



ENGLISH
NATURE

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English Nature's Research Programme 2003/2004

English Nature Research Reports



working today
for nature tomorrow

English Nature Research Reports

Number 553

English Nature's Research Programme 2003/2004

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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 2003-4, 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.

A significant role for English Nature is the dissemination of the evidence on which conservation decisions are taken and these projects are included under the relevant headings.

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. In some cases survey forms part of work intended to clarify specific site impacts related to diffuse pollution, coastal processes and Earth heritage and these projects are listed under these more specific headings.

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 2003/2004 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 2002.

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 2003

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2. English Nature's Research Programme

2.1 Climate change

MONARCH 2.2

Contractor University of Oxford **Completion** 31/03/04
Officer M Harley, Environmental Impacts Team **Cost** £26,000

Description

To 'test', through case studies, predictions about the impacts of climate change on biodiversity developed in the previous stage of the MONARCH programme (MONARCH 2.1).

INTERREG Climate Change project

Contractor To be decided **Completion** 31/03/04
Officer M Harley, Environmental Impacts Team **Cost** £29,000

Description

To prepare a bid for European Union (EU) INTERREG 3b funds to run a transnational project on climate change, biodiversity and spatial planning. If successful, the project will begin in 2004-2005.

The role of nature conservation in mitigating climate change

Contractor Tyndall Centre, University of East Anglia **Completion** 30/09/05
Officer M Harley, Environmental Impacts Team **Cost** £1,732

Description

Research to investigate the practicability of a range of options to mitigate the effects of climate change.

MarCLIM

Contractor Marine Biological Association **Completion** 31/03/06
Officer D Laffoley, Maritime Team **Cost** £37,500

Description

Research to assess and predict the influence of climatic change upon intertidal biota, and its implications for the conservation management and protection of the marine environment of Britain and Ireland.

2.2 Coastal processes

Dungeness geomorphological features

Contractor University of Durham **Completion** 31/07/03
Officer T Collins, Maritime Team **Cost** £8,000

Description

To assess the distribution of geomorphological features close to, or adjacent, to the Dungeness candidate Special Area of Conservation (cSAC).

Flood defence standards on protected sites

Contractor	J Ash	Completion	31/03/04
Officer	J McNish, Environmental Impacts Team	Cost	£15,000

Description

To provide information on the appropriate standard of flood defence for coastal sites which will enable English Nature to provide evidence based advice to Defra, the Environment Agency (EA) and other operating authorities.

North Wessex proto-Coastal Habitat Management Plan ('proto-ChaMP')

Contractor	Royal Haskoning/Environment Agency	Completion	31/10/03
Officer	B Corns, Somerset and Gloucestershire Team	Cost	£10,000

Description

To provide an approximate initial assessment of potential coastal realignment ('managed retreat') opportunities in the North Wessex area and throughout the Severn Estuary using recent and old aerial photographs and GIS to determine the amount of intertidal habitat lost. To identify the 'new' coastline for the South West region over a 50 year planning horizon and 5mm per year sea-level rise scenario.

Cuckmere managed retreat

Contractor	Environment Agency	Completion	31/03/05
Officer	R Edgar, Sussex and Surrey Team	Cost	£5,000

Description

Final year of a three year programme to manage the first stages in the restoration of the Cuckmere Valley, Sussex including the managed retreat of the west side of the valley and prepare the way for the further retreat of the whole lower valley and reinstatement of river meanders.

Chichester Harbour dredging study

Contractor	Chichester Harbour Conservancy	Completion	31/03/04
Officer	H Davies, Hampshire and Isle of Wight Team	Cost	£5,000

Description

To improve our understanding of coastal processes in Chichester Harbour and the impacts of beneficial disposal of dredged material in intertidal areas.

2.3 Diffuse pollution

Heath Lake SSSI hydrological survey

Contractor	W S Atkins	Completion	30/11/03
Officer	S King, Thames and Chilterns Team	Cost	£19,356

Description

Heath Lake SSSI appears to be getting increasingly eutrophic. This is 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.

Transport: diffuse impacts

Contractor	To be decided	Completion	31/10/03
Officer	D Markham, Environmental Impacts Team	Cost	£4,000

Description

To review the impacts on biodiversity of diffuse pollution from the inland transport sector. In particular, to examine the contribution of both the strategic and local roads network.

Nitrogen biomonitoring tools, phase 2

Contractor	CEH/NHM	Completion	28/02/05
Officer	M Harley, Environmental Impacts Team	Cost	£18,000

Description

The development of biomonitoring tools which utilise organism performance measures for assessing nitrogen impacts on protected sites.

Pollution and climate change Conservation Focus Group (CFG)

Contractor	Various	Completion	31/03/06
Officer	M Harley, Environmental Impacts Team	Cost	£8,000

Description

To support the Pollution and Climate Change Focus Group (CFG) projects, including a project on nitrogen and biodiversity co-funded with the Department of the Environment, Food and Rural Affairs (Defra).

Westwood Great Pool SSSI farm nutrient plan

Contractor	To be decided	Completion	31/03/04
Officer	H Ward, Herefordshire and Worcestershire Team	Cost	£1,000

Description

Production of a farm nutrient plan for the catchment area affecting Westwood Great Pool SSSI.

Survey of ditch flora in Sandwich to Hacklinge Marshes SSSI

Contractor	Carter Ecological Consultants	Completion	31/12/03
Officer	P Williams, Kent Team	Cost	£12,000

Description

Re-survey of ditch flora of Sandwich to Hacklinge Marshes SSSI, following original survey in 1982 to assess changes in the flora, with particular reference to diffuse pollution in the eutrophic ditch system.

Bittel Reservoir SSSI farm nutrient plan

Contractor	To be arranged	Completion	31/03/04
Officer	H Ward, Herefordshire and Worcestershire Team	Cost	£1,500

Description

Production of a farm nutrient plan for the catchment area affecting Bittel Reservoir SSSI.

2.4 Earth heritage

Safeguarding and managing geological sites

Contractor	Symonds Group	Completion	30/06/03
Officer	C Prosser, Environmental Impacts Team	Cost	£9,517

Description

Production of illustrated generic guidance demonstrating good practice in the safeguard and management of geological sites. The end result will be new management guidance available electronically and in hard copy.

Contribution to Regionally Important Geological and Geomorphological Sites (RIGs) conference

Contractor	UKRIGs	Completion	31/10/03
Officer	J Larwood, Environmental Impacts Team	Cost	£1,000

Description

To provide support for the UKRIGs national conference, which aims to conserve the geological interest of regionally important sites outside the geological SSSI series.

UK Regionally Important Geological Sites (UKRIGs) Newsletter

Contractor	UKRIGs	Completion	28/02/04
Officer	J Larwood, Environmental Impacts Team	Cost	£1,688

Description

To continue support and development of UK Regionally Important Geological Sites (UKRIGs) newsletter.

UK RIGs Website

Contractor UKRIGs **Completion** 28/02/04
Officer J Larwood, Environmental Impacts Team **Cost** £1,200

Description

To continue support of UK RIGs Website development to facilitate provision of relevant scientific and technical information.

Local Geodiversity Action Plans

Contractor Chester College & Warwickshire County Council **Completion** 28/02/04

Officer J Larwood, Environmental Impacts Team **Cost** £14,812

Description

To continue development of two pilot Local Geodiversity Action Plans in Cheshire and Warwickshire including compilation of geological information about these two counties.

Frogden Quarry SSSI site investigation

Contractor B Chandler **Completion** 31/08/03
Officer J Larwood, Environmental Impacts Team **Cost** £1,000

Description

A site based investigation at Frogden Quarry SSSI, Dorset, a site noted for its Middle Jurassic marine fauna.

How the past informs the future

Contractor To be decided **Completion** 31/12/03
Officer J Larwood, Environmental Impacts Team **Cost** £10,000

Description

To disseminate results of British Geological Survey research into the value of geological information in forecasting future environmental change, undertaken in 2002/2003.

Yorkshire Dinosaur Coast

Contractor Scarborough Borough Council **Completion** 28/02/04
Officer J Larwood, Environmental Impacts Team **Cost** £1,300

Description

Continued contribution to the development of the Yorkshire Dinosaur Coast project.

Geodiversity presentation for Hill Head 2003

Contractor ENTEC **Completion** 30/06/03
Officer C Prosser, Environmental Impacts Team **Cost** £3,000

Description

Production of a high quality power-point presentation, and delivery of the presentation at the Hill Head mineral extraction event. The presentation will be based on English Nature's 'Geodiversity and the Minerals Industry' publication.

Geology site management review report

Contractor	To be decided	Completion	31/03/04
Officer	C Prosser, Environmental Impacts Team	Cost	£15,482

Description

To use the results of previous research into management and safeguard of geological and geomorphological sites, to produce a new revised guidance document.

Scientific gains from FACELIFT

Contractor	Prof R Sparks, J Arum, B Markham, R Dixon	Completion	31/12/03
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Officer	M Murphy, Environmental Impacts Team	Cost	£3,000
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Description

To compile information on scientific benefits of the FACELIFT programme, which aims to maintain the conservation value of SSSIs designated to protect geological features.

Mine dump SSSI monitoring and survey

Contractor	To be decided	Completion	31/03/04
Officer	H Townley, Environmental Impacts Team	Cost	£8,000

Description

This project aims to produce a detailed scientific study on a number of mine dumps, through field-based assessment, to inform future monitoring and conservation management.

Favourable condition and soft sediments

Contractor	Wardell Armstrong	Completion	31/05/03
Officer	D Evans, Environmental Impacts Team	Cost	£15,063

Description

A study to determine what contributes to instability of geological sections in poorly consolidated sediments as a basis for advice to planners, developers and conservation bodies on managing these sections.

Geomorphological/landscape conservation in Europe

Contractor	To be decided	Completion	28/02/04
Officer	J Larwood, Environmental Impacts Team	Cost	£2,000

Description

To look at how geomorphological/landscape conservation is undertaken across Europe and identify best practice which can be applied in England.

UKRIGs project officer

Contractor	UKRIGs	Completion	31/03/04
Officer	J Larwood, Environmental Impacts Team	Cost	£20,000

Description

Project Officer to increase capacity of Regionally Important Geological Sites (RIGs) groups through sharing of best practice.

2.5 *Habitat and Area Survey*

Investigation into distribution of invertebrates in the intertidal mudflats of the Medway, Swale and South Thames Estuaries

Contractor	To be decided	Completion	31/03/04
Officer	C Chambers, Kent Team	Cost	£15,000

Description

Contribution to the Medway-Swale Estuary Partnership project. This initial phase will involve collection of data from past survey.

Maerl Beds

Contractor	Joint Dorset Marine Committee	Completion	31/05/03
Officer	Gavin Measures, Terrestrial Wildlife Team	Cost	£1,000

Description

To train amateur divers in scientific survey methods and undertake quantitative surveys of the density of living Maerl at a range of locations around the Purbeck coast from Swanage to Kimmeridge.

Condition assessment of Natura 2000 sites

Contractor	P Waring	Completion	31/03/04
Officer	B Fleming, Humber to Pennines Team	Cost	£10,000

Description

To determine the condition of Natura 2000 sites in the Humber to Pennines area, focusing on the South Pennine Moors SPA and the Thorne & Hatfield Moor SAC complex.

Thames and Chilterns parklands project

Contractor	To be decided	Completion	31/03/05
Officer	S King, Thames and Chilterns Team	Cost	£10,000

Description

This is Phase II of a project to detail information on the parklands and wood pasture sites within the Thames and Chilterns area. The project involves collection of field data at sites of potential importance identified in the Phase I desk study.

Sussex Seasearch

Contractor	Marine Conservation Society	Completion	31/03/04
Officer	A Jones, Sussex and Surrey Team	Cost	£2,000

Description

To supply basic data on habitats and species in the shallow sub-littoral of Sussex (up to 6km out to sea).

Meres and Mosses of Shropshire: NVC surveys

Contractor	Whild Associates	Completion	31/12/03
Officer	C Hogarth, North Mercia Team	Cost	£8,000

Description

To produce National Vegetation Classification (NVC) maps and ecological descriptions for 11 wetland sites in Shropshire.

Montgomery Canal map digitisation

Contractor	Montgomeryshire Wildlife Trust	Completion	31/07/03
Officer	C Hogarth, North Mercia Team	Cost	£1,000

Description

To digitise the results of vegetation survey of the Montgomery canal using a GIS.

Lake Macrophyte survey methodology

Contractor	CEH, Edinburgh	Completion	30/11/03
Officer	S Clarke, Environmental Impacts Team	Cost	£5,000

Description

To develop a common standards method for survey of macrophytes of lakes. A joint project with Scottish Natural Heritage.

West Sussex Airphoto Interpretation Project - Land Use and Habitats (Phase 1)

Contractor	West Sussex County Council	Completion	31/10/03
Officer	M Knight, Sussex and Surrey Team	Cost	£11,515

Description

To complete a Phase 1 Habitat Survey of the South Downs Lifescapes project area.

Changes in biodiversity in British woodland 1971-2002

Contractor	CEH, Wessex Associates	Completion	31/07/04
Officer	K Kirby, Terrestrial Wildlife Team	Cost	£30,000

Description

Surveys carried out in woodland across GB in 1971 will be repeated and changes in flora, woodland structure and soils assessed. The changes will be related to known trends in woodland management and other environmental factors.

Seasearch

Contractor	Kent Wildlife Trust	Completion	31/03/05
Officer	J Dear, Kent Team	Cost	£10,000

Description

A survey of the sublittoral sea bed off the Kent coast using volunteers.

Isle of Wight BAP project

Contractor	J Cox	Completion	31/03/04
Officer	A Gordon, Hampshire and Isle of Wight Team	Cost	£2,500

Description

To produce Biodiversity Action Plans for broadleaf woodland, estuaries and farmland on the Isle of Wight.

Site of Interest for Nature Conservation (SINC) and Biodiversity Action Plan (BAP) grassland survey

Contractor	Leicester and Rutland Wildlife Trust	Completion	31/03/04
Officer	N Pike, Eastern Area Team	Cost	£7,000

Description

To undertake survey work to identify important non-SSSI grassland in Leicestershire and Rutland. The project also involves offering management advice and assistance to landowners of identified sites.

Silurian grasslands

Contractor	Wildworks	Completion	31/03/04
Officer	P Baskeyfield, Herefordshire and Worcestershire Team	Cost	£3,000

Description

Grasslands survey on the Silurian outcrops of Worcestershire, including rare Silurian Limestone outcrops.

Evaluation of veteran tree sites

Contractor	To be decided	Completion	31/03/05
Officer	K Kirby, Terrestrial Wildlife Team	Cost	£10,000

Description

To test a system for the conservation evaluation of parkland and other veteran tree habitats based on habitat characteristics, rather than direct species measures.

Survey of SAC/SSSI rivers

Contractor	To be decided	Completion	10/11/03
Officer	D Withrington, Environmental Impacts Team	Cost	£20,000

Description

Testing of survey methodologies for aquatic plant communities in rivers, including baseline surveys of SSSIs and proposed SSSIs. Rivers proposed for survey in 2003 are the Axe, Kennet and Lambourn.

Life in UK rivers

Contractor	Various	Completion	31/12/03
Officer	D Withrington, Environmental Impacts Team	Cost	£26,000

Description

An EU funded project aimed at developing nature conservation strategies and monitoring protocols for rivers. This project is additionally supported by the Environment Agency, Scottish Environment Protection Agency, Countryside Council for Wales, Scottish Natural Heritage and SNIFFER.

Grassland BAP/Wildlife sites survey

Contractor	Leicester and Rutland Wildlife Trust	Completion	30/04/04
Officer	N Pike, Eastern Area Team	Cost	£6,000

Description

To undertake a grassland survey in Leicestershire and Rutland, based upon selection criteria for Sites of Interest for Nature Conservation (SINCs), and offer management advice and assistance in getting these sites into positive management.

Intertidal survey of *Sabellaria alveolata* biogenic reef from the North Wirral Foreshore to the Great Orme

Contractor	Marine Biological Association of the UK	Completion	31/03/04
Officer	M Bailey and I Reach, Cheshire to Lancashire Team	Cost	£5,000

Description

To establish the distribution and abundance of the honeycomb worm *Sabellaria alveolata* along the North Wirral Foreshore and around Hilbre Island in the Dee Estuary.

Severn Estuary intertidal biotope survey

Contractor	EMU Ltd	Completion	31/05/04
Officer	M Wills, Somerset and Gloucestershire Team	Cost	£42,000

Description

Production of a complete biotope map on GIS, covering the entire intertidal areas of the Severn Estuary European Marine Site on the English side of the estuary. This information will be used in conjunction with other data such as bird roosting and feeding movements, to help inform responses to casework and development of projects, such as a scheme of management for the site.

Monitoring of grassland Biodiversity Action Plan targets: field survey

Contractor	Just Ecology	Completion	31/12/03
Officer	C Pinches, Terrestrial Wildlife Team	Cost	£37,000

Description

To provide baseline information on grassland condition and extent of a sample of 500 Grassland Inventory sites in England, against which to monitor the achievement of BAP targets for the five priority lowland grassland types. The survey will also provide information on the role of agri-environment schemes in meeting grassland BAP targets.

Ouse Valley, Sussex baseline survey

Contractor	Sussex Biodiversity Record Centre	Completion	31/12/03
Officer	J Curson, Sussex and Surrey Team	Cost	£10,000

Description

Survey to identify potential mitigation and compensation sites for possible loss of Lewes Brookes SSSI, Sussex if it is used for flood alleviation as part of the Environment Agency's Ouse Strategy.

Arable margins in Avon

Contractor	Avon Wildlife Trust	Completion	31/03/04
Officer	Gavin Measures, Terrestrial Wildlife Team	Cost	£4,000

Description

Recruiting a network of volunteer surveyors to identify notable arable wildlife and monitor particular farms in Avon.

Wiltshire farmland

Contractor	RSPB	Completion	31/03/04
Officer	Gavin Measures, Terrestrial Wildlife Team	Cost	£3,000

Description

A three year project concentrating on recording farmland biodiversity in Wiltshire. With a dedicated project officer, our aim is to harness voluntary action from local communities - the ultimate objective being to build a sustainable network of volunteers.

Howardian Hills veteran tree invertebrate survey

Contractor	Howardian Hills AONB Project	Completion	31/03/04
Officer	S Christian, North and East Yorkshire Team	Cost	£1,000

Description

To establish an inventory of veteran tree resource and associated invertebrates.

Evaluation of extent, distribution and biodiversity interest of traditional orchards

Contractor	To be decided	Completion	30/04/05
Officer	H Robinson, Terrestrial Wildlife Team	Cost	£5,000

Description

Collate and review existing information relating to extent, distribution, and loss rates of traditional orchards, as well as information on their biodiversity and management.

Survey of wet woodlands in River Ouse valley and tributaries, Bedfordshire

Contractor	Bedfordshire FWAG	Completion	31/12/03
Officer	D Radley, Bedfordshire and Cambridgeshire Team	Cost	£2,000

Description

A contribution to a partnership project to identify and survey wet woods in the valley of the River Ouse and tributaries, with a view to long-term management, restoration and linkage.

Heritage coast sea-search

Contractor	Heritage Coast Project	Completion	31/03/08
Officer	T Mallows, North and East Yorkshire Team	Cost	£1,500

Description

To collate data and information from recreational divers on the health of coastal ecosystems.

Suffolk County Wildlife Sites: grassland survey

Contractor	Suffolk Wildlife Trust	Completion	31/03/04
Officer	A Collins, Suffolk Team	Cost	£3,000

Description

To carry out surveys of unimproved grassland sites which have been identified as County Wildlife Sites, using standard assessment techniques.

Herefordshire Millennium map

Contractor	Herefordshire Nature Trust	Completion	31/03/04
Officer	V Cooper, Herefordshire and Worcestershire Team	Cost	£6,000

Description

Continuation of the Phase 1 survey work in Herefordshire, to produce a Millennium Map and inform work on the preparation of inventories of key habitats, and implementation of a range of Biodiversity Action Plan (BAP) and other targets.

Identifying changes to the ancient woodland inventory using the National Inventory of Woodland and Trees (NIWT)

Contractor	To be decided	Completion	31/03/04
Officer	E Goldberg, Terrestrial Wildlife Team	Cost	£20,000

Description

To resolve discrepancies between the Ancient Woodland Inventory (AWI) and the Forestry Commission's National Inventory of Woodland and Trees (NIWT), to provide a more accurate ancient woodland inventory.

Service Level Agreement with Hampshire Biodiversity Information Centre: habitat surveys

Contractor	Hampshire Biodiversity Information Centre	Completion	31/03/04
Officer	W Fojt, Hampshire and Isle of Wight Team	Cost	£6,437

Description

Service Level Agreement with Hampshire Biodiversity Information Centre, which includes 36 days of habitat survey during 2003/04.

Analysis of the extent of different scrub types in England

Contractor	CEH	Completion	30/04/04
Officer	H Robinson, Terrestrial Wildlife Team	Cost	£10,000

Description

Establish the extent of important scrub types in England based upon data gathered by Countryside Survey 2000.

Phase 2 NVC survey of lowland heathland communities in Bedfordshire

Contractor	Greensand Trust	Completion	31/12/03
Officer	S Hamley, Bedfordshire and Cambridgeshire Team	Cost	£3,650

Description

Lowland heath communities with heather are a priority BAP habitat and a rare feature in this part of the South Midlands. The objective is to describe and characterise the heathland vegetation and associated plant communities of SSSIs in Bedfordshire.

NVC survey of chalk grassland County Wildlife Sites (CWS) in Bedfordshire

Contractor	Bedfordshire Wildlife Trust	Completion	31/12/03
Officer	D Radley, Bedfordshire and Cambridgeshire Team	Cost	£2,000

Description

A contribution to an NVC survey of targeted County Wildlife Sites (CWSs) known to be under threat from development, of high nature conservation value, and adjacent to or near existing chalk grassland SSSIs.

York city pond survey

Contractor	BTCV	Completion	31/03/04
Officer	S Christian, North and East Yorkshire Team	Cost	£1,000

Description

To complete an inventory of ponds in York city, and engage the local community in their management.

Biological surveys using divers

Contractor	Aquatic Survey & Monitoring	Completion	31/05/03
Officer	E Hill, Maritime Team	Cost	£95,000

Description

To monitor subtidal habitats at a range of sites using diver and video mediated survey techniques, so as to develop condition assessment methods for subtidal reef features.

East Yorkshire coast roll-back project

Contractor	North and East Yorkshire Ecological Data Centre	Completion	31/07/03
Officer	L Jones-Walters, North and East Yorkshire Team	Cost	£2,600

Description

Audit of biodiversity of Holderness coast. To continue to develop restoration guidelines for areas where 'roll-back', that is relocation of buildings and other assets from locations vulnerable to coastal erosion, has occurred.

2.6 Habitat management

Allerton game-strip crops research project

Contractor	Game Conservancy Trust	Completion	31/12/03
Officer	I Alexander, Dorset Team	Cost	£1,000

Description

To research the feasibility of using clover in game-strip crops in agri-environment schemes.

Monitoring the change in vegetation resulting from the trial introduction of cattle to Braunton Burrows cSAC, Devon

Contractor	P Robinson	Completion	31/03/04
Officer	S Bates & J Diamond, Devon Team	Cost	£3,750

Description

To assess the suitability of cattle grazing in conjunction with sheep grazing, to manage vegetation on Braunton Burrows cSAC.

Restoration of lakes

Contractor	Posford Haskoning	Completion	30/08/03
Officer	D Withrington, Environmental Impacts Team	Cost	£33,000

Description

Project Officer support for English Nature's lake restoration project including an options appraisal report for Aqualate Mere SSSI. Completion of a manual of restoration techniques.

Regional forestry frameworks

Contractor	Forestry Commission	Completion	31/03/05
Officer	K Kirby, Terrestrial Wildlife Team	Cost	£10,000

Description

Work with the Forestry Commission to develop Regional Forestry Frameworks that reflect biodiversity objectives.

Support for the England Deer Initiative

Contractor	Deer Initiative of England and Wales	Completion	31/03/04
Officer	E Goldberg, Terrestrial Wildlife Team	Cost	£15,000

Description

To support the work of the Deer Initiative in promoting good practice in deer management in woodland.

The role of large herbivores in the Atlantic forest landscape and its implications for modern conservation management

Contractor	To be decided	Completion	31/03/05
Officer	K Kirby, Terrestrial Wildlife Team	Cost	£15,000

Description

To assess the implications of recent ideas on the role of large herbivores in the Atlantic forests for modern conservation, with respect to the development of 'naturalistic grazing regimes'.

Norfolk Broads fish survey and removal trials, The Broads, cSAC

Contractor	ECON Ecological Consultancy	Completion	31/12/03
Officer	R Southwood, Norfolk Team	Cost	£13,902

Description

A trial to biomanipulate barriered areas within Barton Broad and the whole of Cockshoot Broad, The Broads cSAC, including survey and subsequent removal of zooplanktivorous fish (leaving piscivorous species). The aim is to increase zooplankton populations and hence produce clearwater conditions suitable for aquatic macrophyte growth.

Grassland birds

Contractor RSPB
Officer P Grice, Terrestrial Wildlife Team
Completion 31/03/04
Cost £15,000

Description

To better understand the key habitat attributes of agricultural grasslands for birds, using the Yellow hammer as a case study species. The role of different management practices and systems will be investigated and recommendations for management sympathetic to birds under, for example, Agri-Environment schemes will be developed.

Modelling of woodland ground flora

Contractor Liverpool University
Officer K Kirby, Terrestrial Wildlife Team
Completion 31/03/05
Cost £16,000

Description

To develop models of ground flora change in relation to management and environmental factors. An EN funded PhD studentship.

The dynamics of invertebrate populations associated with Juniper scrub on unimproved chalk grassland

Contractor Reading University
Officer S Davis, Wiltshire Team
Completion 31/12/05
Cost £5,000

Description

To investigate the structure of invertebrate communities associated with juniper, *Juniperus communis* scrub of different ages. To investigate the impact of scrub management on the invertebrate populations.

Wiltshire grazing recovery plan

Contractor To be decided
Officer D Hodd, Wiltshire Team
Completion 31/08/03
Cost £5,000

Description

To identify the extent of favourable condition of grazeable SSSIs and County Wildlife Sites across Wiltshire, and explore and review mechanisms for future development of the Wiltshire Interactive Grazing Initiative. The research will involve case studies of local grazing schemes, and provide strategic direction for grazing management in Wiltshire.

Curled dock *Rumex crispus* survey at Portholme Meadow cSAC

Contractor Cranfield University
Officer Z Hawkes, Bedfordshire and
Cambridgeshire Team
Completion 31/12/03
Cost £3,701

Description

Survey and distribution mapping of Curled dock *Rumex crispus* infestation at Portholme Meadow cSAC, and an investigation into causal factors and potential solutions.

Ecologically sustainable grazing management of lowland semi-natural grassland

Contractor Institute of Grassland and Environmental Research **Completion** 31/03/06

Officer R Jefferson, Terrestrial Wildlife Team **Cost** £10,000

Description

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

The impact of organic manures on semi-natural grasslands

Contractor Consortium led by Institute of Grassland and Environmental Research **Completion** 31/03/05

Officer R Jefferson, Terrestrial Wildlife Team **Cost** £10,700

Description

A project jointly funded with Defra, to determine optimum rates of farmyard manure application to semi-natural meadows through the conduct of experimental research and to test whether equivalent nutrient supply by inorganic fertilisers and other slow-release fertilisers can substitute for farmyard manure.

Suffolk Broads sediment survey

Contractor ENSIS Ltd **Completion** 30/11/03

Officer P Robinson, Suffolk Team **Cost** £18,000

Description

To produce an analysis of the sediments in water bodies in Barnby Broad SSSI, and Sprats Water and Marshes SSSIs. The work is with a view to the future restoration of these water bodies.

Vegetation change in the English uplands following removal of management

Contractor Penny Anderson Associates **Completion** 01/12/03

Officer A Crowle, Terrestrial Wildlife Team **Cost** £45,000

Description

Establishing baseline monitoring of twelve sites identified during an earlier desk study as ones where management has been removed.

Basingstoke Canal monitoring

Contractor To be decided **Completion** 31/03/04

Officer C Chatters, Hampshire and Isle of Wight Team **Cost** £2,000

Description

Detailed monitoring to assess the effect of tree clearance along Basingstoke Canal SSSI, to include an assessment of effects on cray fish and vegetation re-colonisation.

Oystercatcher use of mussel lays in The Wash

Contractor	BTO and CEH	Completion	31/03/04
Officer	C Donnelly, Eastern Area Team	Cost	£11,000

Description

To model oystercatcher use of mussel lays (artificial mussel beds) when 1) mussel stocks are high or low; 2) cockle stocks are high or low; 3) weather is good or poor; 4) oystercatcher population sizes vary.

Orlestone Forest monitoring

Contractor	R Bennett	Completion	31/03/04
Officer	P Harvey, Kent Team	Cost	£1,200

Description

To monitor ground flora composition following management by a rotary mulcher. This is the third year of a three year project.

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

Contractor	Institute of Grassland and Environmental Research	Completion	01/01/07
Officer	R Jefferson, Terrestrial Wildlife Team	Cost	£10,000

Description

A project jointly funded with Defra, to determine the influence of livestock breed and experience during rearing on subsequent foraging behaviour and, in turn, 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.

Herefordshire Community Commons

Contractor	Herefordshire Nature Trust	Completion	31/03/04
Officer	M July, Herefordshire and Worcestershire Team	Cost	£15,000

Description

A project to protect the species rich grasslands of Herefordshire's commons. Advice will be given to Commoners on the management of 40 Commons.

Assessment of the effect of spray drift on woodland plant species

Contractor	Dr J Ghazoul, Imperial College (Silwood Park)	Completion	31/12/03
Officer	K Kirby, Terrestrial Wildlife Team	Cost	£4,000

Description

To assess, via field survey, evidence across a range of ancient woods for effects from spray drift on marginal woodland vegetation.

Heartwoods project

Contractor	Heartwoods Ltd	Completion	31/03/08
Officer	M July, Herefordshire and Worcestershire Team	Cost	£10,500

Description

The second stage of the Marches Woodland Initiative, to be carried out in Worcestershire. Through advice about management of Ancient Semi-natural Woodland (ASNW) and information about marketing and diversification, the aim is to establish sustainable woodland management.

Advice to fishery owners

Contractor	Wild Trout Society	Completion	30/09/03
Officer	Gavin Measures, Terrestrial Wildlife Team	Cost	£2,000

Description

To promote tailored advice to managers and owners of chalk river habitats on best practice for fisheries, river channel and riparian zone management.

Review of cereal field margins

Contractor	Writtle College	Completion	31/03/04
Officer	Gavin Measures, Terrestrial Wildlife Team	Cost	£4,500

Description

To establish whether the margins set up using Countryside Stewardship Scheme agreements are meeting the objectives and targets of the Habitat Action Plan (HAP) for cereal field margins.

Wooded Heath study

Contractor	Weald Heathland Initiative	Completion	31/03/04
Officer	L Hutchby, Sussex and Surrey Team	Cost	£2,000

Description

To broaden the understanding of the wooded heath habitat, reappraise its biodiversity, landscape and recreational value, and to recommend a more integrated approach to its management.

Peatlands for People Project - peatland restoration report, Solway and Duddon Mosses cSAC, Cumbria

Contractor	Symonds	Completion	31/03/04
Officer	W Williams, Cumbria Team	Cost	£15,000

Description

To produce a report on the development of approaches and techniques for the restoration of the Solway and Duddon Mosses cSAC, Cumbria.

Ashdown Forest grazing action plan

Contractor	Conservators of Ashdown Forest	Completion	28/02/04
Officer	L Hutchby, Sussex and Surrey Team	Cost	£4,000

Description

To investigate the options by which extensive grazing of Ashdown Forest might be introduced. Production of an action plan for putting this in place.

2.7 Hydrology

Investigations of water quality problems affecting the Ouse Washes

Contractor	Black & Veatch	Completion	31/05/03
Officer	J Graham, Bedfordshire and Cambridgeshire Team	Cost	£2,500

Description

The current failure of the Ouse Washes Special Protection Area SPA/cSAC to meet its conservation objectives relates to external factors of water quality and quantity. The aim of the study is to investigate solutions to the water quantity problems affecting the conservation interests of the site.

Guidance on SSSI fen and bog boundaries

Contractor	Symonds Group	Completion	21/02/04
Officer	R Meade, Environmental Impacts Team	Cost	£10,000

Description

To provide guidance on how to identify hydrological buffer zones around lowland raised bogs designated or proposed as SSSI. This is important in placing boundaries and defining the necessary extent of management agreements and agri-environment schemes. A partnership project with CCW, SNH and DoENI.

Peatlands for People Project - access and restoration specifications

Contractor	Humphries Rowell, Ewan Associates, ENVIROS, Symonds	Completion	31/03/04
Officer	W Williams, Cumbria Team	Cost	£50,000

Description

To undertake geological, hydrological and topographical investigations to produce specifications for the restoration, interpretation and access to raised mires, in both the Solway and Duddon areas of Cumbria.

Installation of specialised water level recording equipment at Bolton Fell Moss SSSI and Walton Moss SSSI, Cumbria

Contractor	To be decided	Completion	28/02/06
Officer	I Soane, Cumbria Team	Cost	£22,000

Description

To install and collect data from specialised water level recording equipment within line transects of dipwells at selected sites on Bolton Fell Moss SSSI and Walton Moss SSSI, Cumbria. At Bolton Fell Moss the objective is to draw conclusions about the effect of peat extraction and ditch management on water levels. At Walton Moss the objective is to compare the seasonal variations in the water profile across the "unmodified dome" with variations across the "modified dome" and at the edge of the site.

Hydrological survey of Stolford-Stert Peninsula, Bridgewater Bay, Somerset

Contractor	To be decided	Completion	31/10/03
Officer	A King, Somerset and Gloucestershire Team	Cost	£4,200

Description

To undertake a summer time survey of the surface hydrology on the Stolford-Stert Peninsula, Somerset to establish hydrological flow regimes and salinity gradients across the area.

Hydrological advice contract

Contractor	S Bennett and British Geological Survey	Completion	31/03/06
Officer	J Schutten, Environmental Impacts Team	Cost	£10,000

Description

To provide the senior hydro-ecologist and conservation officers in the area teams with technical advice and guidance on casework.

Wetland Framework Development

Contractor	Department of Animal and Plant Sciences, University of Sheffield	Completion	31/07/04
Officer	R Meade, Environmental Impacts Team	Cost	£15,000

Description

The Wetland Framework is the most up-to-date analysis of how the hydrology of different wetland types functions through this project. It is now being extended from types represented in East Anglia to Hampshire/Dorset/Surrey, the West Midlands, Cumbria and Wales. A partnership project with CCW and EA.

2.8 Impact studies

Indicators of sustainable fisheries

Contractor	IEEP	Completion	31/03/04
Officer	S Gabrynowicz, Maritime Team	Cost	£10,000

Description

To develop indicators for monitoring environmental effects of fisheries policy, including effects of by catch and physical damage to habitats and species.

Effects of reductions in organic and nutrient loading on bird populations in estuaries and coastal waters of England and Wales : Phase 2

Contractor	The British Trust for Ornithology and HR Wallingford	Completion	31/08/03
Officer	M Coyle, Environmental Impacts Team	Cost	£22,000

Description

This work constitutes the second phase of a study investigating the impacts on waterbirds using estuaries and other coastal sites of the EC's Urban Waste Water Treatment Directive (UWWTD) and Bathing Water Directive (BWD), which have aimed to improve the levels of treatments to waste water discharges by reducing organic matter and nutrient levels.

Integrated Pollution Prevention Control (IPPC) Call-off contract

Contractor	NERC	Completion	30/03/04
Officer	M Coyle, Environmental Impacts Team	Cost	£15,000

Description

To provide additional specialist advice on water quality and air pollution impacts from industrial sectors applying for a permit under the Pollution Prevention and Control (PPC) Regulations 2000.

Literature review on impact of burning in the uplands of England

Contractor	Ecological Solutions	Completion	31/08/03
Officer	M Rebane, Terrestrial Wildlife Team	Cost	£2,500

Description

A review of the impacts on moorland biodiversity, soil and hydrology, due to heather and grassland burning in the English uplands.

No-Take Zones in South West England

Contractor	Cornish Fish Producers Organisation	Completion	31/12/06
Officer	R Covey, Cornwall & Isles of Scilly Team	Cost	£20,000

Description

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 by contributing towards a project officer post.

Natural fish carrying capacity of river SACs and impacts of stocking on SAC features of interest

Contractor	EA	Completion	31/03/05
Officer	D Fraser & J Smith, Environmental Impacts Team	Cost	£5,000

Description

To develop understanding of the impacts of fish stocking activities on naturally occurring riverine fauna by establishing the natural carrying capacities of adult trout in English river of different types. Also by establishing densities of stocked trout which adversely impact on the viability of fish species and cray fish for which Special Areas of Conservation are established in the UK.

Effects of foot and mouth on Barn owls

Contractor	British Trust for Ornithology	Completion	31/03/05
Officer	I Carter, Terrestrial Wildlife Team	Cost	£20,000

Description

To determine whether foot and mouth disease, and the resulting control and management measures imposed, have affected Barn owl numbers or productivity.

Review of the damage to protected fish stocks by water abstraction intakes

Contractor	To be decided	Completion	31/03/04
Officer	J McNish, Humber to Pennines Team	Cost	£5,000

Description

To review physical and behavioural techniques for preventing killing of fish in water abstraction intakes, in freshwaters, estuaries and coastal waters. The project is being run jointly with the Environment Agency, and will update a previous review by giving more consideration to fish species protected under conservation legislation.

Lundy No Take Zone monitoring

Contractor	MER Consultants	Completion	31/03/04
Officer	K Bull, Maritime Team	Cost	£25,000

Description

To develop and implement a monitoring programme for the Lundy No Take Zone, and assess the conservation effectiveness of this area with closed fisheries compared to areas adjacent to and outwith the site.

Fen condition assessment

Contractor	To be decided	Completion	30/09/03
Officer	R Meade, Environmental Impacts Team	Cost	£5,000

Description

A review of fen condition assessment data compiled for the English Nature Site Information System (ENSIS); followed by advice on how categorisation could be improved to highlight contemporary impacts, and guidance on how to implement the advice consistently.

Research into the impacts of gull egg collection

Contractor	M Hudson, Centre for Environmental Sciences, Southampton University	Completion	31/07/06
Officer	B Lord, Hampshire and Isle of Wight Team	Cost	£5,000

Description

To gather data over three years to evaluate whether collection of Black headed gull eggs has an effect upon the breeding success of Black headed gull and associated breeding bird species.

EU Marine Site (EMS) management : site characterisation of selected EMSs

Contractor	To be decided	Completion	31/03/04
Officer	M Coyle, Environmental Impacts Team	Cost	£5,000

Description

To characterise European Marine Sites (EMSs) in terms of water and sediment quality, and identify areas where anthropogenic activity could be affecting habitats and species for which the sites were designated.

Diglis Weir, River Severn, shad *Alosa* spp, bypass scoping study

Contractor	To be decided	Completion	31/03/04
Officer	D Heaver, Herefordshire and Worcestershire Team	Cost	£5,000

Description

The national plan for both shad species *Alosa* spp, strongly focuses on restoration of historical populations within their former range, particularly opening up their former migration routes where practicable. Without some basic assessment of the costs of making the Diglis Weir on the River Severn passable, this part of the plan is unlikely to be realised.

Solway Firth European Marine Site bird disturbance study

Contractor	R Armstrong, Environmental Management Services	Completion	31/07/03
Officer	M Young, Cumbria Team	Cost	£7,100

Description

To identify and map sources of disturbance to birds in the Solway Firth European Marine Site, including the frequency and type of the disturbance sources, and whether there is likely to be a significant effect upon bird populations from disturbance. To suggest measures that can be employed to prevent disturbance.

Lower Derwent project

Contractor	Various	Completion	31/03/04
Officer	S Woolven, North and East Yorkshire Team	Cost	£35,000

Description

A joint project with the Environment Agency, Yorkshire Water and three Internal Drainage Boards (IDBs). An investigation of the ecology of the Lower Derwent Valley, Yorkshire in order to develop sustainable management options.

Yar Estuary, Solent European Marine Site dredging study

Contractor	ABPMER	Completion	31/05/03
Officer	C Lambert, Hampshire and Isle of Wight Team	Cost	£2,000

Description

To assess the impacts of maintenance dredging on the Yar Estuary, part of the Solent European Marine Site, and advise on beneficial use of dredging.

Repeat monitoring of Pixey and Yarnton Meads SSSI, Oxfordshire

Contractor	Ecological Planning and Research	Completion	30/09/04
Officer	H Lancaster, Thames and Chilterns Team	Cost	£3,872

Description

From 1988 to 1993 annual monitoring of the plant communities on Pixey and Yarnton SSSI, Oxfordshire was carried out as part of a programme of monitoring in connection with neighbouring gravel extraction. During 2003 and 2004 this monitoring will be repeated to help ascertain if any changes have taken place within the sward as a result of these works and the restoration of the gravel pits.

The effects of human activity on turnstones and other wading birds in the Thanet Coast and Sandwich Bay SPA

Contractor	K Webb	Completion	31/12/03
Officer	S Peckham, Kent Team	Cost	£12,000

Description

A three year study looking at what turnstones require in an over-wintering site, effects of human activity on turnstones and other winter waders, and the measures needed to protect them.

Assessing the threat to Natura 2000 sites from point sources of atmospheric ammonia

Contractor	To be decided	Completion	31/03/05
Officer	C Bidston, Environmental Impacts Team	Cost	£5,000

Description

To assess and develop monitoring techniques in order to develop guidance on reliable cost-effective monitoring of ammonia emissions from intensive livestock units and to use passive and continuous monitoring to map spatial and temporal patterns of deposition of ammonia in the vicinity of an intensive livestock unit.

Basin fens study

Contractor	To be decided	Completion	31/12/03
Officer	R Meade, Environmental Impacts Team	Cost	£10,000

Description

A study to provide an overview of the scale of nutrient enrichment of basin fens and an evaluation of the measures available to reduce such damage. It will include a check-list for use on sites not featured in this generic study.

Assessment of overgrazing in upland woods

Contractor	To be decided	Completion	31/03/05
Officer	K Kirby, Terrestrial Wildlife Team	Cost	£5,000

Description

To test guidelines for assessing overgrazing in upland woods. This is a joint project with Defra and the Forestry Commission.

Land use and flood management

Contractor	Posford Haskoning Ltd	Completion	31/03/04
Officer	K Kirby, Terrestrial Wildlife Team	Cost	£5,000

Description

An inter-agency project to assess the potential role of land-use policy changes in flood management and their integration with biodiversity and landscape objectives.

Planning and ancient woodland

Contractor	To be decided	Completion	31/03/05
Officer	K Kirby, Terrestrial Wildlife Team	Cost	£5,000

Description

Development of improved guidance to local authorities on ancient woods and planning developments.

Site characterisation of selected EMSs

Contractor	To be decided	Completion	31/03/04
Officer	M Coyle, Environmental Impacts Team	Cost	£5,000

Description

To characterise selected EMS in terms of current water quality and identify areas where conditions might result in effects on habitats and species for which the site was designated. Also to consider activities, permissions and sources which have, or are likely to have, a significant effect on the sites.

Local Authorities Handbook

Contractor	David Tyldesley & Associates	Completion	31/01/05
Officer	C Simms, Environmental Impacts Team	Cost	£4,000

Description

Preparation of a handbook to provide basic and up to date information to Conservation Officers on the role of Local Authorities and the Town and Country Planning System in nature conservation.

Contribution of extractive industry to conservation

Contractor	To be decided	Completion	31/03/04
Officer	T Cosgrove, Environmental Impacts Team	Cost	£3,000

Description

A further contribution to the Minerals and Nature Conservation Forum project 'Measuring the Minerals Industry's contribution to Biodiversity'.

Transport casework and policy advice contract

Contractor	TRL Ltd	Completion	31/03/04
Officer	D Markham, Environmental Impacts Team	Cost	£14,000

Description

A call-off contract to provide specialist advice to English Nature on a range of transport plans and projects.

Monitoring the effects of the Lundy Island 'No Take Zone'

Contractor	Consortium	Completion	31/05/06
Officer	C Davis, Devon Team	Cost	£50,000

Description

Development and implementation of a monitoring programme to investigate the effects of the UK's first 'No-Take Zone'. This will be conducted in two phases. The first phase in year one will be the design, development and trial, years two and three will be implementation and ongoing data analysis.

Review of multi-modal studies

Contractor	To be decided	Completion	31/03/04
Officer	D Markham, Environmental Impacts Team	Cost	£3,000

Description

To review studies into the interaction between forms of transport commissioned by government (i.e. multi-modal transport studies). In particular to assess the extent to which biodiversity has been taken into account and to draw out lessons about the appraisal process.

2.9 Invasive exotic species

Bullfrog eradication project

Contractor	Froglife	Completion	31/12/03
Officer	B Banks, Kent Team	Cost	£2,000

Description

Monitoring the effectiveness of continued eradication of specimens of the North American bullfrog in Kent and East Sussex.

Biological control of Japanese knotweed

Contractor	Cornwall College	Completion	30/04/05
Officer	C Williams, Cornwall & Isles of Scilly Team	Cost	£2,000

Description

To establish the viability of using the grass *Miscanthus* or other fast growing grasses as a biological control of Japanese knotweed, and establish the mechanisms by which this control takes place.

Control of invasive aquatic plants

Contractor	To be decided	Completion	31/03/04
Officer	S Clarke, Environmental Impacts Team	Cost	£10,000

Description

Call-off advice contract for local teams to provide advice on the control or eradication of invasive aquatic plant species. It includes telephone and email advice, and site visits to advise on feasibility of control.

Control of African clawed frog *Xenopus laevis*

Contractor	Prof R Tinsley, University of Bristol	Completion	31/03/04
Officer	J Foster, Terrestrial Wildlife Team	Cost	£8,000

Description

To eradicate an introduced population of the African clawed frog *Xenopus laevis*, and to evaluate the effectiveness of control methods. To assess the threats posed by this species through diet, demographic and pathogen analysis.

2.10 Landscape ecology and restoration

Grassland seed project

Contractor	Suffolk Wildlife Trust	Completion	31/03/04
Officer	A Collins, Suffolk Team	Cost	£5,000

Description

To compare the effectiveness of different types of grassland creation using seeds taken from unimproved grasslands, and to run a workshop to inform landowners and managers.

Action strategy for the River Leam

Contractor	Warwickshire FWAG	Completion	31/03/04
Officer	A Irving, North Mercia Team	Cost	£2,000

Description

Preparation of an action strategy to reduce habitat fragmentation and increase biodiversity within the River Leam catchment.

Longstones (Area Based Initiative) project

Contractor	Shropshire Wildlife Trust	Completion	31/03/04
Officer	T Wall, North Mercia Team	Cost	£5,000

Description

Preparation of an Area Based Initiative between the Long Mynd and the Stiperstones, to focus support and action for the conservation and enhancement on key habitats in the Shropshire Hills.

Peatlands for People Project - scrub and woodland assessment

Contractor	CPM Environmental Planning & Design	Completion	31/03/04
Officer	W Williams, Cumbria Team	Cost	£6,000

Description

To survey the scrub and woodland on the Solway Mosses cSAC and adjacent land and provide recommendations for reducing the woodland and scrub cover from the mosses in a way that takes into account access and landscape considerations, together with the creation of new wet woodland.

Limestone Country Project - Assessment of the impact on biodiversity of traditional cattle grazing

Contractor	University of Newcastle	Completion	31/12/06
Officer	P Evans, North and East Yorkshire Team	Cost	£25,000

Description

The Limestone Country LIFE Project aims to bring about a return to mixed farming with native upland cattle breeds on the Craven Limestone Complex and Ingleborough Complex cSAC. The research aims to assess the impact of these new cattle grazing regimes on the status of a range of semi-natural upland habitats and species populations.

Advice on river restoration

Contractor	River Restoration Centre	Completion	31/12/06
Officer	D Withrington, Environmental Impacts Team	Cost	£10,000

Description

Provision of advice and technical specifications for restoring rivers and floodplains. Events and publicity to promote and disseminate best practice on river restoration.

Mass movement relating to landslips at Axmouth to Lyme Regis Undercliff NNR

Contractor	P Grainger	Completion	31/03/09
Officer	A Knott, Devon Team	Cost	£1,598

Description

To record and report on the most active landslips and the earth movement connected with these, using photographs and geological and geomorphological knowledge.

The South Downs Lifescape Vision Mapping project

Contractor	University of Brighton, Biogeography and Ecology Research Group (BERG)	Completion	31/03/04
Officer	R Matthews, Sussex and Surrey Team	Cost	£13,000

Description

As part of the South Downs Lifescapes Pilot Project, the Vision Mapping Project is a mechanism for helping to visualise and identify areas of opportunity for enhancing the network of key habitats across this area.

Chalk grassland creation feasibility study

Contractor	FWAG	Completion	31/07/03
Officer	D Radley, Bedfordshire and Cambridgeshire Team	Cost	£3,055

Description

The study is in three phases: phase one identifies the existing chalk grassland resource and biodiversity hotspots in South Cambridgeshire, South Beds, North Herts and North Essex; phase two identifies current barriers and opportunities for conservation management including existing expertise, technology, livestock and graziers; and phase three prepares two proposals for chalk grassland creation.

Yorkshire and the Humber - trialling environmental strategies and targetting in Natural Areas

Contractor	To be decided	Completion	31/03/05
Officer	P Welsh, North and East Yorkshire Team	Cost	£25,000

Description

To make information about environmental objectives accessible to farmers and other land managers. To involve farmers and others in the development of objectives and strategies and in overseeing and encouraging delivery.

River restoration: catchment scale guidance

Contractor	To be decided	Completion	31/01/04
Officer	D Withrington, Environmental Impacts Team	Cost	£5,000

Description

Development of options for a demonstration project on integrated catchment management, in partnership with Defra, EA and the Forestry Commission.

Shropshire Biodiversity Action Plan

Contractor	Shropshire County Council	Completion	31/03/04
Officer	E Steer, North Mercia Team	Cost	£4,000

Description

A report upon BAP projects in Shropshire which form part of the Local Biodiversity Action Plan.

BAP wetland habitats

Contractor	To be decided	Completion	28/02/04
Officer	R Meade, Environmental Impacts Team	Cost	£10,000

Description

There is an increasing trend to look at natural habitats and species as part of the landscape. This is particularly appropriate for wetlands identified as priority habitats in BAP, as water on which they depend is often managed at a regional scale. This project will set out and evaluate potential parameters for developing a vision for wetlands in England, with reference to worked examples.

Staffordshire Biodiversity Action Plan

Contractor	To be decided	Completion	31/03/04
Officer	G Walker, North Mercia Team	Cost	£3,000

Description

To develop the Staffordshire Local Biodiversity Action Plan so as to conserve the most important habitats and species in the area.

Central rivers project study

Contractor	Multi Agency/Authority Partnership	Completion	31/03/04
Officer	J Blowers, North Mercia Team	Cost	£2,000

Description

To create a habitat network on the terraces along the Rivers Trent and Tame between Burton on Trent and Tamworth in south east Staffordshire, targeting key BAP habitats and species.

Meres and Mosses project

Contractor	FWAG	Completion	31/03/04
Officer	C Walker, North Mercia Team	Cost	£14,000

Description

Catchment-based project to get landowners and farmers into Countryside Stewardship to achieve extensification of catchments and reduce diffuse pollution.

Washland report : Phase 2

Contractor	CU Silsoe	Completion	31/10/03
Officer	A Giacomelli, Environmental Impacts Team	Cost	£8,421

Description

To provide written guidance for flood defence managers and policy makers on the situations where washlands can be beneficial to both flood management and biodiversity. To hold a workshop to promote the concept.

Bird-habitat association models

Contractor	RSPB	Completion	31/03/04
Officer	P Grice, Terrestrial Wildlife Team	Cost	£10,000

Description

Use of bird and habitat data from the re-survey of farms in Arable Stewardship Schemes to refine existing, and develop new, bird-habitat models for farmland birds. These will assist with predicting the impacts of land management measures and agriculture policy change on farmland bird populations.

Warwickshire Local Biodiversity Action Plan

Contractor	Warwickshire Wildlife Trust	Completion	31/03/04
Officer	A Irving, North Mercia Team	Cost	£3,000

Description

To develop the Warwickshire Local Biodiversity Action Plan so as to conserve the most important habitats and species in the area.

2.11 Natural Heritage Information Systems

Suffolk Biological Records Centre

Contractor	Suffolk Biological Records Centre	Completion	31/03/04
Officer	R Rafe, Suffolk Team	Cost	£28,000

Description

Support to the development and operation of Suffolk Biological Records Centre, specifically GIS mapping and modelling of habitat extent and potential. Management of information, and requests for information, on English Nature's behalf.

Service Level Agreement with Environmental Records Centre for Cornwall and Isles of Scilly

Contractor	Environmental Records Centre for Cornwall & Isles of Scilly	Completion	30/06/04
Officer	J Clitherow, Cornwall & Isles of Scilly Team	Cost	£10,000

Description

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.

Upland habitat inventory

Contractor	Exegesis Spatial Data Manager	Completion	31/12/03
Officer	A Crowle, Terrestrial Wildlife Team	Cost	£82,000

Description

To be able to report on the extent of upland priority habitats, including heath, blanket bog and calcareous grassland.

Minerals and nature conservation forum action plan

Contractor	To be decided	Completion	31/03/04
Officer	T Cosgrove, Environmental Impacts Team	Cost	£7,000

Description

Contribution to the forum website and the project 'Measuring the Minerals Industry's contribution to Biodiversity' which will contribute to the delivery of the Minerals and Nature Conservation Forum (MNCF) action of identifying the current impact of the industry on wildlife. This project will quantify the net biodiversity gains or losses from quarrying, past and future, and determine whether the activity is sustainable in wildlife terms within the East Midlands Region.

Surrey Biological Record Centre development

Contractor	Surrey Biological Record Centre	Completion	31/03/04
Officer	M Knight, Sussex and Surrey Team	Cost	£10,000

Description

This contract aims to further the development of the Surrey local record centre through improvements in data management including the transfer of data onto Recorder 2002. These improvements will enhance access to the centre's data holdings and achieve compliance with National Biodiversity Network (NBN) data management standards.

Integrated Coastal Zone Management : ICZMap feasibility study

Contractor	North and East Yorkshire Ecological Data Centre	Completion	31/10/03
Officer	L Jones-Walters, North and East Yorkshire Team	Cost	£3,000

Description

To establish an Integrated Coastal Zone Management (ICZM) GIS for the East Riding of Yorkshire coastal zone, with ICZMap as the base mapping. To integrate a pilot selection of terrestrial and maritime data sets. To evaluate output as a tool for decision support and monitoring of the ICZM plan.

Bird survey data on Map-Information System

Contractor	To be decided	Completion	31/03/04
Officer	C McCarty, Northumbria Team	Cost	£5,000

Description

To put bird survey data already acquired, some dating to the 1980s, onto a 'user friendly' map-based system. The information is required to enable local team staff to take a view on disturbance issues relating to populations of ground nesting birds.

Worcestershire Biological Records Centre

Contractor	Worcestershire Records Centre	Completion	31/03/04
Officer	D Heaver, Herefordshire and Worcestershire	Cost	£10,000

Description

To support the development of the Worcestershire Biological Records Centre, under a Service Level Agreement.

South Downs Lifescapes Joint Data Management

Contractor	Sussex Biodiversity Record Centre	Completion	31/03/04
Officer	M Knight, Sussex and Surrey Team	Cost	£6,000

Description

To determine what biodiversity data is held by record centres for the South Downs Lifescapes pilot area and the format in which it is stored.

Warwickshire Local Records Centre

Contractor	Warwickshire Museum Service	Completion	31/03/04
Officer	A Irving, North Mercia Team	Cost	£3,000

Description

To progress the development of a Warwickshire Local Records Centre.

Staffordshire Local Records Centre

Contractor	Staffordshire Wildlife Trust	Completion	31/03/04
Officer	J Blowers, North Mercia Team	Cost	£4,000

Description

To support the Local Record Centre Staffordshire, through a Service Level Agreement. To digitise English Nature's data and make it available to others. To supply wildlife records to English Nature.

Local Records Centre for Birmingham and Black Country

Contractor	Wildlife Trust for Birmingham and The Black Country	Completion	31/03/04
Officer	H Griffiths, North Mercia Team	Cost	£3,000

Description

To support the Ecological Database for the Black Country and Birmingham (Eco-Record) through a Service Level Agreement. To digitise English Nature's data and make it available to others. To supply wildlife records to English Nature.

Herefordshire Biological Records Centre

Contractor	Herefordshire Council	Completion	31/03/04
Officer	D Heaver, Herefordshire and Worcestershire Team	Cost	£10,000

Description

To support the development of the Herefordshire Record Centre, under a Service Level Agreement.

Development of Wood-pasture information system

Contractor	To be decided	Completion	31/03/05
Officer	R Isted, Terrestrial Wildlife Team	Cost	£15,000

Description

A wood-pasture information system has been developed and the current year's work will involve populating it with various national data-sets.

Peatering out plantfinder

Contractor	Dove Associates	Completion	31/07/03
Officer	R Meade, Environmental Impacts Team	Cost	£6,842

Description

To provide a reference source about plants grown in peat-free or peat-reduced growing media in England.

Database of 'Fungi of Conservation Concern'

Contractor	RBG Kew	Completion	31/10/03
Officer	C Borges, Essex, Hertfordshire and London Team	Cost	£13,144

Description

Database development to facilitate greater access to the collections of fungi held in the herbarium at the Royal Botanic Gardens Kew.

Agri-environment targetting and feasibility

Contractor	North and East Yorkshire Ecological Data Centre	Completion	30/09/03
Officer	L Jones-Walters, North and East Yorkshire Team	Cost	£2,400

Description

To assemble data sets to facilitate targetting of agri-environment funding in North and East Yorkshire. To propose a GIS approach to an agri-environment decision making framework.

Development options FenBASE and BogBASE

Contractor	To be decided	Completion	31/03/04
Officer	R Meade, Environmental Impacts Team	Cost	£10,000

Description

The FenBASE and BogBASE databases have been developed within Microsoft Access, but each dataset has different data fields. Options for merger and future development to allow transfer to GIS will be evaluated and prioritised.

Air Pollution Information System (APIS)

Contractor	Centre for Ecology and Hydrology	Completion	31/03/04
Officer	M Harley, Environmental Impacts Team	Cost	£2,000

Description

To further develop the Air Pollution Information System (APIS) to provide conservation practitioners with air quality information by Web access.

Shropshire Local Records Centre

Contractor	Shropshire County Council	Completion	31/03/04
Officer	C Hogarth, North Mercia Team	Cost	£3,000

Description

To carry out a feasibility study for the creation of a Shropshire Local Records Centre.

2.12 Public Access

Recreational use of SSSIs

Contractor	Arkenford Ltd	Completion	30/06/03
Officer	G Bathe, Environmental Impacts Team	Cost	£10,000

Description

An assessment of the contribution that SSSIs make to public access, sport and recreation in England.

Quarr Abbey surveys

Contractor	Quarr Abbey Heritage Project	Completion	31/12/03
Officer	C Lambert, Hampshire and Isle of Wight Team	Cost	£1,500

Description

To assess the location and distribution of protected species at Quarr Abbey, in view of a project to enhance visitor access.

Access and Woodlarks

Contractor	University of East Anglia	Completion	31/01/04
Officer	A Brown, Terrestrial Wildlife Team	Cost	£10,000

Description

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.

Wigeon survey and observation in the Yorkshire Dales

Contractor	Yorkshire Dales National Park	Completion	31/08/03
Officer	D Slater, North and East Yorkshire Team	Cost	£1,000

Description

Nationally significant populations of Wigeon in the Yorkshire Dales may be susceptible to disturbance by boats and walkers, particularly with the introduction of a public right of access around upland lakes and reservoirs in the Yorkshire Dales. A baseline survey is to be carried out across twelve lakes in the Yorkshire Dales.

Impact of access on breeding birds

Contractor	RSPB	Completion	31/03/05
Officer	A Brown, Terrestrial Wildlife Team	Cost	£31,000

Description

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

Upland birds and access to the countryside

Contractor	Game Conservancy Trust	Completion	31/03/04
Officer	A Brown, Terrestrial Wildlife Team	Cost	£21,000

Description

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.

Social Value of Nature in the East Midlands

Contractor	OpenSpace	Completion	31/10/03
Officer	I Paterson, Eastern Area Team	Cost	£14,170

Description

To identify the values people place on local areas of green space in the East Midlands.

2.13 Remote Sensing and Telemetry

Compact Airborne Spectrographic Imagery (CASI) of the Solent European Marine Site

Contractor	Environment Agency	Completion	28/02/05
Officer	W McKenzie, Hampshire and Isle of Wight Team	Cost	£30,000

Description

Investigation of the use of Compact Airborne Spectrographic Imagery (CASI) for condition monitoring of the Solent European Marine Site.

Condition categories of bogs: remote sensing

Contractor	Geodata Unit, University of Southampton	Completion	21/02/04
Officer	R Meade, Environmental Impacts Team	Cost	£20,000

Description

Development of remote sensing methods to assess condition categories of lowland raised bog.

2.14 Risk Assessment

Flood defence standards and protected sites

Contractor	J Ash, Risk and Policy Analysis Ltd	Completion	31/03/04
Officer	T Collins and Z Masters, Bedfordshire and Cambridgeshire Team	Cost	£15,000

Description

To provide information to inform decisions and advice given on the appropriate standards of flood defence for protected sites at the coast and on tidal rivers.

Biomarker workshops

Contractor	NERC	Completion	30/06/03
Officer	M Coyle, Environmental Impacts Team	Cost	£1,992

Description

To hold a workshop in order to determine the potential application of biomarkers in current and future monitoring programmes.

2.15 Site Survey

NVC survey of maritime cliff and slope within the Robin Hoods Bay cSAC

Contractor	To be decided	Completion	30/11/03
Officer	T Mallows, North and East Yorkshire Team	Cost	£10,000

Description

To survey the vegetation of maritime cliff and slope within the Robin Hoods Bay candidate Special Area of Conservation (cSAC) as part of national inventory of soft and hard cliff resources. The survey will also provide a baseline for future monitoring of the cSAC.

Thames Basin Heath pSPA NVC survey

Contractor	Ecological Planning and Research	Completion	31/03/04
Officer	R Hobbs, Sussex and Surrey Team	Cost	£10,000

Description

To produce NVC habitat maps for the three Surrey SSSIs which fall within the Thames Basin Heath pSPA, Horsell Common, Ockham and Wisley and Whitmore Common.

Veteran tree mapping at Windsor Forest Great Park SSSI

Contractor	Mosaic Mapping	Completion	30/11/03
Officer	S King, Thames and Chilterns Team	Cost	£4,000

Description

To map, using a Geographical Positioning System (GPS), digitally photograph and tag the dead wood habitat within Windsor Forest Great Park SSSI.

The Wash subtidal benthic monitoring programme

Contractor	ECOMARIS and Environment Agency	Completion	28/02/04
Officer	C Donnelly, Eastern Area Team	Cost	£20,000

Description

To obtain information on condition of the subtidal habitats of The Wash European Marine Site. To contribute to existing knowledge of natural change in these communities in the Wash and develop a programme for long-term monitoring so we can continue to develop knowledge of natural change in the most cost-effective and scientifically sound way.

Lichen survey of Ebernoe Common cSAC

Contractor	S Davey	Completion	31/03/04
Officer	L Hutchby, Sussex and Surrey Team	Cost	£3,300

Description

Survey of the lichens at Ebernoe Common cSAC, Sussex and advice on how to manage the lichen interest, alongside the bat interest for which the site is selected as cSAC.

NVC survey of Avon Valley SSSI and condition assessment

Contractor	Wessex Environmental Associates	Completion	31/03/04
Officer	C Chatters, Hampshire and Isle of Wight Team	Cost	£20,000

Description

Baseline NVC survey of entire Avon Valley SSSI (excluding Blashford Lakes), baseline ditch surveys and condition assessment of botanically rich areas.

Re-evaluation of Lugg Meadows SSSI

Contractor	Bio-Scan Limited	Completion	31/03/04
Officer	V Cooper, Herefordshire and Worcestershire Team	Cost	£3,000

Description

An analysis of existing quadrat and map data for Lugg Meadows (including part notified as SSSI), to determine the NVC types present and their distribution.

Vegetation and invertebrate survey of Overstrand Cliffs cSAC, Norfolk

Contractor	To be decided	Completion	31/03/04
Officer	P Lambley, Norfolk Team	Cost	£8,000

Description

To carry out a vegetation and invertebrate survey of Overstrand Cliffs cSAC, Norfolk.

Avon Gorge grassland survey

Contractor	Wessex Ecological Consultancy	Completion	30/09/03
Officer	S Lee, Somerset and Gloucestershire Team	Cost	£1,500

Description

To undertake a comprehensive NVC survey of the calcareous grasslands within Avon Gorge Woodland cSAC.

NVC survey of lowland SSSIs

Contractor	Bullens	Completion	31/12/03
Officer	B Davies, Humber to Pennines Team	Cost	£10,000

Description

To produce up to date NVC survey data for small lowland SSSIs in the Humber to Pennines area.

Moulton Marsh saline lagoon survey

Contractor	To be decided	Completion	31/03/04
Officer	C Donnelly, Eastern Area Team	Cost	£5,000

Description

A baseline survey of saline lagoons and Moulton Marsh which were not included in the national saline lagoon surveys by Smith and Laffoley 1992, and Downie 1996.

Phase 1 site characterisation of The Broads cSAC and Broadland SPA and Ramsar sites for the purposes of the Environment Agency (EA)/EN Review of Consents Projects

Contractor	Just Ecology/Exegis	Completion	31/07/03
Officer	H Dixon, Norfolk Team	Cost	£16,000

Description

To identify the location and extent of the habitats and species upon which designation of The Broads cSAC/Broadland SPA is based. This will not involve any new survey work but the gathering, collation, interpretation and presentation (in GIS format) of existing information.

Humber Estuary data review

Contractor	Institute of Estuarine and Coastal Studies, University of Hull	Completion	31/07/03
Officer	K Jennings, Humber to Pennines Team	Cost	£2,500

Description

To review the best available information on habitat and species of national and international importance on the Humber Estuary, under the auspices of the Humber Estuary Designations Project. The Review will be a major cornerstone of the current national and international designations review and any resulting proposals for changes to these.

NVC survey of Boscastle to Widemouth SSSI

Contractor	Spalding Associates	Completion	28/02/04
Officer	M Beard, Cornwall & Isles of Scilly Team	Cost	£22,433

Description

NVC Survey of Boscastle to Widemouth SSSI in order to inform a number of corporate objectives including SSSI condition assessment, SSSI management strategies, and BAP habitat inventories.

NVC survey of Porthtowan to St Agnes section of Godrevy SSSI

Contractor	Wessex Environmental Associates	Completion	31/03/04
Officer	B Tonkin, Cornwall & Isles of Scilly Team	Cost	£7,220

Description

NVC Survey of the coast between Portowan and St Agnes, in order to inform SSSI condition assessment, SSSI management strategies and BAP habitat inventories.

Monitoring sea grass *Zostera* in the Isles of Scilly European Marine Site

Contractor	K J Cook, Marine Consultancy and Training	Completion	31/03/04
Officer	R Covey, Cornwall & Isles of Scilly Team	Cost	£3,000

Description

The project involves sea grass *Zostera* monitoring in the Isles of Scilly EMS, and compilation of the results in a report.

Monitoring Berwickshire and North Northumberland Coast cSAC : Assessment of subtidal sea cave

Contractor	Contribution to SNH	Completion	30/12/03
Officer	K Bull, Maritime Team	Cost	£5,000

Description

To determine whether the desired condition of the internationally important sea caves is being achieved, as part of the overall Natura 2000 monitoring programme for the Berwickshire and North Northumberland Coast cSAC.

Poole Harbour prey availability for waders

Contractor	CEH and EMU	Completion	31/03/04
Officer	S Burton, Dorset Team	Cost	£6,984

Description

To study the availability of prey items for waders in Poole Harbour, Dorset.

Brampton Bryan SSSI veteran tree survey

Contractor	J Smith, Mosaic Mapping	Completion	31/03/04
Officer	P Baskeyfield, Herefordshire and Worcestershire Team	Cost	£2,500

Description

A survey to assess the presence, densities, condition and types of veteran trees, and map the relative significance of this resource within the Brampton Bryan SSSI.

NVC survey of Carricknath Point to Portbean Beach SSSI

Contractor	Wessex Environmental Associates	Completion	31/03/04
Officer	B Tonkin, Cornwall & Isles of Scilly Team	Cost	£2,513

Description

NVC Survey of Carricknath Point to Portbean Beach SSSI in order to inform an SSSI condition assessment, SSSI management strategies and BAP habitat inventories.

Phase 2 survey of semi-natural grassland SSSIs in Cambridgeshire

Contractor	S Lambert	Completion	31/01/04
Officer	T Barfield, Bedfordshire and Cambridgeshire Team	Cost	£4,572

Description

To describe, map and characterise the grassland, allied plant communities and associated rare vascular plants of a range of semi-natural grassland SSSIs in Cambridgeshire, along with recommendations for future management.

Croft Castle fungus survey

Contractor	National Trust	Completion	31/03/04
Officer	P Baskeyfield, Herefordshire and Worcestershire Team	Cost	£2,000

Description

To assess the importance for fungi of a potential SSSI.

Vegetation Survey of Skiddaw Group SSSI

Contractor	Rigby Jerram	Completion	31/10/03
Officer	I Slater, Cumbria Team	Cost	£8,128

Description

To carry out a National Vegetation Classification survey of Skiddaw Group SSSI which will complete a two year survey project covering the whole of the Lake District High Fells cSAC.

Hatchet Pond New Forest cSAC macrophyte survey

Contractor	C Newbold	Completion	31/12/03
Officer	S Clarke, Environmental Impacts Team	Cost	£3,330

Description

Survey of aquatic plants within Hatchet Pond, which forms part of the New Forest cSAC and contains several rare and local aquatic species.

Soft Cliff Inventory, Axmouth to Lyme Regis Undercliffs NNR

Contractor	Southwest Ecological Surveys	Completion	31/04/04
Officer	A Knott, Devon Team	Cost	£14,462

Description

To map and describe the mosaic of vegetation types on Axmouth to Lyme Regis Undercliffs NNR, with information gathering on selected invertebrate fauna.

Scotton & Laughton Ponds SSSI, Lincolnshire macrophyte survey

Contractor	To be decided	Completion	31/03/04
Officer	S Clarke, Environmental Impacts Team	Cost	£5,000

Description

Aquatic plant surveys at two lowland ponds designated as SSSI.

Teesmouth and Cleveland Coast European Marine Site: Rocky shore bird food availability study

Contractor	To be decided	Completion	31/12/03
Officer	M Quigley, Northumbria Team	Cost	£8,000

Description

To establish baseline information upon the availability of bird food resources within areas of rocky shore of the Teesmouth and Cleveland Coast European Marine Site.

Establishment of a monitoring protocol to assess the condition of Ross Links, part of the Berwickshire and North Northumberland Coast cSAC, and to monitor trends and changes in stock management

Contractor	T Dargie	Completion	31/12/03
Officer	S Coles, Northumbria Team	Cost	£12,000

Description

To give recommendations as to grazing regime and restoration techniques, to ensure favourable condition of Ross Links, part of the Berwickshire and North Northumberland Coast cSAC.

2.16 Socio Economics

Quality of Life Capital decision tool

Contractor	Countryside Agency	Completion	31/03/04
Officer	H Doran, Environmental Impacts Team	Cost	£5,000

Description

To promote and encourage the use of the Quality of Life Capital decision making tool, to achieve more sustainable outcomes for land management and development.

Biodiversity and community involvement

Contractor	To be decided	Completion	31/03/04
Officer	R Rafe, Suffolk Team	Cost	£5,000

Description

Good practice guidance on integration of biodiversity into Suffolk Community Strategies, and biodiversity elements of community (parish) plans and audits.

Fisheries policy advice

Contractor	S Lockwood & University of Hull (D Symes)	Completion	31/03/04
Officer	H Beadman, Maritime Team	Cost	£20,000

Description

To provide specialist advice on aspects of English Nature fisheries policy development (ie., Ecosystem Based Approach for fisheries) and specific scientific advice on casework or other elements of maritime fisheries work.

Fisheries economic study

Contractor	Nautilus Consultants	Completion	31/03/04
Officer	S Gabrynowicz, Maritime Team	Cost	£5,000

Description

To produce a 3-phase report on various capacity reduction options for more sustainable fisheries, outlining the nature conservation and environmental implications for each option.

River Wye Lifescapes

Contractor	Herefordshire Council	Completion	31/01/05
Officer	M Wilkinson, Herefordshire and Worcestershire Team	Cost	£20,000

Description

Lifescape project to prepare a zonal map. The project aims to link BAP habitat creation targets to conservation mechanisms and these will be presented to landowners and local communities.

England Biodiversity Strategy (EBS) and business

Contractor	To be decided	Completion	31/03/04
Officer	H Doran, Environmental Impacts Team	Cost	£4,000

Description

To support the Business and Biodiversity Implementation Group of the England Biodiversity Strategy (EBS). To provide guidance on how biodiversity can be assessed as a material issue, as part of Company Law Review Guidance.

Reviewing corporate biodiversity engagement

Contractor	Middlemarch Environmental Ltd	Completion	30/11/03
Officer	H Doran, Environmental Impacts Team	Cost	£3,666

Description

To find out which nature conservation organisations are working with the business community, the nature of the relationships and what biodiversity benefits are being delivered.

Water Framework Directive : Implementation

Contractor	Simmons & Simmons; other to be decided	Completion	31/03/04
Officer	D Withrington, Environmental Impacts Team	Cost	£15,000

Description

Provision of legal advice on regulations transposing the Water Framework Directive into UK law. Legal support for English Nature's role in implementation.

Biodiversity advice provision in Kent

Contractor	Kent Lifescapes and Land Use Consultants	Completion	30/06/03
Officer	R Cameron, Kent Team	Cost	£20,000

Description

To review the achievements and effectiveness of biodiversity advice provision in Kent. To provide options for improving biodiversity advisory services.

Social functions of nature

Contractor	To be decided	Completion	31/03/04
Officer	J Burney, Environmental Impacts Team	Cost	£5,000

Description

To undertake a habitat based study of the socio-economic functions of nature.

Socio economics of geology

Contractor	University of Wales, Aberystwyth	Completion	31/03/04
Officer	J Burney, Environmental Impacts Team	Cost	£15,225

Description

To explore the socio economic benefits of protecting our geological heritage through support of a PhD student.

Limestone Country Project - Assessment of changes in economic conditions following return to mixed farming systems utilising native upland cattle breeds

Contractor	Askham Bryan College	Completion	31/12/06
Officer	P Evans, North and East Yorkshire Team	Cost	£6,250

Description

The Limestone Country LIFE Project aims to bring about a return to mixed farming with native upland cattle breeds on the Craven Limestone Complex and Ingleborough Complex cSAC. The research aims to assess how well farms change from an essentially subsidy driven unprofitable sheep system (or from a currently mixed system utilising modern continental breeds) to a mixed system with native breeds which targets a premium market.

Water company customer consultation

Contractor	MVA	Completion	31/12/03
Officer	A Giacomelli, Environmental Impacts Team	Cost	£5,000

Description

Customer survey to get views on impacts of the 2004 Periodic Review of water company charges on bills, and to find out attitudes towards the water environment.

Sub-regional governance project

Contractor	To be decided	Completion	31/03/04
Officer	R Wilson, North and East Yorkshire Team	Cost	£4,000

Description

To establish how statutory bodies can effectively influence and engage with sub-regional governance processes.

2.17 Species Recovery Projects

Possibilities for re-introduction of extinct butterfly species on Shapwick Heath NNR, Somerset

Contractor	A Borsje, Butterfly Conservation	Completion	30/11/03
Officer	A King, Somerset and Gloucestershire Team	Cost	£4,500

Description

To investigate and advise on the re-establishment potential of extinct butterfly species on Shapwick Heath NNR, through assessment of habitat management and ecological (metapopulation) requirements of selected species. The two species selected for further investigation are marsh fritillary and swallowtail.

Shad *Alosa* sp. swimming speed project

Contractor	Environment Agency	Completion	31/03/04
Officer	D Heaver, Herefordshire and Worcestershire Team	Cost	£6,000

Description

To undertake a literature review of the available information on the swimming speeds, and migrations of the twaite shad *Alosa alosa*. To carry out a series of experiments that will determine the affect on shad species of a range of temperatures at various life stages.

Devon and Cornwall bat advice contract

Contractor	Cresswell Associates	Completion	31/03/04
Officer	J Squirrell, Cornwall & Isles of Scilly Team	Cost	£20,000

Description

Complete advisory service on all bat cases referred by English Nature.

Shad genetics projects

Contractor	Environment Agency	Completion	31/01/04
Officer	D Heaver, Herefordshire and Worcestershire Team	Cost	£1,500

Description

To describe the population genetic structure of British shad *Alosa spp.* populations. To characterise the population genetic structure of British shad populations, with particular reference to the degree of population subdivision. To determine whether shad populations in Britain consist exclusively of *A. fallax* or whether *A. alosa* or hybrids between the two species are present.

Autecological study of the lesser silver water beetle *Hydrochara caraboides*

Contractor	D Boyce	Completion	31/01/04
Officer	M Jones, Somerset and Gloucestershire Team	Cost	£3,900

Description

To survey and carry out an autecological study of the lesser silver water beetle *Hydrochara caraboides* within the Brue Valley.

Herefordshire BAP Great crested newt ponds survey of River Wye floodplain

Contractor	Herefordshire Amphibian and Reptile Group	Completion	31/03/04
Officer	L Solly, Herefordshire and Worcestershire Team	Cost	£2,500

Description

Great crested newt ponds survey of the River Wye Floodplain.

Breckland stone curlew project

Contractor	RSPB	Completion	31/03/04
Officer	S Anthony, Suffolk Team	Cost	£35,000

Description

Stone curlew population monitoring, providing advice to landowners and carrying out the necessary species management and protection work. The overall objective is to maintain and recover the stone curlew population in East Anglia, and to maintain Breckland Farmland SSSI/Breckland pSPA in favourable condition for stone curlew.

Ebernoe Common cSAC bat monitoring

Contractor	Dr D Hill, University of Sussex	Completion	31/03/04
Officer	L Hutchby, Sussex and Surrey Team	Cost	£5,000

Description

To carry out monitoring of the roost and habitat use of Barbastelle and Bechsteins bats at Ebernoe Common cSAC.

Determining the status of sharp-leaved pondweed *Potamogeton acutifolius* in England

Contractor	To be decided	Completion	31/12/03
Officer	S Clarke, Environmental Impacts Team	Cost	£7,000

Description

To undertake the survey and monitoring of populations of sharp-leaved pondweed *Potamogeton acutifolius* in England.

Cornwall chough project

Contractor	RSPB	Completion	31/03/06
Officer	I Carter, Terrestrial Wildlife Team	Cost	£15,000

Description

Monitoring and awareness raising project to improve our understanding of chough habitat requirements in Cornwall.

Fenland rare plants autecology

Contractor	T Pankhurst	Completion	31/12/03
Officer	J Sutcliffe, Terrestrial Wildlife Team	Cost	£8,040

Description

To monitor ribbon-leaved water plantain *Alisma gramineum*, fen violet *Viola persicifolia* and fen ragwort *Senecio paludosus* and complete on-going autecological studies.

DNA studies

Contractor	Dr M Fay, Kew Gardens	Completion	31/03/05
Officer	I Taylor, Terrestrial Wildlife Team	Cost	£5,000

Description

To undertake DNA studies of a range of rare plant species to inform future conservation strategies.

Orchid micropropagation

Contractor	M Ramsay, Kew Gardens	Completion	31/03/05
Officer	I Taylor, Terrestrial Wildlife Team	Cost	£5,000

Description

To undertake micropropagation work on selected rare and endangered orchid species.

Spotted flycatcher pilot study

Contractor	RSPB	Completion	31/03/04
Officer	P Grice, Terrestrial Wildlife Team	Cost	£10,000

Description

To trial techniques in order to establish the feasibility of a multi-year, multi-site, autecological study of the spotted flycatcher from 2004/05.

Cirl bunting 2003 survey

Contractor	RSPB	Completion	31/03/04
Officer	P Grice, Terrestrial Wildlife Team	Cost	£10,600

Description

A five-yearly survey of breeding Cirl buntings which will establish whether the UK BAP 2003 target of 550 pairs has been achieved.

Tree sparrow recovery options

Contractor	RSPB	Completion	31/03/04
Officer	P Grice, Terrestrial Wildlife Team	Cost	£10,000

Description

To understand better the recent large decline in the tree sparrow, the effects of providing supplementary nest sites and food as a management measure, and the measures required in a recovery strategy for the species.

Dormouse

Contractor	M Woods (Somerset Mammal Group)	Completion	31/03/04
Officer	D Appleton, Devon Team	Cost	£1,500

Description

To gain a better understanding of dormouse habitat use in South West England, particularly in 'non-traditional' sites, and to determine relative abundance of different habitats within the region. To produce informative succinct guidelines for use by planners and developers, when considering dormice during development planning.

Radio-tracking studies to identify foraging areas and commuting routes used by greater horseshoe bats around pSSSI, SSSI and cSAC roosts in southwest England

Contractor		Completion	31/03/04
Officer	J Diamond & Devon Team D Willis, Somerset and Gloucestershire Team	Cost	£15,000

Description

To identify foraging areas used by pregnant and lactating females, greater horseshoe bats and/or by juvenile bats; to identify linear features of the landscape used as commuting routes between roosts and foraging areas; to identify temporary night time feeding roosts used by the bats.

Status of BAP listed Rosser's sac-spider, *Clubiona rosserae*

Contractor	British Arachnological Society	Completion	31/10/03
Officer	R Key, Terrestrial Wildlife Team	Cost	£1,500

Description

Baseline survey of Rosser's sac-spider *Clubiona rosserae* to determine its conservation status in Fenland.

Ascomycete fungus *Hypocreps rhododendri*

Contractor	To be decided	Completion	31/03/04
Officer	C Borges, Essex, Hertfordshire and London Team	Cost	£2,000

Description

Commissioning of a species report on the status of the ascomycete fungus *Hypocreps rhododendri* and recommendations for future conservation action.

Fungus *Armillaria ectypa*, BAP species report

Contractor	To be decided	Completion	31/03/04
Officer	C Borges, Essex, Hertfordshire and London Team	Cost	£2,000

Description

Commissioning of a species report on the status of the fungus *Armillaria ectypa* and recommendations for future conservation action under the UK BAP.

Conservation of marsh, Montagu's and hen Harriers around The Wash

Contractor	RSPB	Completion	31/03/04
Officer	I Carter, Terrestrial Wildlife Team	Cost	£5,000

Description

Monitoring breeding marsh harriers, Montagu's harriers and, when they occur, hen harriers around The Wash SPA, in order to enable more effective conservation measures to be implemented.

Metalliferous bryophytes in Cornwall

Contractor	To be decided	Completion	28/02/05
Officer	B Tonkin, Cornwall & Isles of Scilly Team	Cost	£9,000

Description

To undertake the survey and monitoring of UK BAP metalliferous bryophytes in Cornwall.

Spotted flycatcher, Loddington Farm, Leicestershire study

Contractor	Game Conservancy Trust	Completion	31/03/05
Officer	P Grice, Terrestrial Wildlife Team	Cost	£2,800

Description

To study the breeding ecology of spotted flycatchers at Loddington Farm, Leicestershire, in order to better understand recent decline.

Survey and autecological project on the Noble Chafer *Gnorimus nobilis*

Contractor	PTES	Completion	31/01/06
Officer	J Webb, Terrestrial Wildlife Team	Cost	£5,000

Description

To further determine the distribution of breeding sites for the Noble chafer *Gnorimus nobilis* in Worcestershire, Herefordshire and Gloucestershire and identify current threats.

Vendace *Coregonus albula* – survey to determine outcomes from recent translocations

Contractor	CEH, Environment Agency	Completion	31/10/03
Officer	D Fraser, Environmental Impacts Team	Cost	£5,722

Description

To determine the success of introductions and the minimum favourable condition requirement for Vendace *Coregonus albula* in the two sites to which the species has been translocated.

Biodiversity Action Plan: Bees, Wasps and Ants

Contractor	Aculeate Conservation Group	Completion	31/03/04
Officer	D Sheppard, Terrestrial Wildlife Team	Cost	£15,000

Description

Project work undertaken in order to promote conservation of bees, wasps and ants identified as BAP priority species, including bumblebee recording and study of the assemblages of flower-rich habitats.

Saline lagoon sandworm *Armandia cirrhosa* – feasibility study and survey

Contractor	NHM, Weymouth & Portland Siling Academy	Completion	31/10/06
Officer	V Copley, Maritime Team	Cost	£2,000

Description

Feasibility study into the potential for translocating saline lagoon sandworm *Armandia cirrhosa* from current known sites in Portland Harbour, Dorset to former site at Eight Acre Pond, Hampshire.

Intra and inter-population differentiation in reed beetles *Donacia* spp

Contractor	University of Sussex	Completion	31/10/04
Officer	R Key, Terrestrial Wildlife Team	Cost	£7,000

Description

PhD at Sussex University looking at the conservation ecology of the two BAP listed beetle species *Donacia bicolor* and *Donacia aquatica*.

Genetic and taxonomic status of two possibly endemic beetle species associated with Lundy cabbage *Coincya wrightii*

Contractor	University of Leeds, National Trust/Landmark Trust	Completion	31/10/05
Officer	R Key, Terrestrial Wildlife Team	Cost	£6,000

Description

Undertake molecular investigation of the genetic and evolutionary links of three possibly endemic beetles associated with Lundy Cabbage *Coincya wrightii*.

Identifying species conservation priorities at a pan-European scale for invertebrate taxa

Contractor	JNCC collaboration	Completion	30/04/06
Officer	D Shepard, Terrestrial Wildlife Team	Cost	£7,000

Description

To set up a web-networked database of European species of invertebrate of conservation concern and initially to populate it with all the species from published Red Lists and lists of species of conservation concern.

Pipistrelle feeding

Contractor	WildCRU	Completion	30/06/03
Officer	Gavin Measures, Terrestrial Wildlife Team	Cost	£5,000

Description

Study of pipistrelle bat feeding activity on conventional and organic farms.

Bog hoverfly *Eristalis cryptarum*, Dartmoor

Contractor	Dartmoor National Park	Completion	30/11/04
Officer	Gavin Measures, Terrestrial Wildlife Team	Cost	£3,000

Description

Study all aspects of the life cycle of the bog hoverfly *Eristalis cryptarum* and produce habitat management guidelines for its conservation within the Dartmoor National Park.

Stag beetle *Lucanus cervus* survey

Contractor	PTES	Completion	30/06/04
Officer	Gavin Measures, Terrestrial Wildlife Team	Cost	£5,000

Description

To repeat surveys carried out previously for stag beetle in order to assess its current status and any national distribution changes.

Four spotted moth *Tyta luctuosa*

Contractor	Writtle College	Completion	31/03/06
Officer	Gavin Measures, Terrestrial Wildlife Team	Cost	£4,500

Description

To monitor the population of the four spotted moth *Tyta luctuosa* at all known sites and establish the habitat requirements so that translocation options can be evaluated.

Fen raft spider *Dolomedes plantarius* survey and monitoring

Contractor	H Smith, University of East Anglia	Completion	31/03/04
Officer	R Key, Terrestrial Wildlife Team	Cost	£2,500

Description

Undertake surveys and monitoring of known populations of fen raft spider *Dolomedes plantarius* and survey for additional populations in the Waveney valley.

Study into eastern-most known population of the pink seafan *Eunicella verrucosa*

Contractor	Various	Completion	30/11/06
Officer	V Copley, Maritime Team	Cost	£4,000

Description

A three year project involving volunteer recorders in a study to investigate the status of the pink sea fan *E. verrucosa* at its most easterly known location.

Bentley Wood, Wiltshire butterflies survey

Contractor	Bentley Wood Charitable Trust	Completion	31/01/04
Officer	Gavin Measures, Terrestrial Wildlife Team	Cost	£5,000

Description

To assess the current status of a range of BAP species found at Bentley Wood, Wiltshire. To improve the habitat for these species and to continue long term monitoring programmes already commenced, and initiate others.

Dormouse surveying strategy for Cumbria

Contractor	To be decided	Completion	30/11/03
Officer	C Bruemmer, Cumbria Team	Cost	£5,000

Description

To recommend a survey strategy for a systematic survey of dormice in Cumbria. To produce a survey protocol for the four known dormouse localities in Cumbria.

Yellow wagtail

Contractor	RSPB, BTO, UEA	Completion	31/03/06
Officer	P Grice, Terrestrial Wildlife Team	Cost	£13,000

Description

To undertake an autecological study of yellow wagtails on lowland farmland in order to understand the reasons for recent decline, and to recommend land management measures that will facilitate population recovery.

Fen orchid *Liparis loeselii* conservation

Contractor	To be decided	Completion	31/03/04
Officer	H Dixon, Norfolk Team	Cost	£3,000

Description

To promote conservation of the fen orchid *Liparis loeselii* in Norfolk by re-establishment of extinct populations.

'Batline' species casework contract

Contractor	Cresswell Associates	Completion	31/03/04
Officer	J Mason, North Mercia Team	Cost	£12,000

Description

A bat helpline to handle bat enquiries, especially domestic ones, in Hereford & Worcester, Gloucs, Staffs, Salop, Warwickshire and West Midlands. The service arranges for volunteer visits and provides advice letters on behalf of English Nature.

Dormouse survey of Avon

Contractor	Avon Wildlife Trust	Completion	31/03/04
Officer	Gavin Measures, Terrestrial Wildlife Team	Cost	£4,000

Description

To conduct systematic dormouse surveys by identifying hazelnuts eaten by dormice in target areas.

Water voles

Contractor	Derbyshire Wildlife Trust	Completion	31/03/04
Officer	Gavin Measures, Terrestrial Wildlife Team	Cost	£4,500

Description

To further the conservation of water vole populations through monitoring within the county of Derbyshire and beyond and to build on past work of the Derbyshire Water Vole Project.

Buttoned snout moth *Hypena rostralis* ecological requirements

Contractor	Butterfly Conservation	Completion	31/12/04
Officer	Gavin Measures, Terrestrial Wildlife Team	Cost	£4,000

Description

Research will focus on the ecological requirements of the buttoned snout moth *Hypena rostralis*, monitoring the effects of habitat management designed to meet these needs, and detection of any changes in the population which may be due to isolation.

Behavioural study of barbastelle bats in Paston Great Barn cSAC

Contractor	To be decided	Completion	31/03/03
Officer	R Cooke, Norfolk Team	Cost	£5,000

Description

A study of the activity and behaviour of barbastelle bats roosting at Paston Great Barn cSAC, Norfolk.

Square spotted clay *Xestia rhomboidia* investigation

Contractor	Butterfly Conservation	Completion	31/12/04
Officer	Gavin Measures, Terrestrial Wildlife Team	Cost	£4,000

Description

Three year investigation into the habitat management requirements of the Square spotted clay moth *Xestia rhomboidia*, particularly concerning the relationship between coppice management, habitat suitability, mobility and population structure.

Conservation of stinking hawk's-beard *Crepis foetida*

Contractor	B Ferry	Completion	31/12/03
Officer	B Banks, Kent Team	Cost	£2,600

Description

Monitoring of five trial introduction sites for stinking hawk's-beard *Crepis foetida*. Survey for potential new introduction sites to meet Species Action Plan (SAP) targets.

Water vole project

Contractor	Wildlife Trust for Birmingham & Black Country	Completion	31/03/04
Officer	J Mason, North Mercia Team	Cost	£3,000

Description

To produce and disseminate a summary of survey work carried out on this species in urban areas of Stoke and the West Midlands conurbation.

Bechstein's bat survey, Dorset

Contractor	F Greenaway	Completion	31/12/03
Officer	J Stobart, Dorset Team	Cost	£3,000

Description

To locate roosts of Bechstein's bat in Dorset.

Durlston marine project

Contractor	Durlston Marine Project	Completion	31/03/04
Officer	Gavin Measures, Terrestrial Wildlife Team	Cost	£5,000

Description

The project aims to advance the national species action plans for the Harbour Porpoise and Bottlenosed Dolphin at a local level through the development of an acoustic research programme.

2.18 Species Survey

Sussex saline lagoon baseline and Ivell's sea anemone survey

Contractor	University of Brighton	Completion	31/12/03
Officer	J Curson, Sussex and Surrey Team	Cost	£1,500

Description

Last year of a 3 year search for globally endemic Ivell's sea anemone *Edwardsia ivelli* initiated as part of the Sussex saline lagoon baseline survey.

Survey of invertebrates of the deadwood of Felbrigg Wood, Norfolk

Contractor	To be decided	Completion	31/03/04
Officer	P Lambley, Norfolk Team	Cost	£3,000

Description

A survey of deadwood invertebrates at Felbrigg Wood, Norfolk.

Humber Estuary Low Tide Count Report 2003-04

Contractor	To be decided	Completion	31/12/04
Officer	K Jennings, Humber to Pennines Team	Cost	£4,000

Description

To complete a full 12 months of Low Tide Counts of waterbirds on the Humber Estuary to enhance our understanding of site usage, assist in the targeting of conservation efforts to greater effect, and help to inform the many decisions on the estuary that must take account of nationally and internationally important bird populations.

Survey of moorland fringe birds around the South Pennine Moors

Contractor	A Blackburn, P Middleton and P Marsh	Completion	31/08/03
Officer	F Dodd, Humber to Pennines Team	Cost	£15,300

Description

To survey the enclosed land (inbye) within 2km of the South Pennine Moors SSSI/SPA/cSAC for wading birds (golden plover, lapwing, curlew, snipe, redshank and twite), in order to ascertain which fields the birds are using, and their population levels.

Invertebrate survey at Chigwell Wood Local Nature Reserve

Contractor	Epping Forest District Council	Completion	31/03/04
Officer	Gavin Measures, Terrestrial Wildlife Team	Cost	£1,400

Description

To survey the flies *Diptera* and beetles *Coleoptera* of Chigwell Row Wood Local Nature Reserve (LNR).

Entomological survey of West Sussex Heaths

Contractor	M Edwards, Sussex Wealden Greens and Heaths Project (THH)	Completion	31/03/04
Officer	R Hobbs, Sussex and Surrey Team	Cost	£2,500

Description

Entomological survey of West Sussex Heaths, covering seven SSSIs, to inform future management.

Night-time use of the Somerset Levels and Moors Floodplain SPA by waterfowl: report 2001 to 2003

Contractor	D Chown	Completion	31/07/03
Officer	M Jones, Somerset and Gloucestershire Team	Cost	£6,000

Description

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

Water vole project

Contractor	Leicester and Rutland Wildlife Trust	Completion	30/04/04
Officer	N Pike, Eastern Area Team	Cost	£1,500

Description

To continue survey and management work on sites supporting key water vole populations in Leicestershire and Rutland. To undertake public involvement in, and education about, water vole conservation.

Monitoring of intertidal benthic communities of The Wash, in support of The Wash SPA mussel restoration project

Contractor Wash Mussel Restoration Project(ECOMARIS) **Completion** 31/03/04

Officer C Donnelly, Eastern Area Team **Cost** £15,000

Description

To undertake sampling and an analysis of macrobenthos, using standard quality assured procedure, at selected intertidal survey sites and to develop population model for mussels based up on experimental treatments.

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

Contractor 2 J's Ecology **Completion** 31/10/07

Officer S Brocklehurst, Thames and Chilterns Team **Cost** £5,000

Description

To record and monitor the number of breeding territories of Wood Lark, Nightjar and Dartford Warblers on the Thames Basin Heaths SPA.

In-bye bird survey, North Yorkshire Moors SSSI

Contractor RSPB **Completion** 31/03/04

Officer D Clayden, North and East Yorkshire Team **Cost** £3,000

Description

To carry out bird survey, principally for waders, to establish important areas of enclosed land (in-bye) in and adjacent to the North Yorkshire Moors SSSI.

The Wash SPA low tide bird counts

Contractor M Yates, CEH **Completion** 30/09/03

Officer C Donnelly, Eastern Area Team **Cost** £10,000

Description

To undertake a low tide survey of numbers and distribution of birds for which The Wash is classified as an SPA and to fulfill condition monitoring requirements. To compare the data with previous low tide surveys taken in the late 1980s and early 1990s.

Lepidoptera Atlas for Hereford and Worcester

Contractor Butterfly Conservation **Completion** 31/01/04

Officer Gavin Measures, Terrestrial Wildlife Team **Cost** £1,000

Description

To publish Part 2 of a micro-moth atlas covering species *Tortricidae* to *Pterophidae*, showing distribution and status in Hereford and Worcestershire.

Spined loach research

Contractor	APEM	Completion	31/03/04
Officer	D Isaac and J Graham, Eastern Area Team	Cost	£7,000

Description

A desk top study into lifecycle of the spined loach and experiments to investigate if weed cutting and dredging impact upon population viability. This is a joint project with the Environment Agency.

The genetics, monitoring and autecology of three UK BAP water beetles

Contractor	Balfour-Browne Club	Completion	31/03/06
Officer	J Webb, Terrestrial Wildlife Team	Cost	£17,500

Description

The project aims to deliver critical UK BAP actions for three water beetles *Hydroporus rufifrons*, *Helophorus laticollis*, and *Laccophilus poecilus*.

Woodland birds survey

Contractor	RSPB and BTO	Completion	31/03/06
Officer	P Grice, Terrestrial Wildlife Team	Cost	£50,000

Description

To understand better the recent declines in many woodland bird species, including any possible geographical variations, and identify key areas for further research investigation and management trials.

Suffolk Broads freshwater fish study

Contractor	To be decided	Completion	31/03/04
Officer	P Robinson, Suffolk Team	Cost	£7,500

Description

To survey the fish populations of the Suffolk Broads, with a view to understanding the ecology and history of these water bodies.

Monitoring sand lizard and natterjack toad populations

Contractor	The Herpetological Conservation Trust	Completion	31/03/04
Officer	J Foster, Terrestrial Wildlife Team	Cost	£5,000

Description

The monitoring of known sand lizard and natterjack sites, and compile resulting survey information onto a database to produce assessments of current status of these species.

Status of Sharp-leaved pondweed *Potamogeton acutifolius*

Contractor	To be decided	Completion	31/12/03
Officer	S Clarke, Environmental Impacts Team	Cost	£5,000

Description

To review the status of Sharp-leaved pondweed *Potamogeton acutifolius* in England.

Bryophyte survey in Cornwall

Contractor	D Holyoak	Completion	31/01/04
Officer	B Tonkin, Cornwall & Isles of Scilly Team	Cost	£14,000

Description

Site survey and monitoring of bryophytes throughout Cornwall.

Highgate Common invertebrate survey

Contractor	To be decided	Completion	31/12/03
Officer	G Walker, North Mercia Team	Cost	£1,000

Description

Site survey of invertebrate fauna at Highgate Common.

Dragonfly and damselfly survey of Houghton Regis Marl Lakes and Sundon Chalk Quarry Bedfordshire

Contractor	S Cham	Completion	31/01/04
Officer	S Hamley, Bedfordshire and Cambridgeshire Team	Cost	£2,437

Description

A survey and recording of dragonflies and damselflies on two threatened chalk quarry sites in Bedfordshire.

Breeding success of nightjars study

Contractor	RSPB	Completion	31/03/04
Officer	A Nicholson, Dorset Team	Cost	£17,850

Description

Study to investigate causes of nesting failure in nightjars.

The conservation status of the Celtic sea slug *Onchidella celtica* in Cornwall

Contractor	Cornwall College	Completion	30/04/04
Officer	C Williams, Cornwall & Isles of Scilly Team	Cost	£3,500

Description

The project will include an assessment of the current Cornish distribution of the Celtic sea slug *Onchidella celtica*, and an investigation of the ecological niche occupied by this animal.

North Staffordshire BAP *Lepidoptera* survey

Contractor	Butterfly Conservation	Completion	31/12/03
Officer	North Mercia Team	Cost	£1,500

Description

To establish the extent and population sizes of the small pearl bordered fritillary butterfly *Boloria selene*, common fan foot moth *Pechipogo strigilata*, argent and sable moth *Rheumaptera hastata hastata* in North Staffordshire.

Project to investigate the factors affecting the recruitment success of the freshwater pearl mussel *Margaritifera margaritifera*, River Eden cSAC

Contractor	To be decided	Completion	31/03/05
Officer	E Donnison, Cumbria Team	Cost	£10,000

Description

Single survey of juvenile freshwater pearl mussel *Margaritifera margaritifera* beds within the River Eden cSAC, in order to assess current levels of recruitment, accompanied by study of water chemistry and sedimentation patterns, in order to determine if increased compensation flow from Ennerdale Water would have a positive effect upon the mussels.

Long-term trends in invertebrate abundance - pilot study

Contractor	IACR - Rothamsted	Completion	31/03/04
Officer	Terrestrial Wildlife Team	Cost	£2,500

Description

To investigate whether suction trap data collected by IACR (Rothamsted) can be used to assess long-term trends in invertebrate abundance on farmland at a national scale.

Rare lichens at Black Tor Copse and Wistman's Wood NNR

Contractor	Dr B Coppins & S Coppins	Completion	31/03/04
Officer	S Bates, Devon Team	Cost	£1,993

Description

To record the locations and population size of all nationally rare lichen species at Black Tor Copse and Wistman's Wood NNR, Devon using a simple, repeatable technique. To review the literature on both woods to draw out population trends for the nationally rare species and relate these to biotic, abiotic and land management changes over the period for which data is available.

Moccas Park NNR survey for the hoverfly, *Myolepta potens*

Contractor	To be decided	Completion	31/03/04
Officer	T Dixon, Herefordshire and Worcestershire Team	Cost	£3,000

Description

A survey of the status and ecology of the BAP priority hoverfly *Myolepta potens* within, and in areas adjoining, Moccas Park NNR.

Breeding ecology of twite

Contractor	University of East Anglia	Completion	30/04/06
Officer	A Brown, Terrestrial Wildlife Team	Cost	£17,000

Description

An EN funded PhD studentship to investigate the ecology of twite: the bird's range has decreased and numbers have fallen dramatically since the mid-1970s and this research seeks to determine whether any factors on the breeding grounds are the cause.

Bat conservation

Contractor	Aylesbury Vale Countryside Service	Completion	30/01/05
Officer	Gavin Measures, Terrestrial Wildlife Team	Cost	£5,000

Description

Delivery of active bat conservation in Aylesbury Vale through training local residents in survey techniques to record bats and their roosts.

Dragonfly survey at Stow-cum-Quy SSSI

Contractor	I Johnson	Completion	31/12/03
Officer	D Radley, Bedfordshire and Cambridgeshire Team	Cost	£1,600

Description

Survey of ponds in and around the Stow-cum-Quy SSSI for all life stages of dragonflies and damselflies, with management suggestions to improve the ponds for these species, in order to maintain existing populations and improve conditions where possible.

Lichen inventories

Contractor	To be decided	Completion	28/02/04
Officer	P Lambley, Norfolk Team	Cost	£8,000

Description

Reassessing and updating inventories for lichen sites. Providing a database for RDB and nationally scarce lichen species.

Lifescapes farmland bird study

Contractor	M Wright	Completion	31/03/04
Officer	B Williamson, Suffolk Team	Cost	£2,500

Description

Assessment of the population levels and distribution of declining farmland birds within the Suffolk Coast and Heaths Natural Area.

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