3 consecutive years
2	Management to increase extant populations, translocation	Reversal of downward trend for 3 consecutive years
3	Management to increase extant populations, translocation	Establishment of viable site and meta-populations across former known range
Handover	Integration with habitat management prescriptions for sustainable management, recognition of ecosystem requirements in respect of climatic change	Evidence of absorption by HAPs and Ecosystem initiatives

Annex 2. List of Species Recovery Programme taxa – 2002/2003

Taxon	Species Name	Year Added	BAP	Recovery Phase	English Nature Contact
Amphibian	<i>Bufo bufo</i> , Common toad	2002/2003	NON BAP	1A Pre-recovery	Foster, Jim
Amphibian	<i>Bufo calamita</i> , Natterjack toad	1991/1992	BAP	2 Recovery	Foster, Jim
Amphibian	<i>Rana lessonae</i> , Pool frog	1996/1997	BAP	Underpinning	Foster, Jim
Amphibian	<i>Triturus cristatus</i> , Great crested newt	1996/1997	BAP	Handover	Foster, Jim
Ant	<i>Anergates atratulus</i> , Dark guest ant	2000/2001	BAP	1A Pre-recovery	Sheppard, David
Ant	<i>Formica candida</i> , Black bog ant	1998/1999	BAP	1A Pre-recovery	Sheppard, David
Ant	<i>Formica exsecta</i> , Narrow headed ant	1996/1997	BAP	1A Pre-recovery	Sheppard, David
Ant	<i>Formica pratensis</i> , Black-backed meadow ant	1997/1998	BAP	Underpinning	Sheppard, David
Ant	<i>Formica rufibarbis</i> , Red barbed ant	1998/1999	BAP	1A Pre-recovery	Sheppard, David
Ant	<i>Formicoxenus nitidulus</i> , Shining guest ant	2000/2001	BAP	1A Pre-recovery	Sheppard, David
Bee	<i>Andrena ferox</i> , a mining bee	2001/2002	BAP	1A Pre-recovery	Sheppard, David
Bee	<i>Andrena lathyri</i> , a mining bee	2000/2001	BAP	1A Pre-recovery	Sheppard, David
Bee	<i>Bombus humilis</i> , a carder bumblebee	2000/2001	BAP	1A Pre-recovery	Sheppard, David
Bee	<i>Bombus monticola</i> , Mountain Bumblebee	2001/2002	NON BAP	Underpinning	Sheppard, David
Bee	<i>Bombus sylvarum</i> , Shrill carder bee	1997/1998	BAP	1A Pre-recovery	Sheppard, David
Bee	<i>Lasioglossum angusticeps</i> , a solitary bee	2000/2001	BAP	1A Pre-recovery	Sheppard, David
Bee	<i>Nomada armata</i> , a cuckoo bee	2000/2001	BAP	1A Pre-recovery	Sheppard, David
Bee	<i>Nomada errans</i> , a cuckoo bee	2000/2001	BAP	1A Pre-recovery	Sheppard, David
Bee	<i>Nomada ferruginata</i> , a cuckoo bee	2000/2001	BAP	1A Pre-recovery	Sheppard, David
Bee	<i>Osmia parietina</i> , Western mason bee	1999/2000	BAP	2 Recovery	Sheppard, David
Beetle	<i>Agabus brunneus</i> , a diving beetle	1998/1999	BAP	1A Pre-recovery	Webb, Jon
Beetle	<i>Amara famelica</i> , a ground beetle	2000/2001	BAP	1A Pre-recovery	Key, Roger
Beetle	<i>Amara strenua</i> , a ground beetle	2000/2001	BAP	1A Pre-recovery	Key, Roger
Beetle	<i>Ampedus nigerrimus</i> , a cardinal click beetle	1999/2000	BAP	1A Pre-recovery	Webb, Jon
Beetle	<i>Ampedus ruficeps</i> , a cardinal click beetle	1999/2000	BAP	1A Pre-recovery	Webb, Jon
Beetle	<i>Ampedus rufipennis</i> , a cardinal click beetle	1999/2000	BAP	1A Pre-recovery	Webb, Jon
Beetle	<i>Anisodactylus nemorivagus</i> , a ground beetle	2000/2001	BAP	1A Pre-recovery	Key, Roger
Beetle	<i>Anisodactylus poeciloides</i> , saltmarsh longspur	2000/2001	BAP	1A Pre-recovery	Key, Roger
Beetle	<i>Anostirus castaneus</i> , chestnut coloured click beetle	2000/2001	BAP	1A Pre-recovery	Key, Roger
Beetle	<i>Badister collaris</i> , a ground beetle	2000/2001	BAP	1A Pre-recovery	Key, Roger
Beetle	<i>Badister peltatus</i> , a ground beetle	2000/2001	BAP	1A Pre-recovery	Key, Roger
Beetle	<i>Brindalus porcicolus</i> , a beetle	2001/2002	NON BAP		Key, Roger
Beetle	<i>Byctiscus populi</i> , Aspen leaf-rolling weevil	2000/2001	BAP	1A Pre-recovery	Key, Roger
Beetle	<i>Carabus intricatus</i> , Blue ground beetle	1996/1997	BAP	1B Pre-recovery	Key, Roger
Beetle	<i>Chrysolina graminis</i> , Tansey beetle	1999/2000	NON BAP	1B Pre-recovery	Key, Roger
Beetle	<i>Cicindela germanica</i> , Cliff tiger beetle	1999/2000	BAP	1A Pre-recovery	Key, Roger
Beetle	<i>Cicindela hybrida</i> , Northern dune tiger beetle	2001/2002	BAP	1A Pre-recovery	Key, Roger
Beetle	<i>Cicindela maritima</i> , Dune tiger beetle	1999/2000	BAP	1A Pre-recovery	Key, Roger
Beetle	<i>Cicindela sylvatica</i> , Heath tiger beetle	1999/2000	BAP	1A Pre-recovery	Key, Roger
Beetle	<i>Cryptocephalus biguttatus</i> , a pot beetle	2001/2002	NON BAP	1A Pre-recovery	Key, Roger
Beetle	<i>Cryptocephalus coryli</i> , Hazel pot beetle	1996/1997	BAP	2 Recovery	Key, Roger
Beetle	<i>Cryptocephalus decemmaculatus</i> , Ten-spotted pot beetle	1998/1999	BAP	2 Recovery	Key, Roger
Beetle	<i>Cryptocephalus exiguus</i> , Pashford pot beetle	1996/1997	BAP	1A Pre-recovery	Key, Roger
Beetle	<i>Cryptocephalus frontalis</i> , a pot beetle	2001/2002	NON BAP	1A Pre-recovery	Key, Roger
Beetle	<i>Cryptocephalus nitidulus</i> , Shining pot beetle	1998/1999	BAP	2 Recovery	Key, Roger
Beetle	<i>Cryptocephalus primarius</i> , a leaf beetle	1998/1999	BAP	1A Pre-recovery	Key, Roger
Beetle	<i>Cryptocephalus sexpunctatus</i> , 6 spotted pot beetle	1998/1999	BAP	1A Pre-recovery	Key, Roger
Beetle	<i>Donacia aquatica</i> , a reed beetle	2000/2001	BAP	1A Pre-recovery	Key, Roger
Beetle	<i>Donacia bicolora</i> , a reed beetle	2000/2001	BAP	1A Pre-recovery	Key, Roger

Taxon	Species Name	Year Added	BAP	Recovery Phase	English Nature Contact
Beetle	<i>Dryophthorus corticalis</i> , a wood-boring weevil	1999/2000	BAP	1A Pre-recovery	Webb, Jon
Beetle	<i>Dyschirius angustatus</i> , a ground beetle	2000/2001	BAP	1A Pre-recovery	Webb, Jon
Beetle	<i>Elater ferrugineus</i> , Rusty click beetle	1999/2000	BAP	1A Pre-recovery	Webb, Jon
Beetle	<i>Eucnemis capucina</i> , a false click beetle	1999/2000	BAP	1A Pre-recovery	Webb, Jon
Beetle	<i>Gastrallus immarginatus</i> , Maple wood-boring beetle	1999/2000	BAP	1A Pre-recovery	Webb, Jon
Beetle	<i>Gnorimus nobilis</i> , Noble chafer	1997/1998	BAP	1A Pre-recovery	Webb, Jon
Beetle	<i>Gnorimus variabilis</i> , Variable chafer	1999/2000	BAP	1A Pre-recovery	Webb, Jon
Beetle	<i>Graphoderus zonatus</i> , Spangled diving beetle	1993/1994	BAP	2 Recovery	Webb, Jon
Beetle	<i>Graphoderus zonatus</i> , Spangled diving beetle	1993/1994	BAP	2 Recovery	Chatters, Catherine
Beetle	<i>Harpalus cordatus</i> , a ground beetle	2000/2001	BAP	1A Pre-recovery	Key, Roger
Beetle	<i>Harpalus dimidiatus</i> , a ground beetle	2000/2001	BAP	1A Pre-recovery	Key, Roger
Beetle	<i>Harpalus froelichi</i> , a ground beetle	2000/2001	BAP	1A Pre-recovery	Key, Roger
Beetle	<i>Harpalus obscurus</i> , a ground beetle	2000/2001	BAP	1A Pre-recovery	Key, Roger
Beetle	<i>Harpalus parallelus</i> , a ground beetle	2000/2001	BAP	1A Pre-recovery	Key, Roger
Beetle	<i>Harpalus punctatulus</i> , a ground beetle	2000/2001	BAP	1A Pre-recovery	Key, Roger
Beetle	<i>Hydrochara caraboides</i> , Lesser silver water beetle	1996/1997	BAP	1A Pre-recovery	Webb, Jon
Beetle	<i>Hypebaeus flavipes</i> , Moccas beetle	1999/2000	BAP	1A Pre-recovery	Webb, Jon
Beetle	<i>Laccophilus poecilus</i> , a diving beetle	1999/2000	BAP	1A Pre-recovery	Webb, Jon
Beetle	<i>Lacon querceus</i> , Oak click beetle	1999/2000	BAP	1A Pre-recovery	Webb, Jon
Beetle	<i>Limonicus violaceus</i> , Violet click beetle	1996/1997	BAP	1A Pre-recovery	Webb, Jon
Beetle	<i>Lucanus cervus</i> , Stag beetle	1997/1998	BAP	2 Recovery	Webb, Jon
Beetle	<i>Malachus aeneus</i> , Scarlet malachite beetle	2000/2001	BAP	1A Pre-recovery	Key, Roger
Beetle	<i>Megapenthes lugens</i> , a click beetle	1999/2000	BAP	1A Pre-recovery	Webb, Jon
Beetle	<i>Melanapion minimum</i> , Sallow guest weevil	2000/2001	BAP	1A Pre-recovery	Key, Roger
Beetle	<i>Melanotus punctolineatus</i> , a click beetle	2000/2001	BAP	1A Pre-recovery	Key, Roger
Beetle	<i>Pachytychius haematocephalus</i> , Gilkicker weevil	2000/2001	BAP	1B Pre-recovery	Key, Roger
Beetle	<i>Panagaeus cruxmajor</i> , Crucifix ground beetle	1996/1997	BAP	1A Pre-recovery	Key, Roger
Beetle	<i>Paracymus aeneus</i> , Bembridge beetle	1996/1997	BAP		Webb, Jon
Beetle	<i>Procas granulicollis</i> , Climbing corydalis weevil	2000/2001	BAP	1A Pre-recovery	Key, Roger
Beetle	<i>Psylliodes luridipennis</i> , Lundy cabbage flea beetle	1996/1997	BAP	1B Pre-recovery	Key, Roger
Beetle	<i>Pterostichus kugelanni</i> , Kugelann's ground beetle	2000/2001	BAP	1A Pre-recovery	Key, Roger
Beetle	<i>Rhynchaenus aestaceus</i> , Alder flea weevil	2000/2001	BAP	1A Pre-recovery	Key, Roger
Bird	<i>Acrocephalus palustris</i> , Marsh warbler	2000/2001	BAP	1B Pre-recovery	Brown, Andy
Bird	<i>Alauda arvensis</i> , Sky lark	2000/2001	BAP	1A Pre-recovery	Grice, Phil
Bird	<i>Botaurus stellaris</i> , Bittern	1994/1995	BAP	2 Recovery	Brown, Andy
Bird	<i>Burhinus oedicnemus</i> , Stone curlew	1997/1998	BAP	Handover	Drewitt, Allan
Bird	<i>Circus aeruginosus</i> , Marsh harrier	1997/1998	NON BAP	3 Recovery	Carter, Ian
Bird	<i>Circus cyaneus</i> , Hen Harrier	2001/2002	NON BAP	1A Pre-recovery	Saunders, Richard
Bird	<i>Circus pygargus</i> , Montagu's harrier	1997/1998	NON BAP	1B Pre-recovery	Carter, Ian
Bird	<i>Crex crex</i> , Corncrake	1998/1999	BAP	Underpinning	Grice, Phil
Bird	<i>Emberiza cirius</i> , Cirl bunting	1995/1996	BAP	3 Recovery	Grice, Phil
Bird	<i>Emberiza schoeniclus</i> , Reed bunting	2000/2001	BAP	1A Pre-recovery	Grice, Phil
Bird	<i>Melanitta nigra</i> , Common scoter	2002/2003	BAP	1A Pre-recovery	Murray, Ashley
Bird	<i>Miliaria calandra</i> , Corn bunting	2001/2002	BAP	1B Pre-recovery	Grice, Phil
Bird	<i>Milvus milvus</i> , Red kite	1991/1992	NON BAP	3 Recovery	Carter, Ian
Bird	<i>Passer domesticus</i> , House Sparrow	2001/2002	NON BAP	Underpinning	Grice, Phil
Bird	<i>Passer montanus</i> , Tree sparrow	2001/2002	BAP	1A Pre-recovery	Grice, Phil
Bird	<i>Pyrrhocorax pyrrhocorax</i> , Chough	2001/2002	NON BAP	Underpinning	Carter, Ian
Bird	<i>Sterna dougallii</i> , Roseate tern	2000/2001	BAP	1B Pre-recovery	Brown, Andy
Bird	<i>Streptopelia turtur</i> , Turtle dove	2001/2002	BAP	1A Pre-recovery	Grice, Phil
Bird	<i>Tetrao tetrix</i> , Black grouse	1997/1998	BAP	1B Pre-recovery	Barrett, John
Bryozoa	<i>Lophopus crystallinus</i> , a freshwater bryozoan	2000/2001	BAP	Underpinning	Not appointed
Butterfly	<i>Argynnis adippe</i> , High brown fritillary	1996/1997	BAP	1A Pre-recovery	Sheppard, David
Butterfly	<i>Aricia artaxerxes</i> , Northern brown argus	2000/2001	BAP	1A Pre-recovery	Sheppard, David
Butterfly	<i>Boloria euphrosyne</i> , Pearl-bordered fritillary	1997/1998	BAP	1A Pre-recovery	Sheppard, David

Taxon	Species Name	Year Added	BAP	Recovery Phase	English Nature Contact
Butterfly	<i>Boloria selene</i> , Small Pearl Bordered Fritillary	2000/2001	NON_BAP	1A Pre-recovery	Sheppard, David
Butterfly	<i>Carterocephalus palaemon</i> , Chequered skipper	1998/1999	BAP	Underpinning	Sheppard, David
Butterfly	<i>Coenonympha tullia</i> , Large heath	1999/2000	NON_BAP	1A Pre-recovery	Sheppard, David
Butterfly	<i>Eurodryas aurinia</i> , Marsh fritillary	1996/1997	BAP	1B Pre-recovery	Sheppard, David
Butterfly	<i>Hesperia comma</i> , Silver spotted skipper	1998/1999	BAP	2 Recovery	Sheppard, David
Butterfly	<i>Lycaena dispar</i> , Large copper	1991/1992	BAP	Underpinning	Sheppard, David
Butterfly	<i>Maculinea arion</i> , Large blue	1991/1992	BAP	3 Recovery	Sheppard, David
Butterfly	<i>Mellicta athalia</i> , Heath fritillary	1996/1997	BAP	1B Pre-recovery	Sheppard, David
Butterfly	<i>Plebejus argus</i> , Silver-studded blue	1999/2000	BAP	1B Pre-recovery	Sheppard, David
Butterfly	<i>Polyommatus bellargus</i> , Adonis blue	2000/2001	BAP	1B Pre-recovery	Sheppard, David
Butterfly	<i>Thymelicus acteon</i> , Lulworth skipper	1997/1998	NON_BAP	1A Pre-recovery	Sheppard, David
Coral	<i>Eunicella verrucosa</i> , Pink sea fan	1999/2000	BAP		Hoskin, Miles
Coral	<i>Leptopsammia pruvoti</i> , Sunset cupcoral	1999/2000	BAP		Hoskin, Miles
Cricket / Grasshopper	<i>Chorthippus vagans</i> , Heath Grasshopper	1999/2000	NON_BAP		Sheppard, David
Cricket / Grasshopper	<i>Decticus verrucivorus</i> , Wart-biter	1991/1992	BAP	3 Recovery	Sheppard, David
Cricket / Grasshopper	<i>Gryllotalpa gryllotalpa</i> , Mole cricket	1996/1997	BAP	1A Pre-recovery	Sheppard, David
Cricket / Grasshopper	<i>Gryllus campestris</i> , Field cricket	1991/1992	BAP	3 Recovery	Sheppard, David
Cricket / Grasshopper	<i>Stethophyma grossum</i> , Large marsh grasshopper	1996/1997	BAP	1B Pre-recovery	Sheppard, David
Crustacean	<i>Austropotamobius pallipes</i> , White-clawed cray fish	1995/1996	BAP	1A Pre-recovery	Fraser, David
Crustacean	<i>Triops cancriformis</i> , Tadpole shrimp	1996/1997	BAP	1B Pre-recovery	Webb, Jon
Damselfly / Dragonfly	<i>Coenagrion mercuriale</i> , Southern damselfly	1997/1998	BAP	2 Recovery	Webb, Jon
Fern	<i>Woodsia ilvensis</i> , Oblong woodsia	1996/1997	BAP	3 Recovery	Taylor, Ian
Fish	<i>Alosa alosa</i> , Allis shad	1996/1997	BAP	1A Pre-recovery	Heaver, David
Fish	<i>Alosa fallax</i> , Twaite shad	1996/1997	BAP	1A Pre-recovery	Heaver, David
Fish	<i>Cetorhinus maximus</i> , Basking shark	1996/1997	BAP	1A Pre-recovery	Hoskin, Miles
Fish	<i>Cobitis taenia</i> , Spined loach	1996/1997	NON_BAP		Fraser, David
Fish	<i>Coregonus albus</i> , Vendace	1995/1996	BAP	1A Pre-recovery	Fraser, David
Fish	<i>Cottus gobio</i> , Bullhead	1998/1999	NON_BAP		Fraser, David
Fish	<i>Gobius cobitis</i> , Giant goby	1996/1997	NON_BAP		Carew, Andrea
Fish	<i>Lampetra fluviatilis</i> , River lamprey	2000/2001	NON_BAP		Fraser, David
Fish	<i>Lampetra planeri</i> , Brook lamprey	2000/2001	NON_BAP		Fraser, David
Fish	<i>Osmerus eperlanus</i> , Smelt	2002/2003	NON_BAP	1A Pre-recovery	Fraser, David
Fish	<i>Petromyzon marinus</i> , Sea lamprey	2000/2001	NON_BAP		Fraser, David
Flowering plant	<i>Adonis annua</i> , Pheasant's eye	1999/2000	NON_BAP		Porley, Ron
Flowering plant	<i>Ajuga chamaepitys</i> , Ground pine	1994/1995	NON_BAP	3 Recovery	Porley, Ron
Flowering plant	<i>Alchemilla minima</i> , an alchimilla	1999/2000	BAP		Taylor, Ian
Flowering plant	<i>Alisma gramineum</i> , Ribbon-leaved water-plantain	1991/1992	BAP	1A Pre-recovery	Sutcliffe, Jill
Flowering plant	<i>Althaea hirsuta</i> , Rough marsh mallow	1991/1992	NON_BAP	2 Recovery	Ulf-Hansen, Flemming
Flowering plant	<i>Apium repens</i> , Creeping marshwort	1995/1996	BAP	2 Recovery	Steven, Graham
Flowering plant	<i>Arabis glabra</i> , Tower mustard	1997/1998	BAP	1A Pre-recovery	Sutcliffe, Jill
Flowering plant	<i>Atriplex pedunculata</i> , Pedunculate sea-purslane	1995/1996	NON_BAP	1A Pre-recovery	Wyatt, Gordon
Flowering plant	<i>Bromus interruptus</i> , Interrupted brome	2001/2002	BAP	Underpinning	Porley, Ron
Flowering plant	<i>Carex depauperata</i> , Starved wood-sedge	1996/1997	NON_BAP	2 Recovery	Taylor, Ian
Flowering plant	<i>Carex muricata</i> ssp. <i>muricata</i> , Prickly sedge	1999/2000	BAP		Taylor, Ian
Flowering plant	<i>Carex vulpina</i> , True fox-sedge	2000/2001	BAP	Underpinning	Porley, Ron
Flowering plant	<i>Centaurea cyanus</i> , Cornflower	1999/2000	BAP	1B Pre-recovery	Porley, Ron
Flowering plant	<i>Cephalanthera longifolia</i> , Sword-leaved helleborine	1997/1998	NON_BAP	1B Pre-recovery	Taylor, Ian
Flowering plant	<i>Cephalanthera rubra</i> , Red helleborine	1997/1998	NON_BAP		Taylor, Ian
Flowering plant	<i>Chamaemelum nobile</i> , Wild chamomile	1996/1997	NON_BAP	Handover	Leach, Simon
Flowering plant	<i>Clinopodium menthifolium</i> , Wood calamint	1995/1996	NON_BAP		Taylor, Ian
Flowering plant	<i>Coincya wrightii</i> , Lundy cabbage	1996/1997	BAP	1B Pre-recovery	Key, Roger
Flowering plant	<i>Corrigiola litoralis</i> , Strapwort	1991/1992	NON_BAP	1A Pre-recovery	Dunsford, Simon
Flowering plant	<i>Crepis foetida</i> , Stinking hawk's-beard	1991/1992	BAP	2 Recovery	Banks, Brian
Flowering plant	<i>Cyperus fuscus</i> , Brown galingale	1996/1997	NON_BAP	1B Pre-recovery	Parker, Stephen

Taxon	Species Name	Year Added	BAP	Recovery Phase	English Nature Contact
Flowering plant	<i>Cypripedium calceolus</i> , Lady's slipper orchid	1991/1992	BAP	1B Pre-recovery	Taylor, Ian
Flowering plant	<i>Damasonium alisma</i> , Starfruit	1991/1992	BAP	2 Recovery	Steven, Graham
Flowering plant	<i>Damasonium alisma</i> , Starfruit	1991/1992	BAP	2 Recovery	Porley, Ron
Flowering plant	<i>Dianthus armeria</i> , Deptford pink	1998/1999	BAP	1B Pre-recovery	Sutcliffe, Jill
Flowering plant	<i>Eriophorum gracile</i> , Slender cotton grass	1996/1997	NON_BAP		Porley, Ron
Flowering plant	<i>Euphrasia rivularis</i> , an eyebright	2000/2001	BAP		Taylor, Ian
Flowering plant	<i>Euphrasia vigursii</i> , an eyebright	2000/2001	BAP		Taylor, Ian
Flowering plant	<i>Filago gallica</i> , Narrow-leaved cudweed	1996/1997	NON_BAP	2 Recovery	Porley, Ron
Flowering plant	<i>Filago lutescens</i> , Red-tipped cudweed	1996/1997	BAP	1B Pre-recovery	Porley, Ron
Flowering plant	<i>Filago pyramidata</i> , Broad-leaved cudweed	1996/1997	BAP	1B Pre-recovery	Porley, Ron
Flowering plant	<i>Fumaria occidentalis</i> , Western ramping-fumitory	1997/1998	BAP		Leach, Simon
Flowering plant	<i>Fumaria occidentalis</i> , Western ramping-fumitory	1997/1998	BAP		McDouall, Andrew
Flowering plant	<i>Fumaria purpurea</i> , Purple ramping-fumitory	1999/2000	BAP		Taylor, Ian
Flowering plant	<i>Galeopsis angustifolia</i> , Red hemp-nettle	1999/2000	BAP	1A Pre-recovery	Porley, Ron
Flowering plant	<i>Galium tricornutum</i> , Corn cleavers	1999/2000	BAP	1A Pre-recovery	Porley, Ron
Flowering plant	<i>Himantoglossum hircinum</i> , Lizard orchid	1997/1998	NON_BAP		Taylor, Ian
Flowering plant	<i>Hypericum linariifolium</i> , Toadflax-leaved St John's wort	1997/1998	NON_BAP	Handover	Leach, Simon
Flowering plant	<i>Juncus pygmaeus</i> , Pigmy rush	2000/2001	BAP	1A Pre-recovery	Leach, Simon
Flowering plant	<i>Juncus pygmaeus</i> , Pigmy rush	2000/2001	BAP	1A Pre-recovery	Lawman, Ray
Flowering plant	<i>Leersia oryzoides</i> , Cut-grass	2000/2001	BAP		Leach, Simon
Flowering plant	<i>Limonium binervosum anglicum</i> , Rock sea-lavender	2002/2003	NON_BAP	1A Pre-recovery	Leach, Simon
Flowering plant	<i>Limonium binervosum cantianum</i> , Rock sea-lavender	2002/2003	NON_BAP	1A Pre-recovery	Leach, Simon
Flowering plant	<i>Limonium binervosum mutatum</i> , Rock sea-lavender	2002/2003	NON_BAP	1A Pre-recovery	Leach, Simon
Flowering plant	<i>Limonium binervosum saxonicum</i> , Rock sea-lavender	2002/2003	NON_BAP	1A Pre-recovery	Leach, Simon
Flowering plant	<i>Limonium britannicum</i> , Rock sea-lavender	2001/2002	BAP		Leach, Simon
Flowering plant	<i>Limonium dodartiforme</i> , Rock sea-lavender	2001/2002	BAP		Leach, Simon
Flowering plant	<i>Limonium loganicum</i> , Rock sea-lavender	2001/2002	BAP		Leach, Simon
Flowering plant	<i>Limonium procerum</i> , Rock sea-lavender	2000/2001	BAP		Leach, Simon
Flowering plant	<i>Limonium recurvum</i> , Rock sea-lavender	2001/2002	BAP		Leach, Simon
Flowering plant	<i>Liparis loeselii</i> , Fen orchid	1994/1995	BAP	1B Pre-recovery	Southwood, Rick
Flowering plant	<i>Luronium natans</i> , Floating water-plantain	1998/1999	BAP	1A Pre-recovery	Walker, Chris
Flowering plant	<i>Lycopodiella inundata</i> , Marsh clubmoss	1999/2000	BAP	1A Pre-recovery	Taylor, Ian
Flowering plant	<i>Melampyrum arvense</i> , Field cow-wheat	1993/1994	NON_BAP	1B Pre-recovery	Porley, Ron
Flowering plant	<i>Melampyrum sylvaticum</i> , Small cow-wheat	2000/2001	BAP		Taylor, Ian
Flowering plant	<i>Mentha pulegium</i> , Penny royal	2001/2002	BAP	1A Pre-recovery	Porley, Ron
Flowering plant	<i>Najas flexilis</i> , Slender naiad	1997/1998	BAP	Handover	Stewart, Allan
Flowering plant	<i>Ophrys fuciflora</i> , Late spider orchid	1996/1997	NON_BAP		Taylor, Ian
Flowering plant	<i>Ophrys sphegodes</i> , Early spider orchid	1996/1997	NON_BAP		Taylor, Ian
Flowering plant	<i>Orchis militaris</i> , Military orchid	1996/1997	NON_BAP		Taylor, Ian
Flowering plant	<i>Orchis simia</i> , Monkey orchid	1996/1997	NON_BAP		Taylor, Ian
Flowering plant	<i>Orobanche reticulata</i> , Thistle broomrape	1995/1996	NON_BAP		Taylor, Ian
Flowering plant	<i>Ptilularia globulifera</i> , Pillwort	1998/1999	BAP	1A Pre-recovery	Taylor, Ian
Flowering plant	<i>Potamogeton compressus</i> , Grass-wrack pondweed	2000/2001	BAP	1A Pre-recovery	Walker, Chris
Flowering plant	<i>Ranunculus arvensis</i> , Corn buttercup	1999/2000	NON_BAP	1A Pre-recovery	Porley, Ron
Flowering plant	<i>Ranunculus ophioglossifolius</i> , Adder's-tongue spearwort	1996/1997	NON_BAP	Handover	Heaver, David
Flowering plant	<i>Ranunculus tripartitus</i> , Three-lobed water-crowfoot	1997/1998	BAP	1B Pre-recovery	Leach, Simon
Flowering plant	<i>Salvia pratensis</i> , Meadow clary	1995/1996	NON_BAP	1B Pre-recovery	Taylor, Ian
Flowering plant	<i>Saxifraga hirculus</i> , Yellow marsh saxifrage	1997/1998	BAP		Taylor, Ian
Flowering plant	<i>Scandix pecten-veneris</i> , Shepherd's needle	1999/2000	BAP	1A Pre-recovery	Porley, Ron
Flowering plant	<i>Schoenoplectus triquetus</i> , Triangular club-rush	1996/1997	BAP	1A Pre-recovery	Johnson, Brian
Flowering plant	<i>Senecio paludosus</i> , Fen ragwort	1991/1992	NON_BAP	1A Pre-recovery	Sutcliffe, Jill

Taxon	Species Name	Year Added	BAP	Recovery Phase	English Nature Contact
Flowering plant	<i>Silene gallica</i> , Small-flowered catchfly	1999/2000	BAP		Porley, Ron
Flowering plant	<i>Sium latifolium</i> , Greater water-parsnip	2000/2001	BAP		Parker, Stephen
Flowering plant	<i>Spiranthes aestivalis</i> , Summer lady's tresses	1996/1997	NON_BAP		Taylor, Ian
Flowering plant	<i>Stachys germanica</i> , Downy woundwort	1997/1998	NON_BAP	1B Pre-recovery	Whetter, Heather
Flowering plant	<i>Teucrium scordium</i> , Water gemanter	1998/1999	NON_BAP		Bates, Simon
Flowering plant	<i>Thlaspi perfoliatum</i> , Cotswold pennycress	1996/1997	BAP	2 Recovery	Heaver, David
Flowering plant	<i>Torilis arvensis</i> , Spreading hedge-parsley	1999/2000	BAP	1A Pre-recovery	Porley, Ron
Flowering plant	<i>Valerianella ramosa</i> , Broad-fruited corn-salad	1999/2000	BAP	1A Pre-recovery	Porley, Ron
Flowering plant	<i>Viola persicifolia</i> , Fen violet	1993/1994	NON_BAP	1B Pre-recovery	Sutcliffe, Jill
Fungi	<i>Battarraea phalloides</i> , Sandy stilt puffball	2000/2001	BAP	1A Pre-recovery	Borges, Carl
Fungi	<i>Boletus pseudoregius</i> , a bolete	1998/1999	NON_BAP	Underpinning	Borges, Carl
Fungi	<i>Boletus regius</i> , Royal bolete	1998/1999	BAP	Underpinning	Borges, Carl
Fungi	<i>Boletus satanas</i> , Devil's bolete	1997/1998	BAP	1A Pre-recovery	Borges, Carl
Fungi	<i>Buglossoporus pulvinus</i> , Oak polypore	2000/2001	BAP	1A Pre-recovery	Borges, Carl
Fungi	<i>Creolophus cirrhatus</i> , a non-stipitate tooth fungus	2001/2002	NON_BAP	Underpinning	Borges, Carl
Fungi	<i>Hericium cirrhatum</i> , a fungi	2000/2001	NON_BAP	Underpinning	Borges, Carl
Fungi	<i>Hericium coralloides</i> , a non-stipitate tooth fungus	1998/1999	NON_BAP	Underpinning	Borges, Carl
Fungi	<i>Hericium erinaceum</i> , Tree hedgehog fungus	1998/1999	BAP	Underpinning	Borges, Carl
Fungi	<i>Hydnellum conrescens</i> , a tooth fungus	1998/1999	BAP	1A Pre-recovery	Borges, Carl
Fungi	<i>Hydnellum scrobiculatum</i> , a tooth fungus	1998/1999	BAP	Underpinning	Borges, Carl
Fungi	<i>Hydnellum spongiosipes</i> , a tooth fungus	1998/1999	BAP	Underpinning	Borges, Carl
Fungi	<i>Hygrocybe calyptriformis</i> , Pink meadow cap	2000/2001	BAP	1A Pre-recovery	Borges, Carl
Fungi	<i>Hygrocybe spadicea</i> , Date-colored waxcap	2000/2001	BAP	1A Pre-recovery	Borges, Carl
Fungi	<i>Microglossum olivaceum</i> , an earth-tongue	2000/2001	BAP	1A Pre-recovery	Borges, Carl
Fungi	<i>Phellodon confluens</i> , a tooth fungus	1998/1999	BAP	1A Pre-recovery	Borges, Carl
Fungi	<i>Phellodon melaleucus</i> , a tooth fungus	1998/1999	BAP	1A Pre-recovery	Borges, Carl
Fungi	<i>Phellodon niger</i> , a fungi	2000/2001	NON_BAP	Underpinning	Borges, Carl
Fungi	<i>Poronia punctata</i> , Nail fungus	1998/1999	BAP	1A Pre-recovery	Cox, Jonathan
Fungi	<i>Poronia punctata</i> , Nail fungus	1998/1999	BAP	1A Pre-recovery	Sutherland, Tom
Fungi	<i>Sarcodon scabrosus</i> , a tooth fungus	1998/1999	BAP	1A Pre-recovery	Borges, Carl
Lichen	<i>Bacidia incompta</i> , a lichen	2000/2001	BAP	1A Pre-recovery	Lambley, Peter
Lichen	<i>Belonia calcicola</i> , a lichen	2000/2001	BAP	Underpinning	Lambley, Peter
Lichen	<i>Biatidium monasteriense</i> , a lichen	2000/2001	BAP	1A Pre-recovery	Lambley, Peter
Lichen	<i>Bryoria smithii</i> , a lichen	2000/2001	BAP	1A Pre-recovery	Lambley, Peter
Lichen	<i>Buellia asterella</i> , Starry Breck-lichen	1994/1995	BAP	1B Pre-recovery	Lambley, Peter
Lichen	<i>Calicium corynellum</i> , a lichen	1999/2000	BAP	2 Recovery	Lambley, Peter
Lichen	<i>Caloplaca aractina</i> , a lichen	2000/2001	BAP	1A Pre-recovery	Lambley, Peter
Lichen	<i>Caloplaca luteoalba</i> , Orange-fruited elm-lichen	2001/2002	BAP	1A Pre-recovery	Lambley, Peter
Lichen	<i>Catapyrenium psoromoides</i> , Tree catapyrenium	2001/2002	BAP	1A Pre-recovery	Lambley, Peter
Lichen	<i>Catillaria laureri</i> , Laurer's catillaria	1993/1994	NON_BAP	1B Pre-recovery	Lambley, Peter
Lichen	<i>Cladonia mediterranea</i> , a reindeer lichen	2000/2001	BAP	1A Pre-recovery	Lambley, Peter
Lichen	<i>Collema dichotomum</i> , River jelly lichen	1998/1999	BAP	1A Pre-recovery	Lambley, Peter
Lichen	<i>Enterographa elaborata</i> , New Forest beech-lichen	1998/1999	BAP	1A Pre-recovery	Lambley, Peter
Lichen	<i>Enterographa soredata</i> , a lichen	2001/2002	BAP	1A Pre-recovery	Lambley, Peter
Lichen	<i>Fulgensia fulgens</i> , Scrambled-egg lichen	1994/1995	NON_BAP	1B Pre-recovery	Lambley, Peter
Lichen	<i>Graphina pauciloculata</i> , a lichen	2001/2002	BAP	1A Pre-recovery	Lambley, Peter
Lichen	<i>Heterodermia leucomelos</i> , Ciliate strap-lichen	1998/1999	BAP	1A Pre-recovery	Lambley, Peter
Lichen	<i>Lecanactis hemisphaerica</i> , Churchyard lecanactis	2000/2001	BAP	1B Pre-recovery	Lambley, Peter
Lichen	<i>Parmelia minarum</i> , New Forest pamelia	1993/1994	NON_BAP	2 Recovery	Lambley, Peter
Lichen	<i>Squamarina lentigera</i> , Scaly breck-lichen	1999/2000	BAP	1B Pre-recovery	Lambley, Peter
Lichen	<i>Teloschistes chrysophthalmus</i> , a lichen	2000/2001	BAP	1A Pre-recovery	Lambley, Peter
Lichen	<i>Teloschistes flavicans</i> , Golden hair lichen	1996/1997	NON_BAP	2 Recovery	Lambley, Peter
Liverwort	<i>Cephaloziella integerrima</i> , a liverwort	1997/1998	NON_BAP	1B Pre-recovery	Tonkin, Beth
Liverwort	<i>Cephaloziella massalongi</i> , a liverwort	1997/1998	NON_BAP	1B Pre-recovery	Tonkin, Beth

Taxon	Species Name	Year Added	BAP	Recovery Phase	English Nature Contact
Liverwort	<i>Cephaloziella nicholsonii</i> , Greater copperwort	1997/1998	BAP	1B Pre-recovery	Tonkin, Beth
Liverwort	<i>Jamesoniella undulifolia</i> , Marsh earwort	1997/1998	BAP	1B Pre-recovery	Porley, Ron
Liverwort	<i>Lejeunea mandonii</i> , Atlantic lejeunea	1997/1998	BAP	1A Pre-recovery	Porley, Ron
Liverwort	<i>Lophozia ruheana</i> , Norfolk flapwort	2001/2002	BAP	1A Pre-recovery	Porley, Ron
Liverwort	<i>Marsupella profunda</i> , Western rustwort	1996/1997	BAP	1B Pre-recovery	Porley, Ron
Liverwort	<i>Pallavicinia lyellii</i> , Veilwort	2000/2001	BAP	1A Pre-recovery	Porley, Ron
Liverwort	<i>Petalophyllum ralfsii</i> , Petalwort	1997/1998	BAP	Handover	Porley, Ron
Liverwort	<i>Riccia huebeneriana</i> , Violet crystalwort	2000/2001	BAP	1A Pre-recovery	Porley, Ron
Mammal	<i>Arvicola terrestris</i> , Water vole	1996/1997	BAP	1A Pre-recovery	Mitchell-Jones, Tony
Mammal	<i>Barbastella barbastellus</i> , Barbastelle bat	1995/1996	BAP	1A Pre-recovery	Mitchell-Jones, Tony
Mammal	<i>Lepus europaeus</i> , Brown hare	1997/1998	BAP	Underpinning	Mitchell-Jones, Tony
Mammal	<i>Muscardinus aellenarius</i> , Dormouse	1991/1992	BAP	3 Recovery	Mitchell-Jones, Tony
Mammal	<i>Myotis bechsteinii</i> , Bechstein's bat	1995/1996	BAP	1A Pre-recovery	Mitchell-Jones, Tony
Mammal	<i>Myotis nattereri</i> , Natterer's bat	1995/1996	NON BAP	Underpinning	Mitchell-Jones, Tony
Mammal	<i>Phocoena phocoena</i> , Harbour porpoise	2001/2002	BAP		Moffat, Angeh
Mammal	<i>Pipistrellus pipistrellus</i> , Pipistrelle bat	1999/2000	BAP	Handover	Mitchell-Jones, Tony
Mammal	<i>Rhinolophus ferrumequinum</i> , Greater horseshoe bat	1994/1995	BAP	3 Recovery	Mitchell-Jones, Tony
Mammal	<i>Rhinolophus hipposideros</i> , Lesser horseshoe bat	1997/1998	BAP	Underpinning	Mitchell-Jones, Tony
Mammal	<i>Sciurus vulgaris</i> , Red squirrel	1991/1992	BAP	1B Pre-recovery	Mitchell-Jones, Tony
Mollusc	<i>Anisus vorticulus</i> , Little ramshorn whirlpool snail	1998/1999	BAP		Key, Roger
Mollusc	<i>Catinella arenaria</i> , Sandbowl snail	1997/1998	BAP	Underpinning	Key, Roger
Mollusc	<i>Margaritifera margaritifera</i> , Freshwater pearl mussel	1996/1997	BAP		Fraser, David
Mollusc	<i>Myxas glutinosa</i> , Glutinous snail	1995/1996	BAP		Key, Roger
Mollusc	<i>Ostrea edulis</i> , native oyster	2002/2003	BAP	1A Pre-recovery	Taylor, Sangeeta
Mollusc	<i>Pisidium tenuilineatum</i> , Fine-lined pea mussel	1999/2000	BAP		Key, Roger
Mollusc	<i>Pseudanodonta complanata</i> , Depressed river mussel	1997/1998	BAP		Key, Roger
Mollusc	<i>Segmentina nitida</i> , Shining ramshorn snail	1997/1998	BAP		Key, Roger
Mollusc	<i>Sphaerium solidum</i> , Wytham Orb Mussel	2002/2003	NON BAP		Key, Roger
Mollusc	<i>Valvata macrostoma</i> , a water snail	1999/2000	NON BAP		Key, Roger
Mollusc	<i>Vertigo angustior</i> , Narrow-mouthed whorl snail	1998/1999	BAP	1B Pre-recovery	Key, Roger
Mollusc	<i>Vertigo genesii</i> , Round-mouthed whorl snail	2000/2001	BAP	1A Pre-recovery	Key, Roger
Mollusc	<i>Vertigo geyeri</i> , Geyer's whorl snail	2000/2001	BAP	1A Pre-recovery	Key, Roger
Mollusc	<i>Vertigo moulinsiana</i> , Desmoulin's whorl snail	1997/1998	BAP	Handover	Key, Roger
Moss	<i>Acaulon triquetrum</i> , Triangular pygmy-moss	2001/2002	BAP	1A Pre-recovery	Porley, Ron
Moss	<i>Atrichum angustatum</i> , Lesser smoothcap	2001/2002	BAP	Underpinning	Porley, Ron
Moss	<i>Brachythecium appleyardiae</i> , Appleyard's feather-moss	2000/2001	BAP	1A Pre-recovery	Porley, Ron
Moss	<i>Bryum calophyllum</i> , Matted bryum	2001/2002	BAP	1A Pre-recovery	Porley, Ron
Moss	<i>Bryum mamillatum</i> , Dune threadmoss	2000/2001	BAP	1A Pre-recovery	Porley, Ron
Moss	<i>Bryum neodamense</i> , Long-leaved threadmoss	2000/2001	BAP	1A Pre-recovery	Porley, Ron
Moss	<i>Bryum turbinatum</i> , Pear-fruited bryum	2001/2002	BAP	1A Pre-recovery	Porley, Ron
Moss	<i>Bryum uliginosum</i> , Cernuous bryum	2001/2002	BAP	1A Pre-recovery	Porley, Ron
Moss	<i>Bryum warneum</i> , Sea bryum	2000/2001	BAP	1A Pre-recovery	Porley, Ron
Moss	<i>Cryphaea lamyana</i> , Multi-fruited river moss	2000/2001	BAP	1A Pre-recovery	Porley, Ron
Moss	<i>Didymodon glaucus</i> , Glaucus beard-moss	1997/1998	BAP	Underpinning	Porley, Ron
Moss	<i>Didymodon tomaculosus</i> , Sausage beard-moss	2000/2001	BAP	1A Pre-recovery	Porley, Ron
Moss	<i>Ditrichum cornubicum</i> , Cornish path moss	1997/1998	BAP	1A Pre-recovery	Tonkin, Beth
Moss	<i>Ditrichum plumbicola</i> , Lead-moss	2001/2002	BAP	Underpinning	Porley, Ron
Moss	<i>Fissidens exiguus</i> , Tiny fern-moss	2000/2001	BAP	1A Pre-recovery	Porley, Ron
Moss	<i>Leptodontium gemmascens</i> , Thatch moss	2000/2001	BAP	Underpinning	Porley, Ron
Moss	<i>Orthodontium gracile</i> , Slender thread-moss	1998/1999	BAP		Porley, Ron

Taxon	Species Name	Year Added	BAP	Recovery Phase	English Nature Contact
Moss	<i>Orthotrichum obtusifolium</i> , Blunt-leaved bristle-moss	2001/2002	BAP	Underpinning	Porley, Ron
Moss	<i>Orthotrichum pallens</i> , Pale bristle-moss	2001/2002	BAP	1A Pre-recovery	Porley, Ron
Moss	<i>Seligeria carniolica</i> , Water rock-bristle	2001/2002	BAP	Underpinning	Porley, Ron
Moss	<i>Sphagnum balticum</i> , Baltic bog-moss	2000/2001	BAP	1A Pre-recovery	Porley, Ron
Moss	<i>Tetradontium repandum</i> , Small four-tooth moss	2001/2002	BAP	1A Pre-recovery	Porley, Ron
Moss	<i>Thamnobryum angustifolium</i> , Derby shire feather-moss	1997/1998	BAP	1A Pre-recovery	Porley, Ron
Moss	<i>Thamnobryum cataractarum</i> , Yorkshire feather moss	2001/2002	BAP	Underpinning	Porley, Ron
Moss	<i>Tortula cernua</i> , Flamingo moss	2000/2001	BAP	1A Pre-recovery	Porley, Ron
Moss	<i>Tortula freibergii</i> , Freiberg's screw-moss	2001/2002	BAP	Underpinning	Porley, Ron
Moss	<i>Weissia multicapsularis</i> , a moss	1997/1998	BAP	1B Pre-recovery	Porley, Ron
Moss	<i>Weissia rostellata</i> , Beaked beardless-moss	2000/2001	BAP	1A Pre-recovery	Porley, Ron
Moss	<i>Weissia squarrosa</i> , Spreading-leaved beardless-moss	2001/2002	BAP	Underpinning	Porley, Ron
Moss	<i>Zygodon forsteri</i> , Knothole moss	2001/2002	BAP	2 Recovery	Porley, Ron
Moss	<i>Zygodon gracilis</i> , Nowell's limestone moss	2001/2002	BAP	Underpinning	Porley, Ron
Moth	<i>Acosmetia caliginosa</i> , Reddish buff	1991/1992	BAP	3 Recovery	Sheppard, David
Moth	<i>Aspiates gilvaria gilvaria</i> , Straw belle	1999/2000	BAP	1A Pre-recovery	Sheppard, David
Moth	<i>Athetis pallustris</i> , Marsh moth	1999/2000	BAP	1A Pre-recovery	Sheppard, David
Moth	<i>Calophasia lunula</i> , Toadflax brocade	1999/2000	BAP	1A Pre-recovery	Sheppard, David
Moth	<i>Catocala promissa</i> , Light crimson underwing	1999/2000	BAP	1A Pre-recovery	Sheppard, David
Moth	<i>Catocala sponsa</i> , Dark crimson underwing	1999/2000	BAP	1A Pre-recovery	Sheppard, David
Moth	<i>Coleophora tricolor</i> , Basil thyme case-bearer	1999/2000	BAP	1A Pre-recovery	Sheppard, David
Moth	<i>Coscinia cribraria bivittata</i> , Speckled footman	1997/1998	BAP	1A Pre-recovery	Sheppard, David
Moth	<i>Cosmia diffinis</i> , White-spotted pinion	1999/2000	BAP	1A Pre-recovery	Sheppard, David
Moth	<i>Cyclophora pendularia</i> , Dingy mocha	1999/2000	BAP	1A Pre-recovery	Sheppard, David
Moth	<i>Dicycla oo</i> , Heart moth	1998/1999	BAP	1A Pre-recovery	Sheppard, David
Moth	<i>Epione vespertaria</i> , Dark bordered beauty	2001/2002	BAP	1A Pre-recovery	Sheppard, David
Moth	<i>Eustroma reticulata</i> , Netteed carpet	1996/1997	BAP	1B Pre-recovery	Sheppard, David
Moth	<i>Gortyna borelii lunata</i> , Fisher's esturine	1999/2000	NON_BAP	1A Pre-recovery	Sheppard, David
Moth	<i>Hadena albimacula</i> , White-spot	1999/2000	BAP	1A Pre-recovery	Sheppard, David
Moth	<i>Heliothobus reticulata marginosa</i> , Bordered gothic	2000/2001	BAP	1A Pre-recovery	Sheppard, David
Moth	<i>Hemaris tityus</i> , Narrow-bordered hawk-moth	1999/2000	BAP	1A Pre-recovery	Sheppard, David
Moth	<i>Hydraecia osseola hucherardi</i> , Marsh mallow moth	1999/2000	BAP	1A Pre-recovery	Sheppard, David
Moth	<i>Hydrelia sylvata</i> , Waved carpet	1999/2000	BAP	1A Pre-recovery	Sheppard, David
Moth	<i>Hypena rostralis</i> , Buttoned snout	2000/2001	BAP	1A Pre-recovery	Sheppard, David
Moth	<i>Idaea dilutaria</i> , Silky wave	1999/2000	BAP	1A Pre-recovery	Sheppard, David
Moth	<i>Idaea ochrata cantinata</i> , Bright wave	1997/1998	BAP	1A Pre-recovery	Sheppard, David
Moth	<i>Jodia croceago</i> , Orange upperwing	1999/2000	BAP	1A Pre-recovery	Sheppard, David
Moth	<i>Luperina nickerlii gueneei</i> , Sandhill rustic	1999/2000	NON_BAP	1A Pre-recovery	Sheppard, David
Moth	<i>Lycia zonaria britannica</i> , Belted beauty	2000/2001	BAP	1A Pre-recovery	Sheppard, David
Moth	<i>Lygephila craccæ</i> , Scarce black-neck	1999/2000	BAP	1A Pre-recovery	Sheppard, David
Moth	<i>Minoa murinata</i> , Drap looper	1998/1999	BAP	1A Pre-recovery	Sheppard, David
Moth	<i>Moma alpium</i> , Scarce Merveille du Jour	1999/2000	BAP	1A Pre-recovery	Sheppard, David
Moth	<i>Mythimna turca</i> , Double line	1999/2000	BAP	1A Pre-recovery	Sheppard, David
Moth	<i>Noctua orbona</i> , Lunar yellow underwing	1998/1999	BAP	1A Pre-recovery	Sheppard, David
Moth	<i>Oria musculosa</i> , Brighton wainscot	2000/2001	BAP	1A Pre-recovery	Sheppard, David
Moth	<i>Paracolax tristalis</i> , Clay fan-foot	1999/2000	BAP	1A Pre-recovery	Sheppard, David
Moth	<i>Pareulype berberata</i> , Barberry carpet	1997/1998	BAP	3 Recovery	Sheppard, David
Moth	<i>Pechipogo strigilata</i> , Common fan-foot	2000/2001	BAP	1A Pre-recovery	Sheppard, David
Moth	<i>Polia bombycina</i> , Pale shining brown	1998/1999	BAP	1A Pre-recovery	Sheppard, David
Moth	<i>Polymixis xanthomista</i> , Black-banded	1999/2000	BAP	1A Pre-recovery	Sheppard, David
Moth	<i>Protolampra sobrina</i> , Cousin German	2000/2001	BAP	1A Pre-recovery	Sheppard, David
Moth	<i>Pyropteron chrysidiformis</i> , Fiery clearwing	1996/1997	BAP		Banks, Brian

Taxon	Species Name	Year Added	BAP	Recovery Phase	English Nature Contact
Moth	<i>Rheumaptera hastata</i> , Argentand sable	2000/2001	BAP	1A Pre-recovery	Sheppard, David
Moth	<i>Schrankia taenialis</i> , White-line snout	1999/2000	BAP	1A Pre-recovery	Sheppard, David
Moth	<i>Scotopteryx bipunctaria</i> , Chalk carpet	1999/2000	BAP	1A Pre-recovery	Sheppard, David
Moth	<i>Shargacuellia lychnitis</i> , Striped lychnis	1999/2000	BAP	1A Pre-recovery	Sheppard, David
Moth	<i>Siona lineata</i> , Black-veined moth	1996/1997	BAP	2 Recovery	Sheppard, David
Moth	<i>Thalera fimbrialis</i> , Sussex emerald	1991/1992	NON BAP	2 Recovery	Sheppard, David
Moth	<i>Trichopteryx polyommata</i> , Barred toothed stripe	2000/2001	BAP	1A Pre-recovery	Sheppard, David
Moth	<i>Trisateles emortualis</i> , Olive crescent	1999/2000	BAP	1A Pre-recovery	Sheppard, David
Moth	<i>Tyta luctuosa</i> , Four-spotted moth	1998/1999	BAP	1A Pre-recovery	Sheppard, David
Moth	<i>Xestia alpicola alpina</i> , Northern dart	1999/2000	BAP	1A Pre-recovery	Sheppard, David
Moth	<i>Xestia rhomboidea</i> , Square-spotted clay	1999/2000	BAP	1A Pre-recovery	Sheppard, David
Moth	<i>Xylena exsoleta</i> , Sword-grass	1999/2000	BAP	1A Pre-recovery	Sheppard, David
Reptile	<i>Caretta caretta</i> , Loggerhead turtle	1999/2000	BAP		Foster, Jim
Reptile	<i>Chelonia mydas</i> , Green turtle	1999/2000	BAP		Foster, Jim
Reptile	<i>Coronella austriaca</i> , Smooth snake	1994/1995	NON BAP	1A Pre-recovery	Foster, Jim
Reptile	<i>Dermochelys coriacea</i> , Leatherback turtle	1999/2000	BAP		Foster, Jim
Reptile	<i>Eretmochelys imbricata</i> , Hawksbill turtle	1999/2000	BAP		Foster, Jim
Reptile	<i>Lacerta agilis</i> , Sand lizard	1994/1995	BAP	1B Pre-recovery	Nicholson, Andrew
Reptile	<i>Lacerta agilis</i> , Sand lizard	1994/1995	BAP	1B Pre-recovery	Foster, Jim
Reptile	<i>Lepidochelys kempii</i> , Kemp's ridley turtle	1999/2000	BAP		Foster, Jim
Scrubs /Trees	<i>Juniperus communis</i> , Juniper	1998/1999	BAP	Underpinning	Sutcliffe, Jill
Scrubs /Trees	<i>Juniperus communis</i> , Juniper	1998/1999	BAP	Underpinning	Taylor, Ian
Scrubs /Trees	<i>Populus nigra</i> , Black poplar	1997/1998	NON BAP		Robinson, Patrick
Scrubs /Trees	<i>Sorbus anglica</i> , a whitebeam	1996/1997	NON BAP	1A Pre-recovery	Taylor, Ian
Scrubs /Trees	<i>Sorbus bristolensis</i> , Bristol whitebeam	1996/1997	NON BAP	1A Pre-recovery	Taylor, Ian
Scrubs /Trees	<i>Sorbus domestica</i> , Service-tree	1996/1997	NON BAP	1A Pre-recovery	Taylor, Ian
Scrubs /Trees	<i>Sorbus eminens</i> , a whitebeam	1996/1997	NON BAP	1A Pre-recovery	Taylor, Ian
Scrubs /Trees	<i>Sorbus lancastriensis</i> , a whitebeam	1996/1997	NON BAP	1A Pre-recovery	Taylor, Ian
Scrubs /Trees	<i>Sorbus subcuneata</i> , a whitebeam	1996/1997	NON BAP	1A Pre-recovery	Taylor, Ian
Scrubs /Trees	<i>Sorbus vexans</i> , a whitebeam	1996/1997	NON BAP	1A Pre-recovery	Taylor, Ian
Scrubs /Trees	<i>Sorbus wilmottiana</i> , a whitebeam	1996/1997	NON BAP	1A Pre-recovery	Taylor, Ian
Sea anemone	<i>Amphianthus dohrnii</i> , Sea-fan anemone	1999/2000	BAP		Hoskin, Miles
Sea anemone	<i>Victorella pavida</i> , Trembling sea mat	1996/1997	NON BAP		Tonkin, Beth
Slime mold	<i>Rare myxomycetes</i> , slime molds	2000/2001	NON BAP	Underpinning	Borges, Carl
Spider	<i>Dolomedes plantarius</i> , Fen raft spider	1991/1992	BAP	1B Pre-recovery	Key, Roger
Spider	<i>Eresus cinnaberinus</i> , Lady bird spider	1994/1995	BAP	2 Recovery	Key, Roger
Stonefly	<i>Brachyptera putata</i> , a stonefly	2000/2001	BAP		Webb, Jon
Stonewort	<i>Chara baltica</i> , Baltic stonewort	2001/2002	BAP	1A Pre-recovery	Watt, Susan
Stonewort	<i>Chara canescens</i> , Bearded stonewort	1996/1997	BAP		Watt, Susan
Stonewort	<i>Chara canescens</i> , Bearded stonewort	1996/1997	BAP		Hawkes, Zak
Stonewort	<i>Chara connivens</i> , Convergent stonewort	2000/2001	BAP	1A Pre-recovery	Clarke, Stewart
Stonewort	<i>Chara curta</i> , Lesser bearded stonewort	2000/2001	BAP	1A Pre-recovery	Clarke, Stewart
Stonewort	<i>Lamprothamnium papulosum</i> , Foxtail stonewort	1997/1998	BAP		Watt, Susan
Stonewort	<i>Nitella gracilis</i> , Slender stonewort	2000/2001	BAP		Clarke, Stewart
Stonewort	<i>Nitellopsis obtusa</i> , Starry stonewort	2000/2001	BAP	1A Pre-recovery	Clarke, Stewart
Stonewort	<i>Tolypella intricata</i> , Tassel stonewort	1999/2000	BAP	1B Pre-recovery	Clarke, Stewart
Stonewort	<i>Tolypella prolifera</i> , Great tassel stonewort	1998/1999	BAP	1B Pre-recovery	Clarke, Stewart
True bug	<i>Cicadetta montana</i> , New Forest cicada	1993/1994	BAP	1A Pre-recovery	Sheppard, David
True fly	<i>Asilus crabroniformis</i> , Hornet robberfly	1997/1998	BAP	1A Pre-recovery	Webb, Jon
True fly	<i>Bombylius discolor</i> , Dotted bee-fly	1999/2000	BAP	1A Pre-recovery	Webb, Jon
True fly	<i>Bombylius minor</i> , Heath bee-fly	1999/2000	BAP	1A Pre-recovery	Webb, Jon
True fly	<i>Callicera spinolae</i> , Golden hoverfly	1997/1998	BAP	1B Pre-recovery	Webb, Jon
True fly	<i>Chrysotoxum octomaculatum</i> , a hoverfly	1996/1997	BAP	1A Pre-recovery	Webb, Jon
True fly	<i>Doros profuges</i> , a hoverfly	1999/2000	BAP		Webb, Jon
True fly	<i>Dorycera graminum</i> , a picture-winged fly	1999/2000	BAP		Webb, Jon
True fly	<i>Eristalis cryptarum</i> , Bog hoverfly	1998/1999	BAP	1A Pre-recovery	Webb, Jon
True fly	<i>Lipsothrix errans</i> , a crane fly	2000/2001	BAP	1A Pre-recovery	Webb, Jon
True fly	<i>Lipsothrix nervosa</i> , a crane fly	2000/2001	BAP	1A Pre-recovery	Webb, Jon
True fly	<i>Lipsothrix nigristigma</i> , a crane fly	1999/2000	BAP	1A Pre-recovery	Webb, Jon
True fly	<i>Odontomyia hydroleon</i> , a soldier fly	2000/2001	BAP	Underpinning	Webb, Jon
True fly	<i>Thyridanthrax fenestratus</i> , Mottled bee-fly	1999/2000	BAP	1A Pre-recovery	Webb, Jon
Wasp	<i>Cerceris quadricincta</i> , a solitary wasp	2001/2002	BAP	1A Pre-recovery	Sheppard, David

Taxon	Species Name	Year Added	BAP	Recovery Phase	English Nature Contact
Wasp	<i>Cerceris quinquefasciata</i> , a solitary wasp	2001/2002	BAP	1A Pre-recovery	Sheppard, David
Wasp	<i>Ceropales variegata</i> , a wasp	2000/2001	NON BAP	1A Pre-recovery	Sheppard, David
Wasp	<i>Chrysis fulgida</i> , a ruby-tailed wasp	2000/2001	BAP	1A Pre-recovery	Sheppard, David
Wasp	<i>Chrysura hirsuta</i> , a cuckoo wasp	2000/2001	BAP	1A Pre-recovery	Sheppard, David
Wasp	<i>Evagetes pectinipes</i> , a spider-hunting wasp	2000/2001	BAP	1A Pre-recovery	Sheppard, David
Wasp	<i>Homonotus sanguinolentus</i> , a spider-hunting wasp	1999/2000	BAP	1A Pre-recovery	Sheppard, David
Wasp	<i>Pseudepipona herrichii</i> , Purbeck mason wasp	1996/1997	BAP	2 Recovery	Sheppard, David
Wom	<i>Armandia cirrhosa</i> , Lagoon sandwom	1991/1992	BAP	1A Pre-recovery	Copley, Victoria
Wom	<i>Hirudo medicinalis</i> , Medicinal leech	1998/1999	BAP		Banks, Brian

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