

# LOCAL BIODIVERSITY ACTION PLAN

FOR BRIDGEND COUNTY BOROUGH

Volume 1

A Framework and Strategy for Action

BRIDGEND BIODIVERSITY PARTNERSHIP



Compiled by Planning Department, Bridgend County Borough Council and David Clements Ecology on behalf of the Bridgend Biodiversity Partnership, January 2002

## **CONTENTS**

Introduction		3
The Bridgend Biodiversity Partnership		4
Chapter 1	Biodiversity	5
Chapter 2	A Local Biodiversity Action Plan for Bridgend	11
Chapter 3	The Biodiversity of Bridgend	16
	Habitats	16
	Species	20
Chapter 4	Habitat and Species Action Plans	24
Chapter 5	Information and Data	29
Chapter 6	General Issues Affecting Biodiversity	31
Chapter 7	Awareness and Involvement	40
Chapter 8	The Way Forward	43
Annex 1	Identification of Priority Habitats and List of SINCs:	
	Preliminary Assessment of Key Habitats, determined by the Bridgend Biodiversity Partnership	44
	Guidance on the Selection of Sites of Importance for Nature Conservation within Bridgend	46
	List of Sites of Importance for Nature Conservation in Bridgend	59
Annex 2	Key Species in Bridgend County Borough	63
Annex 3	Current Biodiversity Initiatives in Bridgend County Borough	92

## **Acknowledgements**

The Bridgend Biodiversity Partnership wishes to acknowledge the work of the Association of Local Government Ecologists in providing support to the biodiversity work of local authorities.

## **INTRODUCTION**

This document, a draft Local Biodiversity Action Plan ('LBAP') for Bridgend County Borough, has been prepared on behalf of the Bridgend Biodiversity Partnership. It is an unfinished document, and such incompleteness is not inappropriate at this early stage in the process because LBAPs are intended to be constantly evolving and improving as knowledge about the region increases. This LBAP does not belong to any one group or individual. Without the involvement and commitment of a wide partnership, inclusive of all sectors of society, there is little prospect of effective long-term action in achieving its objectives. This is therefore the first step in building a consensus and support for action in the whole community.

Local Biodiversity Action Plans differ from previous approaches to nature conservation in two important ways:

- ◆ they are intended to be prepared by, and involve, a broad partnership of individuals and organisations;
- ◆ they follow a disciplined approach to auditing and target setting: the aim is to ensure that national targets for nature conservation are translated into effective action at the local level, and that important local features are fully included in strategies for action.

The Bridgend Biodiversity Partnership (BBP) was formed to advance the conservation and enhancement of biodiversity in Bridgend County Borough, and the launch of this consultation document is the group's first main task. The LBAP will provide a strategy for action in two volumes: Volume 1 will set out the strategic framework and main courses of action, and Volume 2 will contain the detailed actions required for priority habitats and species in the county borough.

The first draft of Volume 1 was initially launched in July 2000, and was exhibited for public comment alongside the emerging Unitary Development Plan. It has been commented on by a variety of locally based nature conservation bodies and individuals. The present version comprises both a revised copy of Volume 1, incorporating the comments received, together with the first draft of Volume 2.

Volume 1 contains statements about issues affecting biodiversity, puts forward a framework and strategy for action, and suggests broad actions that should be taken to help conserve it, whilst Volume 2 contains the detail of the Plan, setting out the actions and partnerships required to conserve and enhance the County Borough's wildlife resource. The development of individual Species and Habitat Action Plans, including clarification of the status and distribution of species and habitats, is an on-going process. Initiatives such as the disaggregation of habitat data held by the national conservation agencies, and the working-up of relevant targets for habitat management and enhancement, are still unavailable in some cases at the time of writing.

## THE BRIDGEND BIODIVERSITY PARTNERSHIP

The Bridgend Biodiversity Partnership (BBP) was initiated in August 1998 and comprises a range of conservation organisations involved with the collection and collation of wildlife data for the Bridgend County Borough area. The Partnership feeds into, and is informed by, a grouping of key partners responsible for delivering the Countryside Strategy and Integrated Action Programme for Bridgend County Borough.

The work of the BBP is supported by the Glamorgan Biodiversity Advisory Group, a forum, established in July 1997, whose remit is to develop biodiversity objectives and action plan targets for the old Glamorgan County area (often referred to as the Watsonian Vice-County 41). This 'strategic approach' was seen as both sensible and logistically essential, considering the limited resources of not just the eight local authorities that comprise Glamorgan, but also of the old county's statutory and non-statutory environment organisations. In any event, such an approach is consistent with *Planning Guidance (Wales): Planning Policy*, which stresses that 'landscape and nature conservation issues are not confined by administrative boundaries, and should be addressed strategically and discussed with adjoining planning authorities'.

The goal of the BBP is to maintain the physical and biological integrity of the biodiversity resource of Bridgend County Borough in a condition capable of supporting its characteristic range of habitats and species, to improve or enhance its ability to support these habitats and species through proactive management and to encourage human contact with and enjoyment of biodiversity, so that present and future generations can benefit from its environmental quality and economic benefits.

The BBP comprises:

### BRIDGEND BIODIVERSITY PARTNERSHIP

<b>Botanical Society of the British Isles</b>	Coed Cymru
<b>Butterfly Conservation</b>	Environment Agency
<b>Countryside Council for Wales</b>	Forestry Commission
<b>Botanical Society of the British Isles</b> (East Glamorgan Recorder)	Forest Enterprise
<b>Glamorgan Bird Club</b>	Groundwork Bridgend
<b>Glamorgan Moth Recording Group</b>	Prince's Trust - Cymru
<b>Glamorgan Wildlife Trust</b>	Royal Society for the Protection of Birds
<b>British Trust for Ornithology</b>	Wales Tourist Board
	Welsh Development Agency

*Organisations shown in bold type are members of the Bridgend Biodiversity Partnership Steering Group; the other organisations are a grouping of key partners also involved with delivering the Countryside Strategy and Integrated Action Programme for Bridgend County Borough.*

For further information on the Local Biodiversity Action Plan for Bridgend County Borough, please contact: *Implementation and Environment Section, Directorate of Environmental and Planning Services, Bridgend County Borough Council, Civic Offices, Angel Street, Bridgend, CF31 4WB. Tel: 01656-643170, Fax: 01656-643190 or e-mail moonsj@bridgend.gov.uk.*

## Chapter 1

### BIODIVERSITY

#### What is Biodiversity? Why does it matter?

'Biodiversity' is a term used to describe the variety and richness of all living things. The term encompasses all life forms, and includes both the genetic variation within species, the interactions between species and the interactions of species with their habitats. It covers everything from algae to elephants, bacteria to blue whales. It is a term that, since the signing of the Biodiversity Convention at the Earth Summit in Rio de Janeiro in 1992, has rapidly moved from the realms of pure science into the public and political arena, and which has stimulated an increased level of interest in nature conservation all over the world.

*'Biodiversity is **all living things**, from the tiny garden ant to the giant redwood tree. You will find biodiversity everywhere, in window boxes and wild woods, roadsides and rain forests, snow fields and sea shore'*

UK Steering Group Report, 1995a

Conserving biodiversity is not just about rare and threatened species and habitats, although Bridgend County Borough has its share of both. All biological life, including we humans, is maintained in a delicately balanced environment, which is easily upset by the loss of species or habitats. The quality of our lives is intimately bound up with the maintenance of biodiversity, since it is ultimately the source of our food, our medicines and many vital materials - even the oxygen in the air that we breathe - as well as a source of well-being and aesthetic enjoyment. It is our responsibility, and in our own self-interest, to look after biodiversity now and for future generations.

There are many compelling reasons for doing this: some are moral, whilst others are aesthetic, economic or simply essential to the maintenance of human life on the planet.

#### **REASONS FOR CONSERVING BIODIVERSITY**

*Biodiversity supports life itself – Most species have a precise role to play in the Earth's well being. Many plants and animals are dependent upon each other in a complex web of life, with each species relying on others for survival.*

*Biodiversity provides essential goods - Plants and animals provide food, medicines, clothing and some of the raw materials for building and industry. It is vital to conserve biodiversity to maintain a wide range of species for future use.*

*Biodiversity helps to maintain the environment – Natural processes assist with flood control, prevent soil erosion, help to filter wastewater, clean pollutants from the air, and mitigate noise and the visual intrusion of development. Biodiversity also acts as an indicator of the health of the environment and is a key test of sustainability.*

*Biodiversity has aesthetic and spiritual value – People benefit greatly from contact with the natural world. Quality of life is intimately linked with the health of the environment. Many people value the very existence of species and habitats even if they have no direct contact with them.*

*Biodiversity is valuable for recreation – Many people enjoy recreation in the countryside and urban nature areas. Attractive landscapes and wildlife are a focus for tourism and are very valuable to local economies.*

Everyone should be concerned at the loss of biodiversity, which has occurred increasingly in recent centuries and especially so over the past fifty years. These have seen an unparalleled rate of loss of wild plants and animals across Britain, with the extinction of more than one hundred species in the 20<sup>th</sup> Century alone. Humans are ultimately the losers if pollution of the air, land and sea, and the destruction of habitats continues unabated. But humans are also important in being able to take action to reverse the current trends of extinction and environmental degradation. Everyone can assist with the conservation of biodiversity, both as individuals or in organisations, and it is in your interest to do so.

## **The Global Challenge**

The United Kingdom was one of over 150 countries that pledged to develop a national strategy for the conservation and sustainable use of biological diversity at the Earth Summit in Rio de Janeiro in 1992. The signing by these countries of the Convention on Biological Diversity signalled global concern that habitats and natural ecosystems were being lost at an alarming rate. Each country recognised that it had a responsibility to halt the decline of biodiversity within its territorial boundaries.

## **UK Strategy**

The UK Government was one of the first signatories to the Convention to produce a biodiversity strategy and action plan in January 1994 - '*Biodiversity: The UK Action Plan*' (HMSO 1994). This report outlined the broad strategy for conserving and enhancing biodiversity in the UK for a 20-year period.

Although the Plan set broad goals and objectives, it was recognised that implementation would require detailed targets. The UK Biodiversity Steering Group (UKSG) was subsequently established with the task of preparing a detailed programme of action. This group had a wide membership including representatives from national agencies such as the Country Nature Conservation Agencies, the Environment Agency, local government, farming and land management, voluntary conservation bodies and industry.

The two volumes of '*Biodiversity: The UK Steering Group Report*' were published in December 1995 (UKSG 1995a/b) and were endorsed by the Government in May 1996. This report advocates four key elements to achieve biodiversity objectives:

- ◆ development of action plans with costed targets for key species and habitats;

- ◆ improving the handling of information and data;
- ◆ raising awareness and involvement;
- ◆ production of Local Biodiversity Action Plans.

The UK Biodiversity Programme is now addressing each of these topics. The preparation of national action plans for habitats and species of particular conservation concern is central to this approach, and 45 national habitat action plans and 391 national species action plans have been produced over the past few years. These plans have clear objectives and have quantified and costed targets, enabling progress to be monitored in the long-term. This represents a new and disciplined approach to nature conservation in the UK.

The UK Biodiversity Programme is being steered by the UK Biodiversity Group (UKBG), which replaced the former UK Steering Group. The various elements of the Programme are being overseen by a range of sub-groups. Also reporting to the UK Biodiversity Group are groups for England, Wales, Scotland and Northern Ireland which help provide information and support biodiversity action within each country area. Six volumes of national Species and Habitats Action Plans have been produced to date by this group (UKBG 1998a/b; 1999a-d).

In Wales the objectives of the UK Biodiversity Programme are met by the Wales Biodiversity Group (WBG). The role of the Wales Biodiversity Group is to promote the implementation of the UK BAP, monitor progress and advise the National Assembly of Wales on the action necessary to maintain and enhance the biodiversity of Wales. Specifically, the WBG will:

- ◆ Stimulate action and monitor progress on the implementation of Species and Habitat Action Plans;
- ◆ Promote good practice in the preparation and implementation of Local Biodiversity Action Plans, and monitor progress with local delivery of biodiversity objectives;
- ◆ Promote public awareness of, and involvement in biodiversity, and monitor progress;
- ◆ Maintain an overview of the range of biodiversity action by different sectors in Wales and assess its overall contribution to maintaining and enhancing biodiversity;
- ◆ Consider how funding might be encouraged from key partners for biodiversity activities in Wales;
- ◆ Report to the National Assembly on progress in implementing the UK BAP in Wales, identifying the key policy issues, and advise on the implications of future strategy for Wales;
- ◆ Liaise with the UKBG to report on progress and future plans for Wales, and to coordinate approaches to common issues where appropriate.

Much of the detailed work on the ground is carried out by the Wales Local Issues Advisory Group (WLIAG) which reports to the WBG. WLIAG seeks 'to promote awareness of and involvement in biodiversity, and monitor progress' through an annual 'Practitioners' Seminar' and an annual questionnaire to local authorities on progress with LBAPs which is reported to WBG and the Practitioners Seminar. WLIAG also agrees and manages the workload of the Wales LBAP Facilitator based at CCW. CCW chairs the Wales Biodiversity Targets and Actions sub-group, and the National Museum & Gallery of Wales chairs the Information sub-group. WLIAG looks to these groups for help in the disaggregation of national targets to LBAPs to local authority areas, and the formulation of a data collection system for reporting local action.

## **Local Biodiversity Action Plans**

The Government has taken a lead in setting the approach for biodiversity conservation, but in order to succeed action needs to be taken at all levels and in all sectors of the community. National objectives for biodiversity can be achieved only through concerted action at the local level, and the preparation of Local Biodiversity Action Plans is something which is clearly advocated by '*Biodiversity: The UK Steering Group Report*'. LBAPs are a fundamental contribution to Local Agenda 21 programmes, another product of the Rio Earth Summit. A healthy natural environment is important to everyone and is essential for our well being and our quality of life. A healthy environment is the main goal of sustainable development, and the conservation of biodiversity plays a major part in this process.

Local Biodiversity Action Plans have two broad functions:

- ◆ to ensure that national action plans are translated into effective action at the local level;
- ◆ to establish targets and action for species and habitats characteristic of each local area.

Local Biodiversity Action Plans differ from previous approaches to nature conservation in two important ways; they are prepared by a wide partnership of interested individuals and organisations, and they follow a very disciplined approach to auditing and target setting. The Plans form the framework from which individual members of biodiversity partnerships can develop strategies for delivering relevant parts of the Plan.

### ***FUNCTIONS OF LOCAL BIODIVERSITY ACTION PLANS***

*To ensure that national targets for species and habitats, as specified in the UK Action Plan are translated into effective action at the local level. National priority species and habitats occurring in the local area must be identified; targets should be linked to national priorities.*

*To identify targets for species and habitats appropriate to the local area, and reflect the values of people locally. Local Biodiversity Action Plans can highlight important local features and provide an opportunity for people to express their views about what is important in their area.*

*To develop effective local partnerships to ensure that programmes for biodiversity conservation are maintained in the long term. The Local Biodiversity Action Plan must be built by consensus. The Plan should be owned by all parties that have a key role in delivering action.*

*To raise awareness of the need for biodiversity conservation in the local context. Increasing public awareness and involvement in biodiversity conservation is crucial for success.*

*To ensure that opportunities for conservation and enhancement of the whole biodiversity resource are fully considered. Plans need to consider appropriate action for different localities within the plan area. Opportunities for habitat enhancement and restoration should be pursued in addition to conservation of the existing resource.*

*To identify the resources available for implementing the objectives of the Plan.*

*To provide a basis for monitoring progress in biodiversity conservation, at both local and national level. A periodic review of whether targets have been achieved will assess the effectiveness of the plan and contribute to national monitoring.*

*(adapted from: Guidance for Local Biodiversity Action Plans: An Introduction).*

It may perhaps seem surprising that Biodiversity Action Plans do not make specific reference to geology, geomorphology and soil science, since these are ultimately the foundation of all habitats and the biological ecosystems that depend on them. The earth sciences form part of the natural world, and are an essential factor both in human development and in the maintenance of the natural environment. Biodiversity Action Plans, however, are normally taken to encompass the *living* elements of the environment, rather than the environment as a whole, making reference to the earth sciences only where they have a direct impact on the survival or maintenance of biological habitats or species, for example through the impacts of quarrying.

The conservation and management of geological resources are currently being addressed through separate means, such as the UK Geological Conservation Review, Minerals Local Plans, and the Regionally Important Geological /Geomorphological Sites ('RIGS') programme. The latter is in the process of being established in south Wales, where it is being coordinated by the South Wales Geologists Association, amongst others. It is anticipated that geological and earth sciences issues will increasingly be addressed as a significant conservation issue in its own right under the aegis of Local Agenda 21 and Sustainability programmes, and that there will be considerable scope for liaison and integration of these interests with the Biodiversity Action Plan in the future.

### **Landmarks in the Biodiversity Action Plan Process**

**1992: Earth Summit, Rio de Janeiro** - UK Government signed the Biodiversity Convention at the UN Conference on the Environment & Development

**1994: Biodiversity: The UK Action Plan** - The UK Government's response to the challenge of the Biodiversity Convention, which set out the principles for biodiversity conservation in the UK and led to the setting up of the UK Biodiversity Steering Group.

**1995: The UK Biodiversity Steering Group Report** - The first biodiversity audit for the UK, which established national and international priority habitats and species for conservation, and the development of quantifiable conservation targets for 391 species and 45 habitats.

**1997: Glamorgan Biodiversity Advisory Group (GlamBAG) established** - To provide a scientific bridge in the former county area of Glamorgan between the national habitats and species targets and those of Local Biodiversity Action Plans. GlamBAG comprises eight local authorities, Countryside Council for Wales, Glamorgan Wildlife Trust, Environment Agency, Brecon Beacons National Park, Dyr Cymru/Welsh Water, Farming & Rural Conservation Agency, Forestry Commission, Forest Enterprise, Welsh Development Agency and the National Museum & Gallery of Wales.

**1997: Action for Wildlife** - A report published by the Countryside Council for Wales which set out preliminary Wales-wide action plans for 12 habitats and 53 species considered to be special priorities in Wales.

**1998: Guidance for Local Biodiversity Action Plans** - A series of self-help guidance notes produced by the UK Local Issues Advisory Group of DETR to assist in the production of Local Biodiversity Action Plans.

**1999: Secretary of State for Wales** called for Local Biodiversity Action Plans to be prepared throughout Wales by the year 2000.

**1998/1999: UK Biodiversity Group** succeeds the UK Biodiversity Steering Group: six volumes of detailed action plans published covering 40 Priority Habitats and 400 Priority Species in the UK.

**2000: Countryside & Rights of Way Act** - Puts the Biodiversity Action Plan process on a statutory basis and requires all Government departments and the National Assembly of Wales to have regard to, and promote, the objectives of biodiversity conservation wherever possible.

**2000/2002: Bridgend Local Biodiversity Action Plan** - Volume 1 produced for consultation in July 2000, and issued in revised form along with Volume 2 in January 2002.

## **Chapter 2**

### **A LOCAL BIODIVERSITY ACTION PLAN FOR BRIDGEND COUNTY BOROUGH**

The Bridgend Biodiversity Partnership (BBP) has been established to advance biodiversity conservation and enhancement in Bridgend County Borough. The preparation of this Local Biodiversity Action Plan has been one of the partnership's first achievements. The Plan will guide action on nature conservation in the County Borough for the coming years, and will provide a focus for everyone involved. But this is only the beginning of an on-going and evolving process of biodiversity action planning.

BBP works closely with the Glamorgan Biodiversity Advisory Group (GlamBAG), which embraces a wide range of organisations – local authorities, statutory conservation agencies, voluntary bodies, representatives of landowners and others – all working together with the common goal of conserving the biodiversity of the eight local authorities of the former 'Glamorgan' county area.

BBP is currently mainly supported by the local wildlife recording organisations, but it will undoubtedly expand as the process of conserving biodiversity progresses. Additional partners from many sectors of society are invaluable in being able to bring with them their own particular skills in formulating and implementing the Plan.

#### **The Biodiversity Action Plan**

The Plan consists of two parts. Volume 1 sets out the overall strategy for biodiversity action and the key objectives, and also:

- ◆ explains the audit of habitats and species undertaken in Bridgend County Borough
- ◆ outlines how the Partnership has selected habitats and species of priority concern
- ◆ identifies data needs
- ◆ summarises the main issues influencing biodiversity
- ◆ examines the raising of awareness and involvement in biodiversity conservation

Volume 2 contains detailed action plans for a range of key habitats and species in Bridgend County Borough. Together, the overall strategy for action in Volume 1 plus the detailed action plans for habitats and species in Volume 2 provide a basis for biodiversity conservation in Bridgend County Borough, and this will be reviewed, supplemented and updated at regular intervals in the future.

## **The Process**

The Biodiversity Action Plan should be seen as a platform for actions to be taken forward by the Partnership, enabling each organisation to develop its own ideas and approaches to biodiversity conservation. The Partners may come together collectively to implement joint projects and address strategic issues, and of course, there will also be opportunities to implement action for biodiversity by building on existing initiatives.

The Plan will promote a variety of actions. The strategic action points set out in this document - for example, how to deal with data needs, or the raising of awareness and involvement in biodiversity conservation - will require further detailed programmes of action to be developed. The habitat and species plans will also recommend action such as site protection, habitat management and restoration, and the need for up-to-date survey data, and they will also raise issues of policy. There will be, within every subject, a variety of mechanisms at different levels for delivering objectives. One way to assist the implementation of the Plan will be to identify lead agencies or individuals to co-ordinate the necessary action.

## **Roles and Contributions**

Implementation of actions depends on a range of functions, for example in land-use planning, provision of grant-aid and land management. Each Partner will have a particular role to play, for example:

- ◆ planning is the remit of local authorities;
- ◆ giving grants and incentives is one of the functions of the National Assembly for Wales and Government Agencies;
- ◆ land management is a primary responsibility of farmers and the farming bodies;
- ◆ community action can be fostered by bodies such as the Glamorgan Wildlife Trust and Town and Community Councils.

If the Plan is to be successful it must stimulate a growing web of action. Success will largely rest on the commitment and enthusiasm of individual partners, and the vital role of the Partnership is to stimulate and co-ordinate action. Effective networking and information exchange by the Partnership will help to minimise duplication and instead build co-operation, making the best use of the expertise and resources available. The Partnership must also undertake the fundamental role of monitoring progress and reviewing priorities.

## **What's New?**

A fair question! Much is already being done for biodiversity conservation in Bridgend County Borough. There is a wide range of existing projects and initiatives and a variety of mechanisms already in place. Nevertheless, this is not simply a re-labelling exercise. The Local Biodiversity Action Plan process brings a new discipline to all of this work. It produces the opportunity to review current activities, identify priorities and set specific targets. It also provides a clear framework for reviewing and monitoring progress. Each organisation can examine its own

programme of work against the agreed priorities of the Bridgend Biodiversity Partnership and the national targets laid down in the Biodiversity Action Plan.

Although organisations with an interest in biodiversity conservation have worked together before, the groupings forming the Bridgend and Glamorgan Partnerships are proof of a new approach and understanding. Partners from a diverse spectrum of organisations and agencies have agreed to joint responsibility. This co-ordinated approach to biodiversity, both in the region and in the county borough, should translate into an unprecedented degree and range of action for biodiversity.

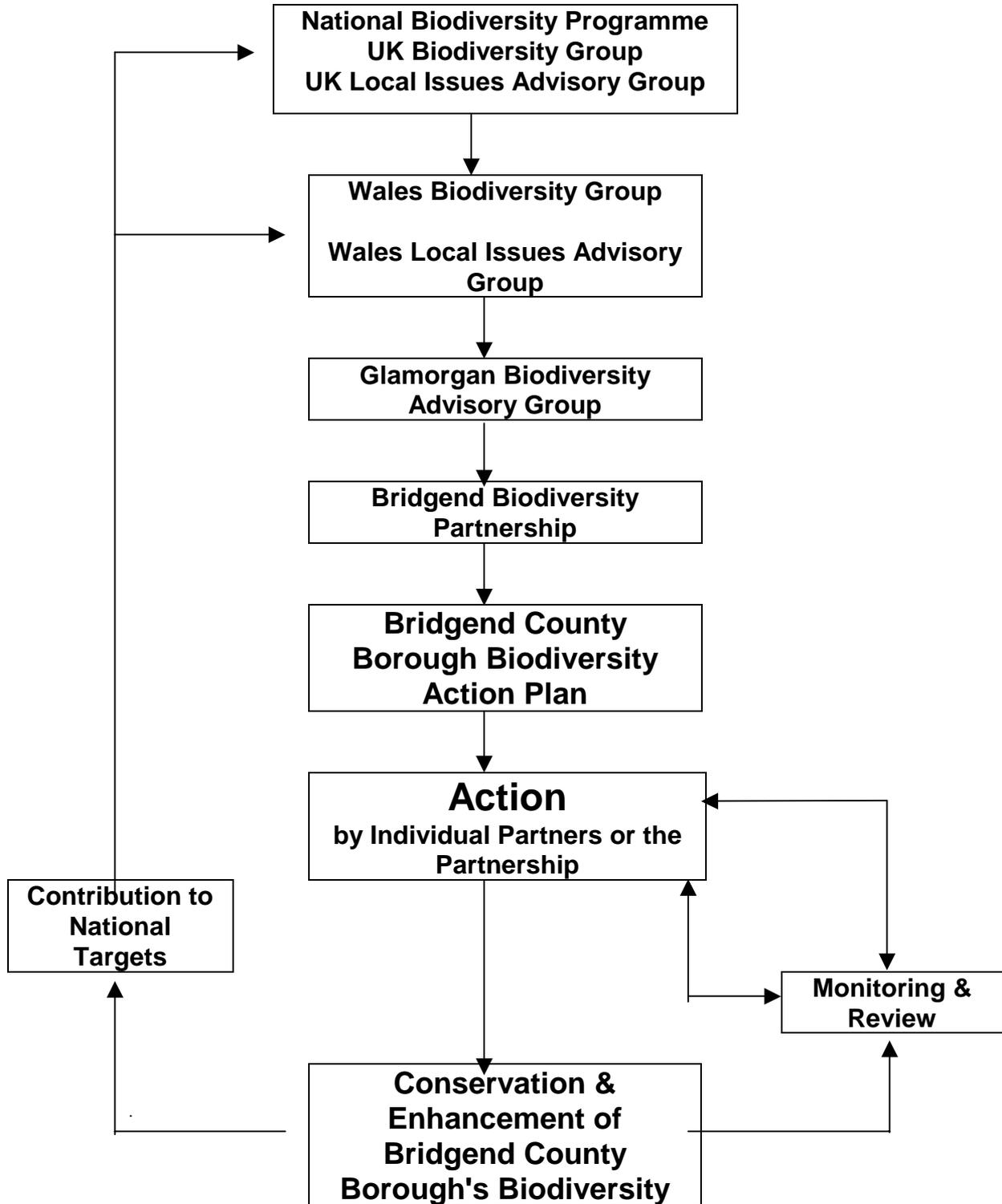
### **Links with Other Plans**

The UK Biodiversity Action Plan (UK BAP) sets the national priorities for all other biodiversity plans in Britain. In South Wales, regional guidance is being formulated to fit into the hierarchy between national and local programmes. The Glamorgan Biodiversity Advisory Group has assisted local authorities at both the audit and action planning stages of the Biodiversity process. GlamBAG's work, essentially looking at habitats and species of conservation concern within the region, will assist local unitary authorities in matching their priorities with each other, and with those in the national guidance.

A range of other plans and processes will help to deliver biodiversity objectives. Objectives and targets should be included in Local Agenda 21 programmes, the Unitary Development Plan (UDP), transport plans and many others. There are many plans and strategies in existence or in preparation which address biodiversity issues; for example Local Environment Agency Plans and management plans for specific areas such as the Kenfig National Nature Reserve, the Porthcawl Lakes, and the Craig-yr-Parcau and Frog Pond Wood Local Nature Reserves. Each of these has a distinct role and contributes to biodiversity conservation within Bridgend County Borough. The biodiversity programme relies on a network of such plans. In turn, the Biodiversity Action Plan will help to identify the need for further plans, help guide them, and support the review of existing plans.

The Habitat and Species Action Plans must identify relevant current action and existing plans, and put these in the context of the overall action required. Individual organisations and agencies such as the Environment Agency Wales and Forestry Commission need to be encouraged and supported in the preparation of biodiversity action plans to cover their own areas of activity. In many cases, individuals responsible for the management of land may find it useful to prepare a plan which relates specifically to their own landholding, and which forms part of their overall business plan.

## PREPARATION AND IMPLEMENTATION OF THE PLAN



## **STRATEGY FOR ACTION ON BIODIVERSITY**

The Bridgend Biodiversity Partnership has identified the following broad objectives:-

- to audit the nature conservation resource of Bridgend County Borough (chapter 3)
- to identify from the audit habitats and species of priority nature conservation concern, including those which are locally distinctive (chapter 3)
- to prepare action plans for habitats and species of priority conservation concern and follow through with programmes of implementation and monitoring (chapter 4)
- to ensure that data on habitats and species in Bridgend County Borough is sufficient to enable effective implementation and monitoring of biodiversity objectives (chapter 5)
- to review general issues affecting biodiversity, such as agriculture and development, and chart a course of appropriate action (chapter 6)
- to raise awareness and involvement in biodiversity conservation across all sectors (chapter 7)
- to encourage individuals and organisations to review their role in biodiversity conservation and the resources required, and develop their own action in response to the Biodiversity Action Plan for Bridgend County Borough (chapter 8)
- to maintain an ongoing partnership which will co-ordinate, develop and support action for biodiversity (chapter 8)
- to monitor and review progress towards meeting the above objectives and the targets set out in the habitat and species action plans (chapter 8)
- to periodically update the Biodiversity Action Plan for Bridgend County Borough and its component habitat and species action plans to take account of changing circumstances (chapter 8)

## Chapter 3

### THE BIODIVERSITY OF BRIDGEND COUNTY BOROUGH

Bridgend County Borough is exceptionally rich in wildlife and diverse landscapes. But many habitats have been lost or damaged, and there is a pressing need to conserve and enhance those that remain. The audit has enabled the identification of habitats and species of priority concern.

#### HABITATS

The *Glamorgan Biodiversity Advisory Group* has produced a number of draft Regional Habitat Action Plans (RHAPs) covering the Glamorgan area, and which are directly relevant to Bridgend County Borough (GlamBAG 1999). The first tranche of RHAPs covers UK BAP priority habitats, namely:

- ◆ *Coastal and Floodplain Grazing Meadow*
- ◆ *Lowland Heathland*
- ◆ *Ancient & Species-Rich Hedgerows*
- ◆ *Fens*
- ◆ *Reedbeds*
- ◆ *Lowland Purple Moor-grass and Rhos Pasture*
- ◆ *Upland Oak Woodlands*

These seven plans, in final draft form, were launched at a special seminar aimed at land managers, land developers and landowners, which was hosted by the Welsh Development Agency in the spring of 1999. A second tranche of regional habitat action plans is currently in production, and these are at various stages of consultation with the Countryside Council for Wales, prior to their public consultation phase. These plans include:

- ◆ *Lowland Hay Meadow*
- ◆ *Lowland Dry Acidic Grassland*
- ◆ *Lowland Calcareous Grassland*
- ◆ *Eutrophic Standing Waters and Ponds*
- ◆ *Sand Dunes*
- ◆ *Shingle*
- ◆ *Coastal Cliff & Slope*
- ◆ *Cereal Field Margins*
- ◆ *Wood Pasture & Parkland*
- ◆ *Wet Woodland*
- ◆ *Upland Mixed Ash Woodland*
- ◆ *Beech & Yew Woodland*
- ◆ *Saltmarsh*

The main source of habitat information for these and other plans is the Countryside Council for Wales (CCW) 'Phase 1 Habitats Survey' carried out in the mid-1980s and early 1990s, together with the Upland Habitats Survey carried out by the former

Nature Conservancy Council (NCC) in the early 1980s. All of the present local authorities (now called 'Unitary Authorities') have access to these data, but disaggregation of the Phase 1 area data held by CCW into individual Unitary Authority Areas has only been partially achieved at the time of writing, which makes the setting of quantified targets for habitats difficult. Nevertheless, approximate areas and targets have been derived from the data in their present form, and future improvement of the dataset will further assist both RHAP and LBAP development in due course.

### **Habitats : Diversity and Importance**

Bridgend County Borough's mosaic of habitats includes ancient woodlands, unimproved wet grasslands, chalk grassland, river valleys and rocky gorges, coastal sand dunes and saltmarsh. These habitats support an exceptionally varied flora and fauna, including many rare and declining species.

Sites of nature conservation importance in Britain which have statutory designations because of their international or national interest represent the 'top tier' of protection in Britain. Such sites are therefore probably the best understood and most widely accepted. The primary designations in this tier are Special Protection Areas (SPAs), proposed Special Areas of Conservation (pSACs), Sites of Special Scientific Interest (SSSIs), National Nature Reserves (NNRs) and Local Nature Reserves (LNRs). Background information about the various legislative and statutory arrangements under which these designations arise is provided in Appendix 1 of Volume 2.

Just two sites of nature conservation importance within the County Borough receive statutory protection for their international wildlife conservation interest; these are Kenfig NNR and Merthyr Mawr pNNR, both of which are SSSIs, and which together form the candidate Kenfig pSAC designated under the EC Habitats & Species Directive.

A very small additional number of sites in the county borough also receive statutory protection for their national interest. There are twelve *Sites of Special Scientific Interest* (SSSIs) and two *Local Nature Reserves* (LNRs), designated in respect of their habitats. These include ancient oak woodland, mixed ancient woodland with rich ground flora, wet meadows on peaty soil, valley and upland blanket mire, deep rocky chasms with mosses and ferns, large sand dune systems and geological features. Statutory designated sites cover only 1,215 hectares or 4.8% of the county borough's land-area, which includes the 974 hectares of the Kenfig pSAC. Excluding these sand dune sites, the figure reduces markedly to just under 1% of the county borough's land-area. This compares rather unfavourably with the 18 'Landscape Conservation Areas' identified in the Local Plan for reasons of scenic and amenity value, rather than for nature conservation, which together cover some 3,062 hectares or 12% of the County Borough.

But statutory designations form only a part of the biodiversity picture. As has been indicated above, statutorily designated sites protect only some of the best examples of Bridgend County Borough's habitats. In addition to these a large number of non-statutory 'Sites of Importance for Nature Conservation' (SINCs) have also been identified in the county borough. The main purpose of these is to help to conserve

additional areas of important wildlife habitat which may not qualify as nationally or internationally significant, but which are important in the regional or local context. SINCs are normally protected against destruction or adverse development through their recognition in the planning and development process, and may be targeted for grant-aid to maintain and enhance their nature conservation interest.

In March 2000, the UK Local Sites Review Group prepared a report for the DETR and gave the following agreed description of the purpose of a Local Site (SINC):

*"The series of non-statutory Local Sites seek to ensure, in the public interest, the conservation, maintenance and enhancement of species, habitats, geological and geomorphological features of substantive nature conservation value. Local Site systems should select all areas of substantive value including the most important and the most distinctive species, habitats, geological and geomorphological features within a national, regional and local context. Sites within the series may also have an important role in contributing to the public enjoyment of nature conservation"*

DETR-LSRG, 2000

Over 160 non-statutory Sites of Nature Conservation Importance have been identified in the county borough, first in the *Ogwr Wildlife Strategy* and subsequently highlighted in the *Landscapes Working for Bridgend County Borough* (Opus 1997) strategy. These areas have recently been validated, and are now added as a layer to the County Borough's Geographic Information System database which is used in planning and development control. An up-to-date (2001) list of SINCs within Bridgend County Borough is attached at Appendix 1 of this Volume, together with guidance on their selection.

In addition, sites may be adopted or designated as nature reserves by voluntary and private sector bodies such as the county wildlife trusts, Butterfly Conservation and the Woodland Trust. For example, the Glamorgan Wildlife Trust manages Park Pond and the Parc Slip Restoration Site near Tondy as one of their nature reserves, while the Woodland Trust owns Trafalgar Wood, Porthcawl.

Even outside of the specially recognised sites, the rest of the county borough is rich in wildlife habitats. For example, patches of scrub, field margins, hedgerows, ponds, mature trees, vegetated tips, road verges and urban green spaces can all contribute to Bridgend County Borough's biodiversity. They are often of particular value to local people in their everyday lives, as well as supporting much of the 'background' biodiversity of ubiquitous species which are not by any means confined to the special, designated sites.

Annex 1 sets out a preliminary assessment of the key habitats in Bridgend County Borough, as determined by the Bridgend Biodiversity Partnership, a list of Sites of Importance for Nature Conservation within Bridgend, and Guidance on their Selection.

## **Habitats : Losses and Threats**

Despite the richness of the wildlife resource in many areas within the County Borough, there has been a considerable loss of biodiversity over the past 100 years, with the fragmentation of many habitats paralleling their decline in quality and extent. The main attrition of habitats has been due to built development, such as roads, houses and industry, but much has also been lost to changes in agricultural practice and commercial afforestation.

Built development results both in direct loss of habitat and in degradation due to the secondary impacts of development, such as increased water abstraction, loss of buffer zones and pressure of increased human presence and disturbance. Where agricultural practice has changed, it is factors such as the disruption of drainage patterns, spraying with herbicides and pesticides, nutrient enrichment and removal of traditional farm features (such as hedges, ponds, and small copses) that have caused impoverishment of wildlife habitats. Changes like these have come about largely through support by successive governments anxious to see Britain become more self-sufficient in food-production, as also as an unwanted consequence of Europe-wide convergence in farming policy in the 1980s and early 1990s.

The main damage caused by afforestation has been to areas of heathland and ancient woodland, which were deemed 'unproductive' and therefore suitable for intensive forestry management in the 1970s and 80s. The pre-existing habitats, which support many rare and characteristic species, were often severely damaged or destroyed entirely by the use of modern drainage and enrichment techniques, before being planted with non-native conifers or broadleaved timber crops.

Agriculture and forestry practices are nowadays more sensitive to the needs of nature conservation, and there have been significant shifts in national and European policy which have seen some slowing in the dramatic rate of habitat and species losses of the past. However, there is still pressure from built development, and many valuable wildlife sites now suffer from a lack of management caused by the decline of traditional, smaller-scale mixed farming.

## **SPECIES**

### **Species : Diversity and Importance**

Bridgend County Borough is rich in a wide range of species due to the area's geographical variation, and the wide range of habitats it contains; in particular, its internationally important sand dune systems. The variety of coastal habitats, which include small areas of saltmarsh, sandy beaches and rocky shoreline, supports a number of species that cannot be found in inland areas. An example is the Strandline Beetle (*Eurynebria complanata*), which at Kenfig is present in one of its most northerly stations in Britain.

Many large areas on the coast have remained comparatively unchanged for long periods. Stable environments allow many species that have very specific habitat requirements to persist. The Merthyr Mawr and Kenfig sand dune systems are a special case. These constitute some of the best dune areas in Wales, and are rich in fungi, bryophytes, vascular plants, invertebrates and vertebrates. Some species are found in very few other places in Britain, such as the Fen Orchid (*Liparis loeselii*) and the Shrill Carder Bee (*Bombus sylvarum*). Even though these species have survived here, management is still required to ensure their long-term survival. The Fen Orchid, for example, appears to enter a new, damp, bare sand slack area after about thirty years, and then finds it difficult to compete with the colonising vegetation after about sixty years! The Shrill Carder Bee needs flower-rich meadows, with good forage plants such as Yellow Rattle and Red Clover, and is badly affected when stock grazing levels are too low, resulting in scrub development, or if they are too high, when flowering heads get nibbled off.

### **Species : Losses and Threats**

Species can be threatened by a range of factors, which can affect both the individual organisms and their habitats. These factors can be broadly grouped together as changes in habitat, pollution, species effects, direct human impacts and genetic effects.

The Marsh Fritillary butterfly (*Eurodryas aurinia*) is a good example of a species that has been driven close to extinction in many parts of Britain because of the way that traditionally managed damp pastures and meadows have been reduced in extent by development, agricultural improvement and abandonment. Species can be affected by a reduction in the overall extent of habitat, fragmentation of the habitat, or changes in habitat quality. In the case of the Marsh Fritillary, the damp grasslands that it needs now often occur in patches too small, or too fragmented, to support a viable population.

Pollution affects many species directly. Freshwater molluscs can be used as bio-indicators in aquatic environments, and lichens are well known for their role as sensitive indicators of air pollution. Many such species are intolerant of high levels of sulphur or nitrates, both key pollutants arising from industrial or farming operations.

Some species can be adversely affected by other species - through competition, disease or predation. For example, invasive species of plant such as Sea-Buckthorn on dunes, or Japanese Knotweed and Himalayan Balsam in river systems, can out-compete native flora and replace it with a monoculture.

Several species of orchid and fern have had their populations reduced, sometimes almost to extinction, by enthusiastic human collectors. Human disturbance can have similar consequences, and is a factor in the reduction in numbers of some birds, notably breeding waders, which depend on open habitats such as wet grasslands in river valleys, or coastal shingle.

Though the genetics of wild populations are generally poorly understood, issues include the introduction of alien varieties, for example cultivated daffodils, and the release of genetically modified organisms. Many individual populations of species have developed very specific genetic adaptations to the precise environmental conditions of their locality. The introduction of 'alien' genetic material through crossbreeding with introduced strains of the same species may severely affect the ability of a localised population to survive.

### **An Audit of Bridgend County Borough's Species**

In its early days, the Glamorgan Biodiversity Advisory Group attempted to establish the presence and/or absence of UK BAP Priority Species in each local authority area. Information was scattered between a variety of sources and proved difficult to assemble. Real progress was only made when resources were found for a Welsh Wildlife and Countryside Link initiative, managed by the Royal Society for the Protection of Birds, and grant aided by CCW. This compiled local species information on a CD-ROM which then underwent testing by biodiversity practitioners throughout Wales, and was eventually launched at the Wales Biodiversity Group meeting in Cardiff on 30<sup>th</sup> July 2000 (CCW *et al* 2000).

The UK Biodiversity Programme identified 1,288 species of national conservation concern. Of these, some 489 species are of priority concern (rapidly declining or globally threatened). The Countryside Council for Wales has so far identified 181 UK Priority Species with published action plans, which are present in Wales.

An audit of Key Species has been carried out for Bridgend County Borough. This has taken account of the national Priority Species and other species of national conservation concern which are known to occur within the county borough, together with small number of additional species which are of local concern and distinctiveness. These are listed in Annex 2. Further identification of the Key Species in the county borough is subject to the continuing work of the Bridgend Biodiversity Partnership and the input of specialist recording bodies and individuals working in the region.

The input of information from the local community is especially important in identifying species of local distinctiveness and rarity, and additional or new information will be included in the LBAP during its periodic revision in the future.

Key Species in Bridgend County Borough should include all of the UK BAP species which occur, together with any additional species that meet local inclusion criteria. Key Species will normally comprise those which:

- ◆ have significant populations in a regional or national context
- ◆ are declining locally
- ◆ are locally rare
- ◆ have local threats to their survival.

National action plans have been prepared for the majority of these species. These plans set targets and a broad framework for action, but to be effective they must be translated into the local context.

Conservation action for most Key Species can be dealt with through Habitat Action Plans. Positive management actions which benefit a particular habitat will also benefit the majority of species which depend on that habitat. However, a few species have very special requirements that cannot be met through habitat action alone. Species Action Plans will therefore be required, for example, where:

- ◆ a species is so highly threatened, or rapidly declining, that urgent action must be taken to avoid local extinction - the rarer fritillary butterflies are a case in point;
- ◆ where a species is widespread, occurring on a range of habitats, but general habitat work will not cater for it;
- ◆ there are species which, although restricted to a particular habitat, have such peculiar ecological requirements that normal habitat management will not cater for it: for example, the Fen Orchid at Kenfig NNR.

## **Wildlife Recording**

Finding out about the wildlife of an area relies on individual people keeping records of what they see and then passing this information on to national and local recording schemes. There is at present no coordinated recording of wildlife information in south Wales, although a number of bodies and individuals compile information themselves, including CCW, the Glamorgan Wildlife Trust and the National Museum & Gallery of Wales. There are several initiatives underway both at the national and the regional level to consolidate and organise the gathering of biological records in south Wales, but these are unlikely to result in any concrete developments in the near future.

### **NATIONAL & LOCAL WILDLIFE RECORDING ORGANISATIONS**

Botanical Society of the British Isles  
British Bryological Society  
British Dragonfly Society  
British Lichen Society

Glamorgan Moth Recording Group  
Glamorgan Wildlife Trust  
Hawk & Owl Trust  
Institute of Terrestrial Ecology

British Mycological Society	Malacological Society
British Trust for Ornithology	Mammal Society
Butterfly Conservation	National Museum & Gallery of Wales
Environment Agency	Otters in Wales Project
Freshwater Biological Association	Royal Society for the Protection of Birds
Glamorgan Badger Group	Vincent Wildlife Trust
Glamorgan Bat Group	Whale & Dolphin Conservation Society
Glamorgan Bird Club	

## Monitoring

The current Key Species in Bridgend County Borough will be placed in a database, which will be updated as additional information on the status of species becomes available. The database will also keep track of relevant conservation projects and current action for each species.

## Biodiversity Policy Base

Throughout most of Britain, local planning authorities have policies aimed at protecting their own locally important sites as well as the nationally important statutory sites and protected species. Thus in the *Mid Glamorgan Replacement Structure Plan 1999*, as it affects Bridgend County Borough, the relevant policies EV5 and EV6 refer to the protection of non-statutory designated sites (ie SINCs) against inappropriate development. The adopted *Ogwr Borough Local Plan* also contains policies related to the protection of trees, hedgerows and woodlands, the protection of sites of national, regional and local importance, and mitigation for their loss or damage by development.

Bridgend County Borough Council is in the process of producing a new 'Unitary Development Plan' for the county borough, which replace the former Mid Glamorgan Structure Plan and other outdated Local Plans. The 'deposit version' of the Unitary Development Plan for Bridgend County Borough, which was issued for public consultation on 24<sup>th</sup> May 2001, contains a suite of policies regarding biodiversity conservation and enhancement.

At the regional and national level, local planning policy is influenced by a number of published documents, including:

- ◆ *Planning Guidance (Wales): Planning Policy (1<sup>st</sup> Revision) 1999* (currently being revised)
- ◆ *Planning Guidance (Wales): Technical Advice Note (Wales) 5: Nature Conservation & Planning 1996*
- ◆ *Strategic Planning Guidance for South East Wales 2000*

## **Chapter 4**

### **HABITAT AND SPECIES ACTION PLANS**

The audit of biodiversity in Bridgend County Borough is on-going, through the collation of existing data and new survey work coordinated by, or carried out by, the Bridgend Biodiversity Partnership. This has enabled the selection of habitats and species of priority concern in the county borough.

One of the Partnership's objectives is to prepare a detailed action plan for those priority habitats identified by the Wales Biodiversity Group which are found in Bridgend County Borough. Relevant Habitat Action Plans (HAPs) should cover the actions that are needed to help conserve the many of the county borough's Key Species. However, some species will not be adequately covered by the Habitat Action Plans, and where this is the case, individual Species Action Plans (SAPs) will also be drawn up.

Volume 2 of the Bridgend Biodiversity Action Plan contains some 16 HAPs and 30 SAPs prepared to date. This volume will be expanded to include any additional Habitat and Species Action Plans as they become available in the future.

#### **Purpose and Scope of the Plans**

The overall aim of each action plan is to enable successful conservation or restoration of priority habitats and species. Each plan should provide an up-to-date and comprehensive review of the current status of these habitats and species, enabling effective and well-directed action.

Each plan will therefore have several goals:

- ◆ to provide information
- ◆ to establish targets for action
- ◆ to direct conservation action
- ◆ to raise awareness
- ◆ to provide a monitoring framework

Action plans will set the conservation direction and outline priorities. They will also present challenges to the many organisations and sectors that are involved. Each plan will help individual organisations to identify their role; for example, whether site management, provision of grant-aid, site protection, or perhaps influencing national policy. Plans must clearly present the extent and type of action that is required and the funds needed for implementation.

The focus of each plan will be the action required at a variety of levels, from the local neighbourhood to national policies and programmes. Action in Bridgend county borough should contribute effectively to national objectives and targets.

This Plan is not intended to be written and then shelved. In the same way, each Habitat or Species Action Plan should be seen as a working document, providing a reference point to monitor progress at regular intervals. Every action plan will be updated over time; additional habitats and species may have plans prepared for them if the UK Action Plan recommends them, or if local circumstances dictate.

## **Content**

Each habitat or species action plan will have three main elements:

- ◆ Assessment – a summary of status, threats and action to date
- ◆ Objectives and Targets – detailed objectives with measurable targets
- ◆ Action Points – actions required to meet objectives and targets.

Action plans will integrate all relevant previous work in the county borough, and provide a comprehensive assessment of conservation needs. They will set out detailed objectives and specific, measurable targets such as area of habitat to be re-created or restored. Targets will, pragmatically, need to be based on funding that might be reasonably available, and indeed action plans may stimulate new resources. The trick is to focus action to reach targets over realistic, yet ambitious, time-scales. Lack of comprehensive data should not be a barrier to setting targets, and indeed a target may be the improvement of data quality. Targets will be audited and reviewed as further information and resources become available in the future.

Each plan will ideally follow a standard format, ensuring a consistent approach and level of detail, and should strive to be compatible with plans written for the same habitats and species - whether regionally or nationally. Liaison is undertaken with neighbouring local authorities through the Glamorgan Biodiversity Advisory Group, the body preparing regional guidance relevant to Bridgend County Borough.

Action plans will need to integrate relevant proposals and approaches accepted in other plans and strategies. Examples of these are Local Environment Agency Plans, Local Authority Countryside Strategies, and LANDMAP strategies. In turn these other plans will help to refine, develop and implement initiatives.

### **CONTENT OF HABITAT ACTION PLANS**

#### ***Introduction***

*Reasons for including the habitat in the Biodiversity Action Plan for Bridgend County Borough – international conservation concern; key habitat within the National Biodiversity Action Plan; habitat of particular Bridgend County Borough concern.*

*Description of habitat – including its variation and associated species*

#### ***Current Status***

*Distribution and extent – regional, national and international context; distribution and extent in Bridgend County Borough*

*Legislation and site designation*

*Summary of important sites*

**Threats**

*Current Factors Affecting the Habitat - summary of the current factors causing loss, damage or reduction in quality of the habitat*

**Current Action**

*Site and species protection – legislation and site designation*

*Habitat management and programmes of action – incentive schemes, habitat management projects, plans, strategies and policies*

*Survey, research and monitoring – audits, research into impacts, research into techniques for management / restoration etc*

*Current action for any specific priority species associated with the habitat*

**Future Action**

*Objectives and Targets*

*Timescales and areas for habitat safeguard, management, restoration and expansion; objectives and targets for species conservation; taking into account national objectives and targets*

*Proposed Action with Lead Agencies*

*Habitat protection and management – site designation; policy changes; programmes for management, restoration and re-creation; special projects and the involvement of existing projects and initiatives*

*Incentive schemes and other resources – targeting and strengthening of incentive schemes; identifying and increasing other resources*

*Species action – any action required for priority species*

*Advice – liaison with landowners and land managers; provision of support and information to relevant organisations*

*Survey, research and monitoring – to support local and national action plan objectives*

*Communication and publicity – raising awareness and providing information to all relevant sectors*

**Information sources**

*Lists of projects, schemes, publications and contacts*

## **CONTENT OF SPECIES ACTION PLANS**

### **Background**

*Reasons for including the species in the Biodiversity Action Plan for Bridgend County Borough – species of international conservation concern; priority species within the National Biodiversity Action Plan; species of particular Bridgend County Borough concern*

*Ecology and habitat requirements*

### **Current Status**

*Population and distribution – international, national and Bridgend County Borough*

*Legislation and site designation*

*Summary of important sites*

### **Current Factors Causing Loss or Decline**

*Summary of the current factors causing decline in populations and distribution*

### **Current Action**

*Protection – legislation and site designation*

*Site management and programmes of action – habitat management, special projects e.g. recovery programmes; incentive schemes*

*Survey, research and monitoring – audits; research into impacts; research into habitat requirements and habitat restoration techniques etc.*

*Objectives and targets for maintaining and increasing species populations and distribution, taking into account national objectives and targets*

### **Future Action**

*Proposed Action with Lead Agencies*

*How the objectives and targets will be delivered, and by whom*

*Species protection and management – site designation; policy changes; habitat management; restoration and re-creation; special projects*

*Incentive schemes and other resources – targeting and strengthening of incentive schemes; identifying other resources*

*Advice – liaison with landowners and land managers; provision of support and information to relevant organisations*

*Survey, research and monitoring – to support local and national action plan objectives*

*Communication and publicity – raising awareness and providing information to all relevant sectors*

***Information Sources***

*Lists of projects, schemes, publications and contacts*

## **Preparation of Action Plans**

Each Habitat or Species Action Plan will be prepared by a working group or lead partner. The opportunity is open to all partners to be involved in the preparation of any plan, and the plans will undergo wide consultation. This will result in them being comprehensive, accurate, forward thinking and widely supported. The involvement of those people who have specialist knowledge, or who have a particular sphere of activity, or the ability to influence implementation, is particularly important.

## **Implementation**

Implementation of each action plan will be achieved through the Bridgend Biodiversity Partnership acting collectively, through individual partners taking action, or through the actions of others not yet involved. There will be a variety of issues and types of action required, and these will be different for different plans. Success will be best achieved through each partner identifying how they can contribute. For example, the National Assembly for Wales might wish to review the targeting of the Tir Gofal scheme, the local authority might wish to identify land-use and management issues within a specific geographical area; or landowners may consider reviewing the management objectives for their landholdings. Encouragement or support will be needed to help some partners take action or to focus efforts, and it is important that a lead agency is encouraged to oversee implementation of each plan.

Some issues and action may be common across a number of plans. For example, several different habitats would benefit from initiatives which encourage grazing. There may be cases where action for one habitat or species works to the detriment of another habitat or species. Such cases will need careful review.

Monitoring progress will be essential, and plans will need to be continually monitored, as circumstances and issues change over time.

## Chapter 5

### INFORMATION AND DATA

The UK Biodiversity Steering Group Report stresses the fundamental importance of good data and a coordinated approach to both national data provision and local data management. The collection of data on the biodiversity of Bridgend County Borough, its habitats and species, is essential to the development and implementation of a Local Biodiversity Action Plan. No single organisation has a statutory duty to collect biological information, yet the need to record and monitor this is self-evident. Preparation of this Local Biodiversity Action Plan will assist in meeting the guidance in *Planning Guidance (Wales): Planning Policy*, and will further assist in ensuring that nature conservation is included in the surveys of local authority areas required by Section 30 of the Town and Country Planning Act (1990). This will ensure that development plans are based on fully adequate information about local species, habitats, geology and landform.

The county borough has made a start on collating data through its partnerships. It has carried out a Hedgerow Survey and begun a Pond Survey in partnership with the National Museum & Galleries of Wales, it has produced *'The Birds of Bridgend'* (BCBC 2000) in partnership with Celtic Bird Tours, and has sponsored the Glamorgan Moth Recording Group's *'Provisional Atlas of Macro-Moths in Glamorgan'* (Gilmore & Stewart (1999)). The CCW has provided copies of its Phase 1 Habitat Survey. Close day-to-day working with the local conservation and recording groups and agencies is an important way of accessing the data needed to prepare action plans.

A list of publications and data sources for Bridgend County Borough is given at Appendix 2 of Volume 2.

#### The National Biodiversity Network

Much information still needs to be obtained. There is also a need to further coordinate the sets of data held by different organisations and individuals. The National Biodiversity Network is a project attempting to establish a national data system and network of local biological record centres.

The Glamorgan Biodiversity Advisory Group, and its sister organisation the Greater Gwent Biodiversity Advisory Group, mirror the operating areas of agencies such as the Countryside Council for Wales and of voluntary sector organisations such as the Glamorgan Wildlife Trust. This existing co-operation on biodiversity issues would support the possible development of a Local Biological Records Centre serving Glamorgan and Gwent in the future.

The twelfth report of the House of Commons 'Environment, Transport & Regional Affairs Committee' was published on 7<sup>th</sup> July 2000. The Committee identified a number of shortcomings in delivering biodiversity action in the UK. Their report, entitled *'UK Biodiversity: Interim Report'*, identifies that primary legislation would be required to remedy some of these shortcomings, and one of their recommendations

is for a statutory basis to be given to local authorities and other public bodies to set up and maintain local biological record centres.

### **LOCAL BIOLOGICAL RECORDS CENTRES**

The UK Biodiversity Steering Group Report suggests that local data management is best carried out by local biological record centres. Local centres are needed to both serve local needs and contribute information at a national level. The Report recommends that each centre should be developed and managed by a consortium of local organisations, and have the following functions:

- *to act as a focus for biological record management in the area*
- *to manage the collection, validation and maintenance of key data sets on behalf of partners*
- *to act as a contact point for access to data by local and national users*
- *to provide support and guidance to recorders, local societies and recording schemes*
- *to provide support for the local planning process*
- *to promote and steer future survey*
- *to provide data and an information service to a range of organisations and individuals*

The consortium-led approach has many benefits: managing partners will have a sense of ownership of the centre; costs of the data service are shared between a number of organisations; there is less duplication of records; it is easier to standardise and quality control the collection, validation and management of the data.

### **Management Guidance for Habitats and Species**

There are many published sources of advice for the general management of habitats and specific management for species available, and some of these are listed in Appendix 3 of Volume 2. In addition, guidance may be sought from a wide range of organisations including:

- ◆ British Trust for Conservation Volunteers
- ◆ Coed Cymru
- ◆ Countryside Council for Wales
- ◆ Countryside Management Association
- ◆ Environment Agency
- ◆ Farming & Rural Conservation Agency
- ◆ Farming & Wildlife Advisory Group
- ◆ Forestry Commission

- ◆ Glamorgan Wildlife Trust
- ◆ Groundwork Cymru
- ◆ Wales Wildlife & Countryside Link
- ◆ Wildfowl & Wetlands Trust
- ◆ Woodland Trust

## **Chapter 6**

### **GENERAL ISSUES AFFECTING BIODIVERSITY**

The conservation of biodiversity is not only dependent on direct action for habitats and species; there are many wider issues that have a great influence on the welfare of wild plants and animals. Agriculture and development are two key issues in Bridgend County Borough, but many other human activities have considerable impact - for example, the various uses of land, patterns of resource consumption, energy use and transport. The intention of this chapter is to review these issues, and make the connection between biodiversity conservation and other activities.

The principal organisations and agencies that are represented on the various biodiversity forums in Wales, Glamorgan and Bridgend County Borough should develop their own awareness and understanding of how the various issues affect biodiversity, and chart a course of appropriate action. There are many different levels of action required, not least the integration of biodiversity objectives into plans and strategies such as Local Environment Agency Plans, for example. The Bridgend Biodiversity Partnership will encourage and support organisations that are formulating their own action for biodiversity.

### **AGRICULTURE**

Agricultural use of land affects approximately 52% of Bridgend County Borough. This figure is a low estimate, since it is a sum of the areas of farmland as stated in the 1997 Agricultural Census, and does not include minor holdings (under 6 hectares) or land designated as common land. Agriculture plays a pivotal role in determining the biodiversity of the countryside and traditional farming practices are particularly important in maintaining wildlife habitats. Many different types of habitats occur on farmland, including ponds, hedgerows and wildflower meadows. Stubble, field margins and fallow land are also valuable for wintering, feeding and breeding birds. Often, within the farmed landscape, but usually not directly linked to the agricultural enterprise, woodland blocks and copses, are not only valuable for biodiversity but also for landscape and timber production.

### **Habitat Loss and Change**

Changes in farming practice over the last fifty years - towards greater intensification and specialisation away from mixed farming systems - have resulted in major losses and fragmentation of habitat. These changes have come about through a national and European policy framework initially developed to meet an urgent need to produce more homegrown food at a time when Europe faced a serious risk of food

shortage. The policies have encouraged food production without commensurate support for the conservation of biodiversity and protection of the landscape; these policies have remained unchecked for too long, and only now are reforms coming on stream.

Food production is important, but needs to be balanced with environmental objectives. Many of the habitats that remain have suffered degradation through drainage, nutrient enrichment, heavy grazing, re-seeding, the application of pesticides or herbicides and the lack of traditional management. Many farmers are aware of the effects of these practices on biodiversity and some are turning to alternative approaches such as integrated crop management.

### **Incentives for Land Management**

The balance between agricultural production and conservation of biodiversity has, in recent years, been encouraged by the introduction of financial incentives to encourage farming practices more sympathetic to wildlife. Such agri-environment schemes, administered by the National Assembly for Wales, Countryside Council for Wales Agriculture Department, Forestry Commission, Cadw: Welsh Historic Monuments, National Parks and other public bodies, have included:

- ◆ *Environmentally Sensitive Areas (ESA) Scheme*
- ◆ *Habitat Scheme*
- ◆ *Moorland Scheme*
- ◆ *Organic Aid/Organic Farming Scheme*
- ◆ *Countryside Access Scheme*
- ◆ *Set-Aside Scheme*
- ◆ *Farm Woodland Scheme*
- ◆ *Farm Woodland Premium Scheme*
- ◆ *Farm and Conservation Grant Scheme*
- ◆ *Tir Cymen*
- ◆ *Hedgerow Renovation Scheme*
- ◆ *Forestry Commission Grant Scheme (FCGS, including the Woodland Grant Scheme - WGS)*
- ◆ *Cadw : Welsh Historic Monuments Management Agreement*
- ◆ *National Park Management Agreement*
- ◆ *SSSI Management Agreements*

Tir Gofal is the new 'all-Wales whole-farm' agri-environment scheme delivered on behalf of the National Assembly for Wales by the Countryside Council for Wales (CCW) in partnership with the Farming & Rural Conservation Agency (FRCA) and the National Park Authority in Snowdonia. Some of the above schemes will be running in parallel with Tir Gofal for the remaining years of their contracts before being phased out, but most (eg ESAs, Habitat Schemes, Moorland Scheme, Countryside Access Scheme, Tir Cymen, FCGS and smaller WGS) will eventually be integrated with, or subsumed by, the All-Wales Scheme.

Set-Aside Schemes remain available to arable farmers, but are not strictly agri-environment schemes although they can offer some wildlife benefits. Current policy

directives, reflected in the Tir Gofal scheme, should allow greater discretion in the implementation of schemes, so maximising benefits to wildlife at least with respect to nationally identified priority habitats and species. All of these schemes are vital to support the Biodiversity Action Plan. Funding is of course limited, and much good environmental management is reliant on the willingness and financial resources of land managers.

The 'Agri-Food Partnership' set up by the Welsh Development Agency, and of which Bridgend County Borough Council is a member, seeks to support the Welsh agricultural and food industry. Support includes the promotion of organic farming, and the development of farmers' markets. The environmental benefits associated with the latter initiative is the reduction of long freight journeys (food miles), so reducing air pollution and the encouragement of environmentally friendly farming practices in the long term. Green consumerism is likely to prove an incentive for environmental land management, and encouraging local markets to buy produce from environmentally-managed land-holdings could bring benefits both to farmers and biodiversity.

### **Advice on Land Management**

Advice to landowners on how to manage land for biodiversity is very important. Whilst the Country Landowners Association (CLA), the National Farmers Union (NFU) and the Farming Union of Wales (FUW) are all active in promoting environmentally sensitive farming, the availability of on-the-ground advice from advisors with a strong agricultural and environmental background is essential.

However, there is a lack of a Farming and Wildlife Advisory Group (FWAG) officer for Glamorgan, and advice and information is not always easy to come by. The Countryside Council for Wales has an advisory role on the management of SSSIs and with the Tir Gofal agri-environment scheme, although the coverage of these sites remains very restricted. The possible appointment of a FWAG officer is currently being investigated as part of a trans-boundary 'Farmers Group' initiative involving a number of the local authorities in the former Glamorgan county area.

Organisations in Glamorgan (through GlamBAG) are currently exploring ways to improve support and advice for the owners of the locally designated Sites of Importance for Nature Conservation.

### **Common Agricultural Policy (CAP)**

Incentive schemes and advice, and the goodwill and sense of stewardship towards the environment by landowners, are all important. However, the primary determinant of the future of biodiversity within agriculture is the Common Agricultural Policy (CAP). Related aspects are consumer demand, social trends and employment within the countryside, policies promoting diversification of enterprise within the countryside and development in technology.

The original aims of the CAP were to increase agricultural productivity, ensure a fair standard of living for the agricultural community, stabilise agricultural markets, guarantee regular supplies of food and ensure reasonable prices to consumers.

The Policy has been very successful in these aims but was due for review. The CAP was in effect supporting farming practices which were insensitive to biodiversity needs, and this was at odds with the national rise in awareness, demand and policy for conservation. The CAP and national policy on biodiversity gave conflicting messages, and this was a source of frustration for many landowners and conservation organisations.

In 1997 the European Commission published Agenda 2000, a blueprint for the development of certain European Union policies including the CAP. The Commission suggested that CAP reform should be accompanied by measures to diversify rural economies, maintain social stability and conserve and enhance the environment. Reform of the CAP may result in removal of support for farm product prices over time. The issues involved are complex but one goal will be to integrate environmental objectives fully into the CAP, resulting in a re-invigorated agri-environmental policy, with new and extended agri-environmental instruments such as Tir Gofal more readily available.

### **A Range of Activity**

Conserving biodiversity within the agricultural sector is a particular challenge and one that involves a wide partnership, from delivery of national and local incentive schemes and advice, to forecasting change and influencing policy. Particularly influential in the latter will be the NFU, FUW and CLA.

The aim of the Biodiversity Action Plan for Bridgend County Borough will be to influence this range of activity. Action stemming from the Plan will have to be clearly relevant to the landowners who manage a large proportion of our countryside.

### **DEVELOPMENT**

Extensive loss of wildlife habitat, particularly within the last 50 years, has been caused by development. Significant activities include housing, industrial and business development, roads, coastal defences, land-fill and mineral extraction, resulting not only in loss of habitats, but also causing a variety of indirect impacts on nature conservation in the form of pollution, modification of water courses, disturbance of sites adjacent to development and isolation and fragmentation of habitats.

The demand for new development continues and has to be accommodated in accordance with the relevant Development Plan. Notwithstanding this requirement the quality of the environment must also be maintained.

### **Sustainable Development**

Two key documents were published in 1994 - '*Sustainable Development : The UK Strategy*' (HMSO 1994b) and '*Biodiversity: The UK Action Plan*' (HMSO 1994a). Both are inextricably linked, since sustainable development 'seeks to improve the quality of human life without undermining the quality of the environment'. In carrying out sustainable development, habitats and features that are effectively irreplaceable should not be destroyed, since once lost they are lost forever. The concept of

sustainable development embodies the principles of not only preventing destruction or damage, but also taking the opportunity to enhance biodiversity. Also important is the adoption of the *precautionary principle*: if in doubt about the environmental effects of the development, avoid the development.

*'Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation'*  
(Bergen Declaration on Sustainable Development in the UNECE Region, May 1990).

## Land-use Planning

There are several pieces of national and European legislation and national government guidance which support biodiversity objectives, including:

- ◆ *EC Directive 92/43/EEC, on the Conservation of Natural Habitats and of Wild Fauna and Flora*
- ◆ *The Conservation (Natural Habitats Etc.) Regulations 1994*
- ◆ *Wildlife & Countryside Act 1981, as amended*
- ◆ *The Countryside & Rights of Way Act 2000*
- ◆ *Planning Policy: Planning Guidance (Wales): Planning Policy (1<sup>st</sup> Revision 1999)*
- ◆ *Technical Advice Note 5: Nature Conservation & Planning 1996*

For development to be sustainable in terms of biodiversity, it needs to be well planned and controlled. The Unitary Development Plan for Bridgend County Borough, if it is to assist in maintaining and enhancing biodiversity at the local level, should be based on detailed audits of the nature conservation resource and the capacity of the area concerned to accommodate development. The UDP needs to contain policies which address the protection of designated sites of nature conservation importance, conservation of biodiversity in the wider countryside and the enhancement of biodiversity within development. Current Planning Guidance also requires planning authorities to conduct environmental appraisals of their development plans to make clear the implications of various strategies and policy alternatives.

The assessment of the effects of development proposals requires a disciplined approach, and decision-makers should be sufficiently well advised as to what makes a good environmental assessment and what the opportunities are for conserving or enhancing biodiversity.

## FORESTRY

Forestry is a major land-use, and can have a great effect on biodiversity. Broadleaved woodlands throughout Wales have suffered from lack of management for decades due to changing markets and the reduced economic viability of woodland products. Replacement of native broadleaved woodland with conifers and the cessation of traditional forms of management such as coppicing have all led to a reduction in biodiversity. Circumstances are changing now, however, particularly with the provision of grant-aid. The role of Forest Enterprise, the commercial arm of

the Forestry Commission, has changed recently to include the protection and enhancement of biodiversity, especially in ancient woodlands, and the drafting of its own Habitat and Species Action Plans for forestry sites.

The Government has set out its approach to sustainable forestry in the UK Forestry Standard 1998. This provides a framework for protecting and managing woodland in the future and gives specific attention to biodiversity issues. In 1996 the Forestry Commission introduced Woodland Improvement Grants under its Woodland Grant Scheme, specifically targeting biodiversity conservation. Grants are available for under managed woods, including funding for the restoration of coppice and for woodland biodiversity. This new targeted approach to grants by the Forestry Commission will greatly assist biodiversity conservation.

Bridgend County Borough Council supports the appointment of a Coed Cymru Officer based within Rhondda Cynon Taff County Borough Council's Planning Department. Coed Cymru promotes the use, protection and enhancement of the native woodlands of Wales. It represents a focal point for organisations that share a concern for native woodlands. Coed Cymru aims to rebuild the timber market for sustainable managed native woodlands, whilst ensuring that the vitality and biodiversity value of each individual woodland is enhanced through positive management.

## **COASTAL ISSUES**

The coastline of Bridgend County Borough supports a rich assemblage of plants and animals. The large sand-dune systems of Kenfig and Merthyr Mawr are sites of European importance for nature conservation. There are only small areas of intertidal mud and salt-marshes, but other habitats include rocky outcrops, cliff, shingle spit and beaches, all of which are important as feeding and roosting places for large numbers of birds - particularly in winter and at migration times - and for other species. Nevertheless, the coast is suffering from pressures that threaten this wildlife interest, including exploitation of offshore sandbanks and channel dredging.

Sea level rise due to global warming also puts pressure on the coast. Within the Bristol Channel a significant loss of inter-tidal habitats is predicted as they are 'squeezed' between rising sea levels and coastal defences. A sea level rise of 6mm per year along the coast of Glamorgan has been predicted; this would give a 32cm increase by 2050. The amenity value of the coast introduces further pressures from recreation and tourism. Pollution is also a problem and includes organic enrichment from sewage and agricultural run-off.

The Swansea Bay Shoreline Management Plan should fully embrace biodiversity objectives. The issues and action required will be included in coastal habitat action plans.

## **RECREATION AND TOURISM**

The trend towards an increasing use of the countryside for recreation is important. Most visits are less than a five-mile round-trip from home, so access to recreation

near to where people live is particularly significant. Access helps to increase public understanding of nature, thus making a contribution to biodiversity protection.

Visitor pressures can, however, be detrimental, especially at heavily used sites, where sensitive species and habitats may be damaged. Noisy, disruptive and damaging activities should be prevented or very carefully controlled in vulnerable sites such as ancient woodlands, fens, heathlands and coastal habitats. On the other hand, some habitats can readily absorb recreational use, such as forestry sites for example. Appropriate measures will be included in Habitat Action Plans where relevant.

Visiting the countryside is one of Britain's most popular leisure activities, and there is clearly an opportunity to promote concern for biodiversity as a central theme in all countryside recreation and tourism initiatives. Raising awareness among people about the needs of the plants and animals that they enjoy seeing in the countryside, will also help to achieve biodiversity objectives.

## **WATER MANAGEMENT**

Biodiversity can be affected in a number of ways by how water is used. Climate change, inappropriate site management and abstraction can all lead to rivers, lakes and wetlands being severely depleted. Wetland habitats, and the wildlife which depends upon them, can be seriously affected by lack of water and the reduction in quality of remaining supplies. The naturalness, variety and extent of wildlife habitat along watercourses are at risk from inappropriate watercourse management and surface drainage.

Effluent from sewage treatment works and industrial processes, and run-off from farmland, may go directly into watercourses or seep into groundwater. Pollution such as this is the other main concern for wetland biodiversity. It is especially problematic where high nitrate and pesticide concentrations, and low dissolved oxygen levels, are the result - many animals and plants which depend on clean water cannot tolerate these conditions. Regulation of these aspects falls within the role of the Environment Agency.

Continual provision of new water resources is unsustainable, and demand for water needs to be managed. All new development, whether for industry or housing, has potentially significant water resource implications.

## **ENERGY**

The production, transmission and use of energy have wide-ranging effects on biodiversity. The generation of energy requires large installations such as power stations, transmission lines, or pipelines, which affect biodiversity directly through land-take. It is important that these installations are sited sensitively, away from vulnerable wildlife habitats.

The burning of fossil fuels results in both acid deposition and the release of pollutants such as carbon dioxide into the atmosphere. Acid rain affects a variety of habitats, particularly forests and lakes. However, the release of carbon dioxide is

having a more widespread effect. Emissions of greenhouse gases by burning fossil fuels have now been positively linked with global warming. This will result in very significant implications for biodiversity.

A sustainable energy policy that reduces energy demand and increases the use of renewable resources such as solar power and biomass fuels was adopted by Bridgend County Borough Council in May 1997. The 'Environmental and Sustainable Development Policy' states that: "this authority will make every effort to use environmentally safe and sustainable energy sources and seek to eliminate the unnecessary waste and use of energy in its own buildings, plant and equipment and promote responsible energy and water management throughout the county borough". The aim is to promote and encourage energy and water conservation and efficiency of use. To this end recent energy production schemes in the county borough have included energy from methane gas at Tythegston and Stormy Down, a waste to energy scheme at Tythegston and several natural gas power stations developments.

## **TRANSPORT**

There are both direct and indirect impacts on biodiversity caused by transportation. The growth of road transport is particularly significant, since road construction can damage, fragment or result in the complete loss of habitats, and it can also create barriers to species movement. Extraction from gravel pits and quarries for aggregates, and development adjacent to roads, can also affect wildlife.

In terms of Bridgend County Borough, car ownership and use has increased significantly in recent years, and traffic is forecast to continue growing at an unsustainable rate. The development of an integrated transportation strategy will hopefully address these issues successfully. Upgrading of the road network, if it involves new highway construction, could have significant effects on wildlife and it is important to ensure that each project does not affect important habitats. The new emphasis on reduced road construction, improved public transport, and maintenance of the existing infrastructure will reduce, but not remove, this impact.

Cycling and walking strategies are also being developed in the county borough to reduce the reliance on the private car and to change the public's attitude to more environmentally sustainable travel. The maintenance and improvement of the existing transportation infrastructure will take priority over the development of new routes, except in exceptional circumstances.

The first Local Transport Plan for Bridgend, was submitted to the National Assembly for Wales at the end of August 2000, and brought together a wide range of practical measures at the local level to produce a comprehensive integrated transportation strategy.

## **AIR QUALITY**

The main sources of air pollution are transport and energy production, both of which release pollutants into the air. Many industries may also contribute to low air quality, although this is a relatively minor factor in Bridgend County Borough.

Air pollution has well documented effects on people's health, but less well known are the implications for biodiversity. The effects are both local and widespread. For example, acid deposition can result in acidification of soils and water bodies, and the release of chemicals such as sulphur and nitrates can also affect organisms. Sensitive species such as lichens, habitats naturally low in nutrients and habitats on acid soils or in acid waters are particularly at risk from poor air quality. Regulation of these aspects falls within the role of the Environment Agency.

## **CLIMATE CHANGE**

'Greenhouse gases' being emitted worldwide contribute significantly to global warming. Even small changes in the earth's temperature could have great effects on biodiversity. Predicted changes include a rise in sea levels and a general warming of temperate regions, which will result in shifts in the composition of aquatic and terrestrial communities, and changes in wildlife behaviour and habitats.

Sea level rise is a considerable threat in Bridgend County Borough and the problems and opportunities need to be anticipated and planned for. Coastal habitats will be lost and species on the edge of their range may well disappear. Climate change illustrates that a long-term perspective for biodiversity needs to be taken in the preparation of action plans.

### **GENERAL ISSUES: ACTION**

*Encourage organisations and individuals with a particular responsibility for land-use and land management activities such as agriculture, development, forestry and water resources, to establish their own objectives and action for biodiversity, taking particular account of targets and action outlined in habitat and species action plans;*

*Establish groups where appropriate to review issues influencing biodiversity and prepare plans of action;*

*Take full account of biodiversity objectives within land-use plans and strategies such as the Unitary Development Plan for Bridgend County Borough and Local Environment Agency Plans;*

*Influence local and regional policy and national guidance, policy and legislation to support biodiversity objectives in Bridgend County Borough.*

## **Chapter 7**

### **AWARENESS AND INVOLVEMENT**

Biodiversity conservation cannot just be left to people involved in land management and nature conservation. It involves many sectors of society and people in all walks of life. Although many people are aware of the need to conserve biodiversity, they do not always appreciate that it concerns them directly, or that their actions can make a difference.

Action plans will specifically address awareness and involvement issues. The Bridgend Environmental Education Partnership (BEEP) is well placed to assess current initiatives and their effectiveness, identify gaps, and consider methods of spreading the biodiversity message. Some initial ideas are sketched out here.

#### **Key Sectors**

One of the main aims of this Local Biodiversity Action Plan is to increase understanding and support for biodiversity throughout Bridgend County Borough. This needs to involve key sectors of society - farmers and land managers, all levels of government, business and industry, media and education, youth and community groups and the professions. Successful implementation of many of the Species and Habitat Action Plans will depend on widespread understanding.

Biodiversity messages and initiatives can be geared to the particular interests of each sector. For instance, much of the success of the biodiversity programme is dependent upon action by farmers - farm managers and the farming industry will be keen to know how to promote biodiversity without losing long-term profitability. In education, schools need to be aware of all the opportunities for integrating biodiversity into the curriculum and finding ways to interest young people in the natural world.

Getting the biodiversity message across is the job of the Bridgend Biodiversity Partnership, but the support of people in each sector who can communicate in terms that are both relevant and understandable to the sector concerned, is also important.

#### **The Public's Role**

The biodiversity message needs to reach everyone as individuals too, focusing on the benefit of biodiversity conservation to us all. There is the enjoyment of contact with nature, the need to protect wildlife for our children and our moral duty to protect wild species. Action for biodiversity will improve the quality of everyone's life in his or her own neighbourhoods and communities.

There are several ways to raise awareness of biodiversity. The most familiar ways are through publications, illustrated talks, displays in shopping centres and libraries, and wildlife walks. Other ways involve adverts or programmes on radio and television, using the Internet, even marketing biodiversity alongside popular products.

A more active part can be played by people by improving their own gardens for wildlife, joining a local conservation organisation, helping to clean up local habitats, or setting up a wildlife corner in their local green space. Local plants and animals can be celebrated in festivals and other events. Initiatives such as these give people a greater understanding of their local biodiversity, and will also give them a stake in its well being. Direct experience builds appreciation of biodiversity conservation.

### **Education and Training**

Integrating biodiversity conservation into formal education is one of the most important ways of raising awareness. Young people form their attitudes to the environment at a very early age, and if children understand and respect nature they are more likely to grow into environmentally aware adults. Educating school children can also have an important knock-on effect to parents and the wider community!

Several national initiatives are examining how biodiversity can be better integrated into the National Curriculum and teacher training. On a practical level, biodiversity education can be promoted through ensuring that all schools have access to nature areas, preferably within their own school grounds. The Bridgend Environmental Education Partnership has been set up to co-ordinate and sponsor environmental education initiatives in the Bridgend County Borough area. BEEP's web-site is at:

*[www.bridgend.gov.uk/english/beep](http://www.bridgend.gov.uk/english/beep)*

Visitor centres such as those at Kenfig National Nature Reserve and Bryngarw Country Park provide a focus for practical activities and field studies, offer equipment and teaching materials, and house exhibitions and libraries of information. Nature reserves in the community, whether rural or urban, give people access to wildlife at first hand.

### **Coordinated Programme**

Successful implementation of this Local Biodiversity Action Plan depends on widespread understanding of all the issues. Public understanding and support must underpin actions, and there is a particular need for heightened awareness within those sectors that can have an influence on biodiversity conservation.

There are many excellent initiatives already. Examples include the Bridgend Environmental Education Partnership already referred to above, the national WATCH project for children, and the Kenfig National Nature Reserve's environmental education programme.

However, effort is needed to co-ordinate the work of all of these initiatives, identify gaps, and greatly increase popular support. We need to get the key messages of biodiversity conservation across to both the general public and to key sectors. Leaders in society will be needed to champion the cause, and more examples of good practice will be needed to illustrate what can be accomplished. Biodiversity should become a household word and an issue that transcends all levels of society.

**AWARENESS AND INVOLVEMENT: ACTION**

*The Bridgend Biodiversity Partnership should prepare an action plan to address awareness and involvement in biodiversity conservation*

*Ensure that information on biodiversity and how to get involved in conserving biodiversity is readily available to the public. Local authorities and voluntary conservation organisations in particular can promote awareness and provide opportunities for involvement through mechanisms such as grant-aid for community projects and the management of nature reserves*

*Promote the Biodiversity Action Plan for Bridgend County Borough and publicise the main objectives and programme of action*

*Develop a strategy for marketing biodiversity which targets key sectors such as business and industry, all levels of government, the public, land managers and education*

*Encourage and support organisations in developing their corporate awareness and commitment to biodiversity, for example within all departments of local government*

*Ensure that biodiversity is a central component of Local Agenda 21 programmes and that Agenda 21 initiatives help to generate awareness and involvement in biodiversity*

*Support the integration of biodiversity conservation into formal education*

## Chapter 8

### THE WAY FORWARD

This Local Biodiversity Action Plan for Bridgend County Borough marks the beginning of a coordinated programme of action. Everyone concerned with the conservation of Bridgend County Borough's biodiversity has an important role in ensuring the success of the objectives of the Plan.

The Bridgend Biodiversity Partnership is committed to working together to further biodiversity conservation, and is keen to see all interested parties join with them to bring about the action that is needed.

The Partnership has a long-term vision for the biodiversity programme. Taking action will involve a great variety of projects, initiatives, courses of action and levels of activity. Some can be progressed immediately, while others will evolve over time. The process needs to be adaptable to changing circumstances. The Partnership is committed to a long-term association, one that will monitor and review progress over many years ahead. This will require considerable coordination to ensure that we remain focused and stay on course to deliver action and meet the targets that we set for ourselves.

#### **WAY FORWARD: ACTION**

*Develop and maintain a long-term Partnership to progress the conservation and enhancement of biodiversity in Bridgend County Borough through developing initiatives, exchanging information, encouraging action, and monitoring and reviewing progress.*

*Encourage individual partners to review their own action, to help meet the objectives and targets set out in the Biodiversity Action Plan and associated habitat and species action plans*

*Monitor the development of the UK Biodiversity Programme and other policies and initiatives at the national and international level, for integration into the Biodiversity Action Plan for Bridgend County Borough*

*Review and update the Biodiversity Action Plan, including the habitat and species action plans, every five years.*

## Annex 1

### 1a Preliminary Assessment of Key Habitats, determined by the Bridgend Biodiversity Partnership

One of the first things that the Bridgend Biodiversity Partnership attempted was a brainstorming exercise to identify priorities. The list produced is reproduced below:

<b>Bridgend Biodiversity Partnership</b>	
<i>Brain-storming Session 17th November 1999</i>	
<u>Important Habitats in Bridgend County Borough</u>	
<b>Sea-shore</b> (13 kms) and coastal habitats : much is of international importance	
<b>Sabellaria beds</b>	
<b>Mussel beds</b>	
<b>Rocky shore</b>	<i>associated features:</i> Purple Sandpiper, fossils (350m years)
<b>Rock-pools</b>	
<b>Sandy shores</b>	<i>associated features:</i> Sandhill Snail, Strandline Beetle ( <i>Eurynebria complanata</i> ) Blind woodlouse
<b>Sand Dunes</b>	<i>associated features:</i> Fen Orchid <i>Liparis loeselii</i> var. <i>ovata</i> The Liverwort <i>Petalophyllum ralfsii</i> long list of BAP priority species recorded (Kenfig cSAC)
<b>Limestone Pavement</b>	<i>associated features:</i> long list of moths and butterflies RIG designation (Lock's Common)
<b>Estuary</b> (Ogmore River, Kenfig River)	<i>associated features:</i> Saltmarsh areas
<b>River Systems</b> - Llynfi, Ogmore, Garw	<i>associated features:</i> Dippers, Otters, Grey Wagtails River gorges, ferns (e.g. Darren-y-Dimbath)
<b>Reedbeds</b>	<i>associated features:</i> Kenfig Pool, Parc Slip Bittern, Cetti's Warbler, Aquatic Warbler
<b>Molinia/Juncus</b> wet pasture	<i>associated features:</i> Marsh Fritillary, Narrow-bordered Bee Hawk-moth, Double Line Moth
<b>Farmland</b> - grazing pastures, field edges	<i>associated features:</i> decline in birds due to loss of traditional mixed agriculture
<b>Hedgerows</b>	

	<i>associated features:</i> Dormouse, Lesser Whitethroat
<b>Restored Land</b> - e.g Parc Slip	<i>associated features:</i> extensive areas, experimental habitat creation Scarce Blue-tailed Damselfly (only BCBC site?) Golden Plover (winter), lapwing (breeding)
<b>Neutral Grassland</b>	<i>associated features:</i> “Hay Meadows”, species-rich MG5
<b>Acid Grassland</b>	<i>associated features:</i>
<b>Calcareous Grassland</b>	<i>associated features:</i> Small Blue butterfly localised plant communities
<b>Woodland</b>	<i>associated features:</i> some is Ancient Coed Cymru initiative supported Wet woodland (e.g. Garw, Llynfi) Oak-Ash (sheep exclosures) Conifer
<b>Moorland</b> (upland)	<i>associated features:</i> rocky cliffs, quarries, heather
<b>Open Water</b>	<i>associated features:</i> Kenfig Pool, Sker Pool, Pink Bay Pond, Wilderness, Pwll-y-Waun Great Crested Newt
<b>Swamp, Valley Mire and Bogs</b>	<i>associated features:</i> rarity
<b>Bracken</b>	<i>associated features:</i> where violets in understorey, on south-facing slopes, potential for High Brown Fritillary
<b>Road Verges</b>	
<b>Parks</b>	
<b>Gardens</b>	
<b>Disused Railway Lines</b>	
<b>Quarries</b>	
<b>Amenity Grassland and Urban Green Space</b>	

## **1b Guidance on the Rationale and Methodology for the Selection of Sites of Importance for Nature Conservation (SINCs)**

The Government's objective for biodiversity is to construct policies that contribute to the conservation of UK flora and fauna, whilst minimising adverse affects of development. All tiers of Government and public agencies involved in the development of land and economic growth have a duty to balance the needs of development with the preservation of natural resources in line with the principles of 'Sustainable Development'.

Article 10 of EU Directive (92/43/EEC) *The Conservation of Natural Habitats, Wild Fauna & Flora* ('The Habitats Directive') identifies the important role that links or stepping-stones from one important habitat to another can be in contributing to the overall biodiversity of an area. These regionally or locally important sites play a vital role in protecting sites further up the designation hierarchy.

A system of locally important sites, termed SINCs (Sites of Importance for Nature Conservation), have been identified and designated within Bridgend County Borough. The planning system plays a crucial role in the promotion of biodiversity including the protection of these designated non-statutory sites. This is achieved through the development control process, of which, this document forms part. The purpose of this Supplementary Planning Guidance is to: -

- *Provide guidance on the treatment of SINCs in the development control process*
- *Set out standardised mitigation and compensatory measures to ensure that development does not impact significantly upon the identified SINCs*

### **Policy Context**

National planning guidance encourages the use of non-statutory designations to protect locally important sites of substantive nature conservation value. This aspiration has been stated in two Government policy documents; '*Sustainable Development: The UK Strategy*', and '*Biodiversity: The UK Action Plan*'.

*Planning Guidance (Wales): Planning Policy 1<sup>st</sup> Review* (PG(W):PP) recognises the need for local planning authorities to maintain and where possible, enhance the quality of the countryside outside statutory designations (paragraph 5.3.5 PG(W):PP). The importance of "other designated sites" in the conservation of natural heritage is an issue identified within the policy document.

PG(W):PP goes on to note that there is a need to develop planning policies which differentiate between statutory and non-statutory designations. Paragraph 5.3.15 PG(W):PP obligates local planning authorities to

formulate policies that conserve the natural beauty and amenity of the countryside.

*Planning Guidance (Wales): Technical Advice Note 5 – Nature Conservation* builds upon the policies of its parent document with regard to non-statutory sites of nature conservation. Paragraph 29 states:

*“Non-statutory sites of local nature conservation importance (often known collectively as Sites of Importance for Nature Conservation [SINCs]) should be both selected and designated...”*

(PG(W): TAN 5 - 1996)

The need for weight to be given to the protection of non-statutory sites is recognised by the South East Wales Strategic Planning Group. As such, Recommendation LNC5 of *Strategic Planning Guidance for South East Wales* states *“All development plans should contain policies which allow for the appropriate protection of species and wildlife networks and corridors”*.

Part I of the Bridgend County Borough Unitary Development Plan sets the local policy context for the protection of biodiversity. Policy 2 encourages developers and all other agencies to *‘protect, conserve and enhance ..... national, regional and local biodiversity’*. These principle aims are progressed into detailed policy in Part II of the UDP. Policy EV19 protects regionally and locally recognised sites of nature conservation and geological importance.

#### **Policy EV19 – UDP Part II Development Affecting Local/Regional Sites for Nature Conservation**

***“Proposals which seriously prejudice the continued viability of, or cause harm to, a designated Local Nature Reserve, a Site of Importance for Nature Conservation, or a Regionally Important Geological or Geomorphological site, as defined in the UDP, will not be permitted.”***

A number of supporting documents produced by Bridgend County Borough Council and various partners relate to this Supplementary Planning Guidance. These are:

- A Countryside Strategy For Bridgend County Borough – 2000/05
- Landscapes Working for Bridgend County
- The Ogwr Wildlife Strategy (approved by Council in January 1994)

These documents expand upon the detailed issues that are faced by the mainly rural areas of the County Borough. The *Countryside Strategy* sets the context from which the policies within the UDP are formulated, whilst *Landscapes Working for Bridgend County Borough* propose appropriate and sensitive design details for new developments and regeneration schemes.

The Ogwr Wildlife Strategy sets the context and background for the SINC system in Bridgend County Borough.

### **Rationale of SINC**

The governing principle of the SINC system within Bridgend County Borough is to conserve and enhance biodiversity and the landscape through the protection of habitats of local value and significance. There are also several more specific functions that these sites perform, namely:

- protect and provide a network of ‘Green Corridors’
- reverse fragmentation and species isolation
- protect areas of community, social and amenity value
- protect areas of ‘Urban Biodiversity’

### **Green Corridors**

Identified sites will create a network of designations alongside nationally and internationally important sites, to aid in the migration and dispersal of genetic diversity within species. These objectives are identified by the *Habitats Directive*, and are similar to those that guide the Directive's ‘*Natura 2000*’ network of Special Areas for Conservation.

### **Reversing Fragmentation and Species Isolation**

The protection and enhancement of non-statutory sites of importance for nature conservation can be utilised to halt, and to a degree, reverse the process of habitat fragmentation. ‘*Biodiversity: The UK Action Plan*’ (page 168) states that “*the fragmentation or isolation of key habitats is to be avoided and wherever practicable, past fragmentation is to be reversed*”. It is an explicit target in the UK Action Plan to increase, expand and extend the area, range, population size, occurrence and distribution of many priority habitats and species in the countryside. Fragmentation is a force acting contrary to these targets, often resulting in habitat extinction, changes in community composition, reduced genetic diversity, exposure to pollution and physical disturbance from neighbouring external activities. Throughout the countryside and in urban areas, these habitat fragments and ‘connecting’ landscape features often provide the greatest opportunities for species migration.

Many important species of wildlife are widely dispersed with healthy overall population numbers. However, they may become isolated from one another. This too can generate the negative impacts upon a particular species that are outlined in 3.3.1.

## **Wider Community, Social and Educational Value**

Although the sites are of a ‘substantive nature conservation value’, they are not purely protected for their value to ecology. SINC’s can also be important for their amenity and education value to the wider community. These purposes are particularly relevant and important in the urban areas of Bridgend, Porthcawl, Maesteg, and Pencoed, where access to semi-natural countryside is both restricted and diminishing.

## **Urban Biodiversity**

Investment in the protection and enhancement of features of nature conservation importance and biodiversity are particularly significant in and around the highly urbanised areas. These urban oases of semi-natural habitats are the most under threat from development, and their protection can provide ecological, social and economic benefits. Urban SINC designations also provide an element of interconnectivity between the town and countryside, in line with the recommendations made in ‘*Towards and Urban Renaissance*’ – *The Rogers Report* (DETR 1999).

Areas of urban biodiversity also suffer from habitat fragmentation and species isolation. Therefore, urban SINC’s can help the migration patterns and genetic dispersal of flora and fauna, whilst providing the visual amenity and associated benefits, mentioned in 3.5.1.

## **Guidelines for the Treatment of SINC’s in the Development Control Process**

As part of an holistic approach to the protection and promotion of biodiversity, a second non-statutory tier of important sites is necessary. Locally designated important sites are vital to biodiversity conservation in south east Wales as statutory designations do not preserve the wider biological resources. This aim has been achieved through the designation of Sites of Importance for Nature Conservation (SINC).

The conservation of the physical and natural environment is a central concern of both national and local planning policy. However, there is as yet no statutory guidance on the way in which locally important sites are to be dealt with within the development process.

**1. Proposals for development which adversely affect a designated Site of Importance for Nature Conservation will normally be rejected, unless the applicant can demonstrate to the satisfaction of the LPA that other material considerations outweigh the nature conservation value of the site.**

Where applications for the development of a site are deemed to have an adverse effect upon a designated SINC, the developer must demonstrate

that there are material considerations that outweigh the biodiversity importance of these sites. However, planning consent will not be refused if a permission has conditions attached that will prevent damage to wildlife, their habitats and important features. Other policies are needed to encourage those developments that protect habitats and promote biodiversity.

Applications that are deemed to adversely affect a designated SINC will be subject to a rigorous examination if it is to satisfy Guideline 1. The consideration of such applications will therefore include an assessment of:

- The need for the development in terms of national and regional considerations, and the impact of permitting it or refusing it upon the local economy;
- The cost and scope of locating the development elsewhere, or meeting the need for the proposal in some other way;
- The detrimental effects on the SINC(s) and the ease and extent to which they can be mitigated against or compensated for.

**2. Where a development proposal has been deemed acceptable in terms of Guideline 1, adequate mitigation measures will be sought.**

Whilst the overall aim of the SINC network is to protect locally significant sites of nature conservation importance, there is also the recognition that there is a need to facilitate and enhance the economic growth of Bridgend County Borough. If a developer can demonstrate that their proposal is satisfactory in terms of the test for Guideline 1, then appropriate mitigation measures will be sought. These measures will be used to reduce or ameliorate the adverse impacts of a development upon any designated SINC. There are a variety of ways in which the adverse effects of a development can be mitigated against. This may include:

- Timing or phasing the development to avoid key times of the year, weather conditions etc;
- Provide sympathetic and appropriately landscaped areas throughout the development to complement the existing SINC habitats (Guideline 6 refers);
- Provision of a strip of appropriate landscaping, or 'buffer zone', between a SINC and a development (Guideline 7 refers);
- Design the layout of the development so that adverse effects are directed away from SINC interests, on or off the site.

The mitigation of impacts upon nature conservation features is a specialist field. Therefore, it would be appropriate that the technical input of a competent ecologist be sought. Discussions with both officers from the Planning Department and an ecologist at an early stage can avoid delays and problems at a later stage of the determination process.

**3. Where a developer has demonstrated that the proposal necessitates the substantial loss, in part or wholly, of a designated SINC, adequate compensatory measures will be sought.**

There are a number of examples where SINC designations partly or wholly overlap land uses allocated within the UDP. Therefore, if a development proposal satisfies Guideline 1, the subsequent loss of a SINC, in part or wholly, will occur. It is the intention therefore, through Planning Agreements, to seek adequate compensatory measures when such a development occurs. Compensatory measures are usually confined to the development site, although this will not always be the case.

Essentially there are four categories of compensatory measures that are considered to be acceptable. These are:

**Habitat Re-creation** – the recreation of the lost or disturbed SINC habitat(s) either within or outside the development site. The newly re-created habitat(s) should be of at least an equal significance of the original.

**Habitat Creation** – the creation of an entirely new habitat(s) within or outside the development site. The created habitat(s) may not be a replication of those lost, but should be of at least equal nature conservation significance.

**Habitat Enhancement** – the improvement of a deteriorating SINC or another area of neglected habitat, through appropriate management or resource input. The SINC/habitat(s) can be within or outside the development site boundary.

**Educational Enhancement** – these are measures that are aimed at raising awareness of nature conservation and biodiversity through initiatives such as community input to habitat management, improving access, and interpretative or teaching facilities.

Appropriate compensatory measures are not restricted to one of the four categories above. Whilst the re-creation of the lost or disturbed habitat is a primary objective, the other measures will assist in achieving an acceptable package of compensation.

However, it is recognised that the re-creation of some habitats is not achievable, whilst others require continued management. Therefore, in order to ensure that a new habitat matures to produce high quality areas of biodiversity, a regime for its continued management should be agreed with the Local Planning Authority, with advice from the Countryside Council for Wales.

**4. Applications for development that are considered to have an affect upon a designated SINC must undertake an ecological assessment.**

To enable a thorough appraisal of the likely impacts of a development upon a SINC it is first necessary to obtain a sufficiently detailed level of base information. The requirement to submit this additional information is Article 4 of the Town and Country (Planning Applications) Regulations 1988 (SI 1988/1812).

The additional information will form an integral part in the decision-making process. Ideally an informal scoping exercise should be held with the relevant Council officer(s) to establish the data sets to be collected and the appropriate level of investigation. The following information will normally be required:

**Description of SINC** – This will include an ecological survey of the affected SINC(s) at an appropriate level of detail and competence, usually referred to as an Extended Phase 1 Survey.

**Description of Proposal** – Brief summary, with plans, of the development including any associated infrastructure requirements, drainage, emissions, landscaping, etc.

**Assessment of Likely Impacts** – Statement with plans of the extent and nature of the likely impacts, negative and positive, direct or indirect, upon the SINC(s).

**Proposed Mitigation or Compensation** – Details of any mitigation measures needed to offset the likely adverse impacts of the development, or any compensatory measure to be provided.

**Future Monitoring/Management** – Brief statement outlining how any compensatory/mitigation is to be managed after the completion of the development. This can also be addressed through Planning Agreements.

The submission of an assessment of this type should not be confused with the requirement to provide a formal Environmental Impact Assessment (EIA). However, if the proposal does fall within either Schedule 1 or 2 of the *Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999*, full consideration of designated SINC(s) will be expected by this Authority.

**5. Development proposals that wholly or partly incorporate a designated SINC into the design and layout of the scheme will be encouraged.**

The presence of a designated SINC wholly or partly within the boundary of a development site is frequently seen as an obstacle, and therefore disregarded within the design process. The majority of medium to large scale proposals contain elements of formal landscaping, open space, and undeveloped land. These offer an opportunity to incorporate an established SINC into the development by not formalising these areas.

These measures will be secured through negotiation, preferably at the master planning stage of the development. Developers will be expected to address the need for necessary and appropriate management of the SINC features affected by their proposals. However, where necessary, the integration of the SINC features within the proposed development will be assured through the imposition of appropriate conditions, or through Planning Agreements facilitated by Section 106 of the *Town & Country Planning Act 1990*.

**6. Landscaping schemes that are sympathetic to, and reflect the biodiversity interest of incorporated or nearby SINC will be encouraged.**

The inclusion of habitats into the development in line with Guideline 6 is a positive step towards meeting the objectives of sustainable development. However, unsympathetic treatment of ‘spared’ SINC habitat through inappropriate landscaping and development layouts can produce negative impacts and hamper efforts to conserve and enhance biodiversity.

The effective integration of a SINC habitat into a development can be supplemented by the planting of indigenous species of flora. The use of indigenous species that are similar or complementary to those occurring in the integrated SINC would further advance biodiversity and sustainable development objectives.

**7. Where development proposals share a common boundary with a SINC, a buffer zone of appropriate landscaping should be provided.**

Where a development’s boundary abuts that of an adjacent SINC, or has incorporated a designation within the layout, an appropriately landscaped ‘buffer zone’ should be established. The buffer zone’s primary objective is to protect SINC habitats against any adverse impacts caused by the proximity of a development. Guideline 7 links directly to the objectives set out in Guideline 6 regarding the flora used within landscaping schemes.

The buffer zones width varies with the type of development and the nature of the SINC habitat being protected. The table below provides a general guide to the minimum standards required by Bridgend County Borough Council.

Habitat	Minimum Buffer Zone Width
Riparian Corridor	10 metres
Broad-leaved Woodland	5-10 metres
Scrub/Bracken	5 metres
Grassland	5 metres
Marsh/Wetlands	15 metres

A very useful reference for planners and developers is “*Developing Naturally – A Handbook for Incorporating the Natural Environment into Planning and Development*”, by Mike Oxford, published by the Association of Local Government Ecologists in 2000.

### **SINC Designation Process**

The mechanism for designating the original 174 SINCs in Bridgend County Borough was through the Ogwr Wildlife Strategy produced by the Ogwr Wildlife Forum in the mid-1990s. This Strategy and its list of SINCs was approved by Ogwr Borough Council in January 1994. *Landscapes Working for Bridgend 1996* reviewed these SINCs and re-published the list of sites. Subsequent desk top study and field truthing have been employed to create a GIS layer of SINC areas, together with proformas indicating their status and nature conservation interest

The designation process can be broken down into six distinct stages:

- 1. Site Identification**
- 2. Site Survey**
- 3. Examination of Sites Suitability**
- 4. Defining Boundary**
- 5. Recording of the Site**
- 6. Consultation/Verification**

Each of these stages involve a series of specialised steps that are firstly aimed at ensuring that each potential SINC is worthy of designation, and secondly, that the boundaries include all the habitats and features of interest.

### **Site Identification**

The first point of reference for identifying SINCs is the original list of Sites of Nature Conservation Interest (SINC) drawn up in by Groundwork Bridgend in “*A Wildlife Strategy for Ogwr 1996*”. This initial list served to centre in on important areas to begin more detailed surveying. A large number of potential candidate sites were identified, but were narrowed down to a more definitive list using the following criteria coupled with the ecological information gathered from a variety of sources. The selection criterion was as follows:

- habitat diversity
- size
- rarity of habitat within the study area
- fragility
- presence of important flora and fauna
- community, social and educational value
- naturalness/typicalness

### **Habitat diversity**

The diversity of a habitat, and the extent to which it can be held up as a good example, is best assessed against the relevant plant community tables of the *National Vegetation Classification 1991*.

### **Size**

There are no size thresholds for SINC. However, sites that are considered too small to form a viable wildlife site should be filtered out, unless there are overriding reasons for its inclusion.

### **Rarity**

The rarity of a particular habitat or feature is based upon its occurrence nationally, regionally, or locally. The types of habitats that qualify for designation have been identified in the UK and Local Biodiversity Action Plans, and the emerging *Gwent, Glamorgan and Carmarthenshire Habitat Action Plan*.

### **Fragility**

The fragility of a particular habitat at a specific location relates to the long term probability of the loss of that site. The loss of the habitat can be due to a variety of factors, including; natural processes, decline/cessation of traditional management, or development pressure.

### **Presence of important flora and fauna**

A particular site may not contain a habitat that qualifies it to be included as a SINC under any of the other criteria. However, the maybe an occurrence of a rare, protected or UK/Local BAP species of flora or fauna.

### **Naturalness/Typicalness**

The naturalness/typicalness of a habitat refers to whether this is a good example of that particular category. This can be assessed by comparison to the detailed descriptions of UK plant communities provided in the *National Vegetation Classification*. The designation of a SINC based on this criterion should essentially show as near to a 'text book' example of that particular habitat.

### **Community, social and educational value**

Although not a scientific or ecological criteria, the value of a site to a particular community may warrant a site's designation that is of a marginal value. Sites selected will usually have an identified amenity or educational value, or provide 'green open space' in an area particularly lacking in such features.

*A report was prepared in 2000 by David Clements Ecology and Pryce Consultant Ecologists at the request of the Gwent and Glamorgan Wildlife Trusts. Its purpose was to set out a framework for the further development of guidance for the selection of SINC, including consideration of common criteria. This report is currently being reviewed by a sub-group set up by the Glamorgan and Gwent Biodiversity Advisory Groups and will inform a review of the above criteria.*

## CCW Phase 1 Habitat Data

The other principal source of information that is predominantly used in site identification is the Countryside Council for Wales' Phase 1 Habitat Data. This data is assembled in the form of maps that classify, in broad terms, the habitat classifications for all the land within the County Borough.

Aerial Photographs are also used to identify the extent of the habitats on the ground. The Phase 1 maps are useful, but they are only schematic. The photographs provide a view of how the site actually looks. Finally, information on areas was gleaned from other organisations' publications. Of particular use was information and records held by the Glamorgan Wildlife Trust.

## Site Survey

The most important stage of the whole process is the survey work on-site. The previous information regarding a site becomes more and more outdated as the project progresses. This aspect of the project gives a current picture of a site. Site surveys can provide a more detailed picture of an area and can be useful in identifying any important species that might use or grow within the boundary.

## Defining a Boundary

Boundary definition was to be initially based on the principle that the boundary would encompass only the areas that have been identified as being of significance. However, as the initial stages of the pilot project progressed, it was found that the areas of interest did not always fall within definable physical boundaries i.e. fence lines, walls etc. In the more upland areas, half a field comprises a habitat worthy of designating, whilst the other half might be of less significance. The transition between the two is both arbitrary and difficult to map, and subject to change over a short period of time. An example of this problem is shown in *figure 1*.

Figure 1



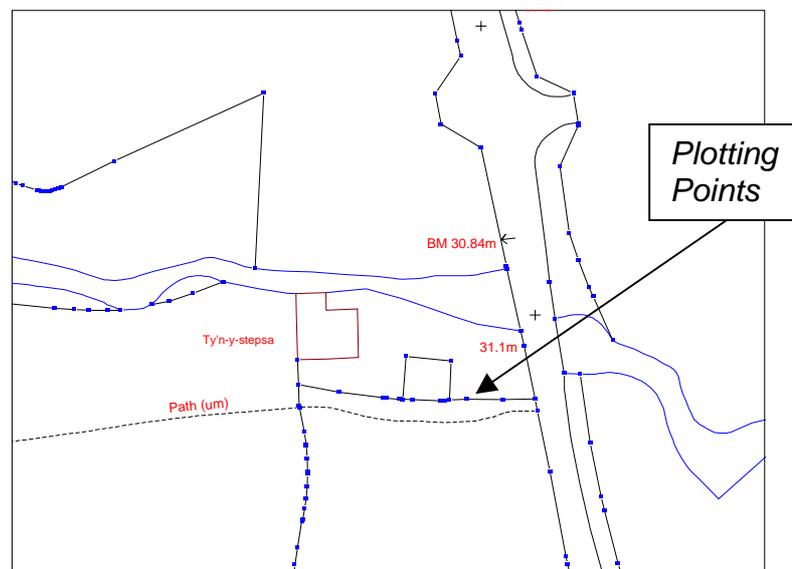
The solution to this problem was to map to the nearest definable boundary that enclosed the area of significance, even if sections of lower value are also recorded.

### Recording of the Site

Initial recording the particular attributes of a site is done on a variety of large-scale paper maps. These maps were used to record field data such as precise SINC boundaries, any extra areas of habitat and physical interest, plus, any evidence that management of the site has occurred.

Digital recording of the selected sites is done using *MAPINFO Professional Version 4.1*, based on the 1:80,000 Ordnance Survey Digital Mapping Service base map. Accuracy when plotting the boundary positions was at the forefront of the recording process. Therefore, the function to display the plotting points used by Ordnance Survey. Figure 2 shows this below.

Figure 2



### Consultation

Consultation and verification of the plotted sites was undertaken with a variety of appropriate parties. The aim of the consultation process is twofold. Firstly to ensure that all information included on the database for the already plotted sites has been sourced and included. Secondly to identify areas adjacent to existing designation, or sites not previously through surveying with the data held by the Planning Department.

**Sites of Importance for Nature Conservation (SINC)**  
**Site Index**

**Community Council Index**

Index	Community Council
BR	Brackla
BDG	Bridgend
CEC	Cefn Cribwr
CTH	Coity Higher
CCH	Coychurch Higher
CCL	Coychurch Lower
CYN	Cynffig
GV	Garw Valley
LAL	Laleston
LL	Llangynwyd Lower

Index	Community Council
LM	Llangynwyd Middle
MG	Maesteg
OV	Ogmore Valley
PEN	Pencoed
MM	Merthyr Mawr
NH	Newcastle Higher
POR	Porthcawl
SBM	St. Brides Minor
YA	Ynysawdre

- **Size Index**

Every site within each of the Community Councils will receive a numerical index based upon the size of the site. #1 will represent the largest site, and subsequent numbers will represent the relative decrease in the size of the others. For sites that cross over between different boundaries, the Community Council with the greater portion of the site resting within it will be accredited with the SINC.

- **Habitat Description**

Although the browser for the SINC table will contain the definitive guide to what Phase 1 Habitats make up the designation, a shorter guide within the reference number will give an idea of the complexity of the habitats.

<b>S</b>	Single
<b>N</b>	Numerous
<b>M</b>	Mosaic

**SINGLE** These are sites that consist of a single habitat classification, for example, a broad-leaved semi-natural woodland.

**NUMEROUS** These are designations that contain between 2 and 4 different habitat classifications.

**MOSAIC** This final category are for SINC designations that contain 5 or greater habitat classifications.

- **Examples**

<b>CCH-1-M</b>	Coychurch Higher, largest site - Mosaic (>4 habitats)
<b>CYN-4-S</b>	Cynffig, 4th largest site - Single habitat
<b>GV-2-N</b>	Garw Valley – 2 <sup>nd</sup> largest site - Numerous habitats (<4)

## 1c Second-tier Sites of Importance for Nature Conservation (SINC)

### Appendix

#### 1

### Second-tier Sites of Importance for Nature Conservation (SINC)

Reference Number	SINC Name	Area m <sup>2</sup>	Centre Point Grid Reference	
BDG-1-S	Eweny Moor	535800	9117	7801
BDG-2-N	Cefn Glas Wood (Graig-y-Casnewydd)	76020	8988	8077
BDG-3-S	Heronston House Meadow	27860	9085	7834
BDG-4-S	River Wood	17410	9189	7813
BDG-5-N	Wildmill Community Park	10670	9029	8078
BR-1-N	Tremains Wood	97830	9208	7999
BR-2-N	Coychurch Road Verge	26130	9294	7954
BR-3-N	Masonic Field	17960	9189	7944
CCH-1-N	Hendir-Uchaf	642500	9782	8366
CCH-2-M	Heol-y-Cyw (east)	350700	9511	8421
CCH-3-N	Wern Fawr/Fernbank	267700	9677	8390
CCH-4-N	Dre Fach	129500	9373	8478
CCH-5-M	Blaencrymlyn	89890	9379	8530
CCH-6-N	Nant Crymlyn	89560	9600	8328
CCH-7-M	Rockwool Grounds	80740	9640	8416
CCH-8-N	Heol-y-Cyw (west)	53550	9437	8446
CCH-9-N	Gelli-feddgaer Wood	25120	9630	8679
CCL-1-N	Moor Farm	147100	9431	7924
CCL-2-S	Crematorium Wood	70450	9332	8024
CEC-1-M	Bedford Park	474400	8478	8339
CEC-2-N	Cefn Farm	130200	8720	8335
CEC-3-M	Mynydd Bach	127200	8494	8253
CEC-4-N	Waun Daffydd Farm	95190	8615	8299
CEC-5-N	Waun Fawr/Coed Uchaf	78240	8585	8197
CEC-6-N	Cefn Cribwr Meadow	23970	8555	8291
CEC-7-N	Cwm Ffos Farm	14370	8631	8333
CEC-8-S	Tymaen Farm Entrance Verge	1202	8649	8206
CTH-1-S	Coed Parc-Gawr	824600	9265	8216
CTH-2-N	Derwen Wood	65210	9135	8237
CTH-3-N	Coedcraidddu	61930	9290	8129
CTH-4-N	Coed Lais	26060	9343	8114
CTH-5-S	Lime Kiln Wood	22870	9384	8137
CTH-6-S	Coed-y-Morfa	20880	9169	8064
CTH-7-N	Parc Farm	20460	9246	8209
CTH-8-N	Smallhold Wood	4221	9316	8131
CYN-1-N	Cornelly Quarry	468000	8262	8021
CYN-2-N	North Eastern Dunes	357700	8094	8242

CYN-3-N	Old Ballas Wood	143800	8309	8066
CYN-4-N	Skер Farm Dunes	107800	7912	7968
CYN-5-S	Ty Tanglwst Wood	51370	8262	8058
CYN-6-N	St James' Church Wood	48780	8231	8252
CYN-7-N	North of Pyle	37410	8337	8330
CYN-8-S	Skер Rocks/Pink Bay	31650	7914	8330
CYN-9-N	Frog Pond Wood	30310	8405	8190
CYN-10-S	Kenfig NNR Field	22520	7994	8122
CYN-11-N	Eastern Frog Pond Wood	19610	8409	8204
CYN-12-N	Afon Cynffig	8455	8158	8225
GV-1-M	Ffroch Wen Mosaic	555200	9108	9124
GV-2-N	Craig Ddu	270700	8990	9007
GV-3-M	Blaengarw North-East	249900	9075	9347
GV-4-M	Bryngarw Park East	230000	9054	8616
GV-5-N	Cwm Garw	105700	9077	8711
GV-6-M	Nant Mwrth	88820	8926	8623
GV-7-S	North Betws Woodland	78730	9001	8777
GV-8-N	Betws West	69890	8956	8719
GV-9-N	Oakdale Cottage Wood	59780	9085	8760
GV-10-N	Disused Railway Wood	53630	9134	8815
GV-11-S	Moelgilau-fawr	17690	8991	8807
LAL-1-N	Stormy Down	744200	8486	8080
LAL-2-N	Coed-Ty-Maen	141300	8872	8131
LAL-3-N	Laleston Meadows	104100	8793	8064
LAL-4-S	Cae Pen-y-Bryn	92540	8609	8135
LAL-5-N	Craig-y-Parcau	68940	8970	7913
LAL-6-N	Cae-Porth	38710	8707	8102
LAL-7-N	Land South of Laleston School	36320	8725	7955
LAL-8-N	Candidate Site	30920	8645	8172
LAL-9-N	Coed-y-Gains	16150	8929	8147
LL-1-S	Coed Pentwyn	263100	886	864
LL-2-N	Coed Tondu	224900	8873	8513
LL-3-N	Nant Cwm-bach	105200	8794	8484
LL-4-S	Coed Coytrahen	74780	8939	8565
LL-5-N	Cwm Cefnydfa	52770	8800	8670
LM-1-M	Gilfach Uchaf	385600	8415	8768
LM-2-M	Gelliheblyg	363900	8790	8994
LM-3-S	Nant Bryncynan Woods	251900	8609	8778
LM-4-N	Waun-y-Gilfach Woods	242200	8548	8834
LM-5-N	Llan Road Woods	150700	8538	8913
LM-6-S	Cwm Nant Gwyn	116400	8693	8669
LM-7-N	Drycity'n-y-Waun	103100	8620	8935
LM-8-N	Llety Woods	76320	8786	8890
LM-9-N	Ty'n-y-Waun	73720	8673	8850
LM-10-N	Nant-y-Castell	28280	8443	8847
LM-11-S	Llwyn-y-Brian	13000	8793	8821
MG-1-M	Caerau West	616500	8462	9408
MG-2-M	Caerau North	476600	8511	9499
MG-3-M	Blaen-Cwmdu	373500	8719	9200
MG-4-M	Nant y Crynwydd	278500	8403	9185

MG-5-N	Aber Cerdin Wood	255500	8513	8965
MG-6-M	Y Parc (north)	251500	8464	9118
MG-7-N	Garth Grasslands	245500	8703	9112
MG-8-M	Nant y Fforest	240300	8836	9058
MG-9-M	Caerygymrig	179400	8733	9060
MG-10-N	Cwm Cerdin	174500	8437	8884
MG-11-M	Cwm Sychbant	173000	8382	9007
MG-12-M	Y Parc (south)	142000	8466	9027
MG-13-N	Cemetery Fields	141800	8669	9130
MG-14-M	Nant Cwm-du-bach	128400	8762	8669
MG-15-N	Cwm Cerwyn	105100	8423	9068
MG-16-N	Craig Tal-y-fan	54630	8598	9190
MG-17-N	Llwydarth Wood	41160	8589	9036
MG-18-M	Tudor West	38260	8506	9406
MG-19-M	Sychbant Fields	23190	8415	8997
MG-20-N	St John's Colliery Field	8772	8798	9148
MM-1-M	Llyn-y-Felin	447300	8763	7721
MM-2-S	Coed Cwintin	177600	8718	7819
MM-3-N	Cwm-y-Benfos	122400	8591	7798
MM-4-N	Home Wood & Long Belt Wood	77300	8540	7928
MM-5-S	Coedpwll Fflew	76450	8866	7760
MM-6-S	Chapel Hill	73070	8887	7812
MM-7-N	Merthyr Mawr Common	69970	8524	7825
MM-8-S	Coed-y-Tyle	39440	8882	7856
MM-9-N	Island Farm POW Camp	35510	8987	7842
MM-10-S	Verville	32860	8897	7744
MM-11-S	Coed-y-Narwen	24470	8850	7822
MM-12-N	Ar-graig Field	22390	8675	7967
MM-13-S	Craig-an Wood	18210	8757	7773
MM-14-S	Kiln Field	11160	8725	7888
MM-15-N	Pwll-y-Mor	4464	8615	7949
NH-1-N	Parc Slip Nature Parc	1576000	8771	8379
NH-2-N	Pennsylvania Wood	347400	8860	8317
NH-3-M	Penyfai Common	254100	8937	8275
NH-4-S	Cefn Cribwr Wood	81600	8789	8242
NH-5-N	Ffwyl Wood (south)	34740	8853	8263
NH-6-N	Ffwyl Wood (north)	24480	8869	8285
NH-7-S	Coed-y-Waun	23740	8902	8271
NH-8-S	Coed-yr-Hela	22210	8921	8317
NH-9-N	Longacre Meadow	17450	8826	8280
NH-10-N	Court Coleman Fish Pond	11960	8828	8178
NH-11-S	Penylan Farm Wood	9795	8921	8317
NH-12-N	Parc Pond	9627	8806	8427
NH-13-N	Angleton Common	7861	8999	8146
OG-1-M	Cwm Dyfolog	883200	9740	9016
OG-2-M	Mynydd yr Aber	863600	9366	9103
OG-3-M	Cwm Dimbarth	779300	9519	8914
OG-4-N	Bryn y Wrsch	418400	9199	8690
OG-5-M	Glynogwr Woods	390500	9567	8696
OG-6-M	Cwm Cyffog	311200	9265	9042

OG-7-M	Rhiw Fer	242300	9285	9213
OG-8-N	Pant-yr-Awel	75090	9346	8808
OG-9-M	Nant-y-Moel Farm	67550	9321	9351
OG-10-M	Glynllan West	11510	9414	8734
PEN-1-N	Hirwaun Common	1221000	9497	8293
PEN-2-N	Bryngwenith & Ty-Chwith	404800	9407	8250
PEN-3-N	Brynau Gwynian	274400	9722	8259
PEN-4-S	Coed Iestyn	51880	9569	8219
PEN-5-N	Ewenny River Fields	12900	9588	8034
POR-1-M	Newton Burrows	384500	8440	7738
POR-2-M	Locks Common	342800	8056	7767
POR-3-M	Pant-y-Hyl	337600	8406	7899
POR-4-S	Black Rocks	127100	8434	7686
POR-5-S	Graig Wood	93420	8430	7791
POR-6-S	The Wilderness	88130	8226	7775
POR-7-N	Manor Farm Fields	71740	8364	7808
POR-8-S	Coedargraig	71500	8406	7827
POR-9-S	Newton Point	71240	8345	7625
POR-10-S	The Beacons	53250	8450	7913
POR-11-N	Nottage Court Wood	48600	8206	7849
POR-12-S	Rhych Point	46430	8277	7642
POR-13-N	Pwll-y-Waun	44650	8295	7764
POR-14-M	Grove Common	17390	8262	7945
POR-15-S	Trafalgar Wood	4571	8168	7753
POR-16-S	Pink Bay Pond	954	8013	7926
POR-17-S	Moor Lane Pond	352	8149	7919
SBM-1-M	Cefn Hirgoed (East)	2276000	9246	8316
SBM-2-N	Cefn Hirgoed (West)	177200	9086	8329
SBM-3-N	Pant Farm/Hirwaun Common	103000	9229	8408
SBM-4-N	Coed Caehelyg	53970	9132	8388
YA-1-N	Rifle Range Wood	199100	8961	8488
YA-2-M	Brynmenyn	127700	9043	8497

### Codes for Community Councils

BDG	Bridgend	LM	Llangynydd Middle
BR	Brackla	MG	Maesteg
CCH	Coychurch Higher	MM	Merthyr Mawr
CEC	Cefn Cribwr	NH	Newcastle Higher
CTH	Coity Higher	OG	Ogmore Valley
CYN	Cynffig	PEN	Pencoed
GV	Garw Valley	POR	Porthcawl
LAL	Lalaeston	SBM	St Bride's Minor
LL	Llangynydd Lower	YA	Ynysawdre

## Annex 2

### KEY SPECIES IN BRIDGEND COUNTY BOROUGH

#### KEY TO TABLES

##### Wildlife & Countryside Act: Protected Species

- 1 Specially protected birds (Schedule 1)
- G Bird protected by general provisions of the WCA
- G(1) 'Game Species': may be taken or killed as game outside the Close Season
- G(2) 'Pest Species': may be taken or killed under annual licence by authorised persons, by approved means and with landowner's permission
- 5 Specially protected animals other than Birds (Schedule 5)
- 5a Protected animals other than birds
- 8 Protected Plants (Schedule 8)

##### UK Red Data Book (RDB) Species

- R Species listed as endangered, rare or vulnerable in UK Red Data Books
- C Candidate Red Data Bird (Batten *et al* 1990)

##### Nationally Scarce Species (UK National Review series)

##### UK BAP (Biodiversity Action Plan) Species (UKBG 1998; 1999; UKSG 1995)

- P Priority Species
- S Species of Conservation Concern

##### RSPB Birds of Conservation Concern (RSPB *et al* 1996)

- Red High Conservation Concern ('Red List')
- Amb Medium Conservation Concern ('Amber List')

##### BTO (British Trust for Ornithology) Alert Species (Crick *et al* 1997)

- High High Conservation Alert
- Med Medium Conservation Alert

##### BC (Butterfly Conservation) National Action Plan

- High High Conservation Priority
- Med Medium Conservation Priority

##### Glamorgan Notable species (Clements & Pryce 2000)

- R Rare in Glamorgan
- S Scarce in Glamorgan
- W Bird which is significant as a wintering species in Glamorgan

<b>Mammals</b>	<b>Wildlife &amp; Countryside Act</b>	<b>UK Red Data Book Species</b>	<b>Nationally Scarce Species</b>	<b>UK BAP Species</b>	<b>Glamorgan Notable Species</b>	<b>Bridgend Notable Species</b>	<b>Notes</b>
Badger	PBA			S			Frequent and well-distributed in the area
Bat, Brandt's	5		NS	S	*		
Bat, brown long-eared	5			S	*		
Bat, Daubenton's	5			S	*		
Bat, lesser horseshoe	5			P	*		One known site
Bat, Natterer's	5			S	*		
Bat, noctule	5			S	*		
Bat, whiskered	5		NS	S	*		
Bats, pipistrelle	5			S	*		Occurs reasonably commonly
Dormouse	5			P	*		One location shown in Atlas
Hare, brown				P	*		Scarce in the area
Hedgehog				S			Reasonably common in the area
Martin, pine	5			S	*		
Mouse, harvest					*		One location shown in Atlas
Otter	5			P	*		Scarce in the area; occurs along main rivers and streams
Polecat				S	*		Several locations shown in Atlas
Shrew, common				S			
Shrew, pygmy				S			
Shrew, water				S			
Stoat				S			
Vole, water	5			P	*		Rare in the area; occurs on Kenfig River & at Parc Slip
Weasel				S			

Birds	Wildlife & Countryside Act	UK Red Data Book Species	UK BAP Species	RSPB Birds of Conservation Concern	BTO Alert Species	Glamorgan Notable Species	Bridgend Notable Species	Notes
Bittern	1	R	P	Red		W		Wintering in low numbers, mainly at Kenfig
Blackbird	G			Amb	Med			<b>Nesting</b> ; common in the area
Blackcap	G		S			W		<b>Nesting</b> ; common in the area
Brambling	1	R	S	Amb				Wintering in low numbers
Bullfinch	G		P	Red	High			<b>Nesting</b> in moderate numbers
Bunting, reed	G		P	Red	High			<b>Nesting</b> ; thinly distributed, low numbers; Maesteg, Kenfig
Buzzard	G	C	S					<b>Nesting</b> ; common in the area
Chiffchaff	G		S					<b>Nesting</b> ; common in the area
Chough	1	R	S	Amb		(R)		Visits in very low numbers; may breed in future
Coot	G(1)							<b>Nesting</b> in low numbers, winters in greater numbers; Kenfig
Cormorant	G		S			W		Non-breeding resident; occurs in low numbers
Crossbill	1		S			W		Wintering in low numbers; prefers conifer woods
Curlew	G	R	S	Amb	Med	W		Probably wintering only, low numbers
Dipper	G	C	S					<b>Nesting</b> in moderate numbers on main rivers & streams
Diver, black-throated	1	R	S	Amb				Wintering in low numbers; coastal
Diver, great northern	1	R	S	Amb				Wintering in low numbers; coastal
Diver, red-throated	1	R	S	Amb	Med	W		Wintering in low numbers; coastal
Dove, stock	G			Amb				<b>Nesting</b> in low numbers; mainly coastal
Duck, long-tailed	1	R	S			W		Wintering rarely, in very low numbers; mainly Kenfig
Duck, tufted	G(1)		S			S		<b>Nesting</b> rarely; wintering in moderate numbers
Dunlin	G	R	S	Amb				Passage & wintering in low-moderate numbers; mainly coast & Kenfig
Duncock	G		S	Amb	Med			<b>Nesting</b> ; common in the area
Fieldfare	1	R	S	Amb				Wintering in moderate-large numbers
Firecrest	1		S	Amb		W		Wintering in low numbers, mainly at Kenfig
Flycatcher, pied	G		S			S		<b>Nesting</b> in moderate numbers, but rather local
Flycatcher, spotted	G	C	P	Red	High	S		<b>Nesting</b> in moderate numbers, but declining
Fulmar	G							Passage & wintering along coast in low numbers
Gadwall	G(1)	R	S	Amb		W		Wintering in low numbers, mainly Kenfig
Garganey	1	R	S	Amb		R		<b>Nesting</b> occasionally; scarce passage bird; mainly Kenfig

Birds	Wildlife & Countryside Act	UK Red Data Book Species	UK BAP Species	RSPB Birds of Conservation Concern	BTO Alert Species	Glamorgan Notable Species	Bridgend Notable Species	Notes
Goldcrest	G		S					<b>Nesting</b> ; reasonably common in the area
Goldeneye	G(1)	R	S	Amb		W		Wintering in low numbers; mainly coastal & Kenfig
Goldfinch	G		S	Amb				<b>Nesting</b> ; reasonably common in the area
Goosander	G(1)		S			W		Wintering in low numbers; mainly Ogmore River & Kenfig
Goose, Brent	G	R	S	Amb				Passage, & wintering rarely in low numbers
Goose, white-fronted	G(1)	R	S	Amb		W		Passage and occasionally wintering in low numbers
Goshawk	1	R	S			R/W		<b>Nesting</b> in low numbers; probably increasing
Grebe, black-necked	1	R	S	Amb		R/W		Wintering in low numbers; Kenfig; may breed in future
Grebe, great crested						S/W		<b>Nesting</b> rarely; winters in low numbers; mainly coastal, Kenfig
Grebe, little	G					S/W		<b>Nesting</b> and wintering in low numbers
Grebe, red-necked	G	R	S	Amb		W		Wintering in low numbers, mainly Kenfig
Grebe, Slavonian	1	R	S	Amb		W		Wintering rarely; Kenfig
Greenfinch	G		S		Med			<b>Nesting</b> ; common in the area
Gull, black-headed	G							Wintering in large numbers; formerly nesting
Gull, common	G			Amb				Wintering in moderate numbers; may nest
Gull, great black-backed	G(2)							Non-breeding resident in low numbers; mainly coastal
Gull, herring	G(2)	C	S	Amb		S		<b>Nesting</b> in very low numbers (Cornelly Quarries); winters in good numbers (Ogmore Estuary)
Gull, lesser black-backed	G		S	Amb				Winters in moderate numbers
Gull, little	1	R	S	Amb		W		Wintering in very low numbers; coastal & Kenfig
Gull, Mediterranean	1	R	S	Amb		W		Wintering in very low numbers; coastal & Kenfig
Heron, grey	G					S		<b>Nesting</b> rarely; also scarce as a non-breeding resident
Kestrel	G		S	Amb	Med			<b>Nesting</b> ; common in the area
Kingfisher	1	C	S	Amb	Med	S		<b>Nesting</b> in moderate numbers along main rivers & streams
Kite, red	1	R	S	Red		(R)		Occasional visitor, but may breed in future
Lapwing	G	C	S	Amb	High	S		<b>Nesting</b> in very low numbers (Parc Slip West); winters in moderate numbers along coast
Linnet	G	C	P	Red	Med			<b>Nesting</b> and wintering in moderate numbers, but declining; mainly coastal

Birds	Wildlife & Countryside Act	UK Red Data Book Species	UK BAP Species	RSPB Birds of Conservation Concern	BTO Alert Species	Glamorgan Notable Species	Bridgend Notable Species	Notes
Mallard	G(1)		S					<b>Nesting</b> ; common in the area
Martin, house	G		S					<b>Nesting</b> ; common in the area
Martin, sand	G	C	S	Amb				<b>Nesting</b> in low-moderate numbers, but generally local and scarce
Merlin	1	R	S	Red		R/W		<b>Nesting</b> in very low numbers; wintering in low numbers
Moorhen	G(1)				Med			<b>Nesting</b> ; common in the area
Nightjar	G	R	P	Red		(R)		Summer visitor; may nest occasionally
Nuthatch	G		S					<b>Nesting</b> ; common in the area
Owl, barn	1	R	S	Amb		R/W		<b>Nesting</b> in very low numbers
Owl, little	G				Med	S		<b>Nesting</b> in moderate numbers
Owl, long-eared	G		S			(R)		May nest occasionally; visits in low numbers
Owl, short-eared	G	C	S	Amb		W		Wintering in low numbers
Owl, tawny	G		S		High			<b>Nesting</b> ; reasonably common in the area; especially in Llynfi Valley
Oystercatcher	G	R		Amb	Med	R		<b>Nesting</b> in very low numbers (Sker); wintering in moderate numbers along coast
Partridge, grey	G	R	P	Red	High	R		<b>Nesting</b> rarely; greatly declined in the area
Partridge, red-legged	G	C						<b>Nesting</b> in low numbers; introduced game species
Peregrine	1	R	S	Amb		S/W		<b>Nesting</b> and wintering in low numbers; may be increasing
Pintail	G(1)	R	S	Amb				Wintering in low numbers, mainly Kenfig & Ogmores Estuary
Pipit, meadow	G	C	S		Med			<b>Nesting</b> ; common in the area
Pipit, rock	G		S			S		<b>Nesting</b> in low numbers
Pipit, tree	G		S		High			<b>Nesting</b> in low numbers; locally common
Plover, golden	G(1)	R	S	Amb				Wintering in moderate numbers; mainly coast & Kenfig
Plover, grey	G	R	S	Amb				Passage & wintering in low numbers; mainly Ogmores Estuary & Kenfig
Plover, little ringed	1		S			(R)		Scarce passage migrant; may nest in future; mostly coastal
Plover, ringed	G	R	S	Amb		S		<b>Nesting</b> and wintering in low numbers; mostly coastal

Birds	Wildlife & Countryside Act	UK Red Data Book Species	UK BAP Species	RSPB Birds of Conservation Concern	BTO Alert Species	Glamorgan Notable Species	Bridgend Notable Species	Notes
Pochard	G(1)	R	S	Amb		(S)		Wintering in moderate numbers (eg Kenfig Pool); may nest in future
Quail	1	R	S	Red		R		<b>Nesting</b> possible in very low numbers
Raven	G	C			Med	S		<b>Nesting</b> ; locally common in the area
Redpoll	G				High	S		<b>Nesting</b> in low numbers; prefers conifer woods
Redshank	G	R	S	Amb	Med	S		<b>Nesting</b> rarely and wintering in low numbers
Redstart	G	C	S	Amb				<b>Nesting</b> in low-moderate numbers; Llynfi Valley favoured
Redwing	1	R	S	Amb				Wintering in moderate-large numbers
Robin	G							<b>Nesting</b> ; common in the area
Sanderling	G	R	S					Wintering in moderate numbers, but declining; coast
Sandpiper, common	G					S/W		<b>Nesting</b> rarely; wintering in low numbers; mainly coastal & Kenfig
Sandpiper, green	1					W		Wintering in very low numbers; mainly Kenfig
Sandpiper, purple	1	R	S	Amb				Wintering in low numbers; coast
Scaup	1	R	S	Amb		W		Wintering in low numbers; mainly coastal & Kenfig
Scoter, common	1	R	P	Red				Passage & wintering in low numbers; coastal
Shelduck	G	R	S	Amb		S		<b>Nesting</b> in very low numbers, mainly Ogmores Estuary
Shoveler	G(1)	R	S	Amb		W		Wintering in low numbers; mainly coastal & Kenfig
Siskin	G		S			S		<b>Nesting</b> in low numbers; prefers conifer woods
Skylark	G		P	Red	High			<b>Nesting</b> ; locally common but declining
Smew	G		S			W		Wintering in very low numbers; mainly Kenfig
Snipe	G(1)	C	S	Amb		S		<b>Nesting</b> rarely; wintering in low numbers
Snipe, jack	G		S	Amb				Wintering in low numbers
Sparrow, house	G(2)							<b>Nesting</b> ; reasonably common in the area, but declining
Sparrow, tree	G	C	P	Red	High	R		<b>Nesting</b> rarely; wintering in low numbers
Sparrowhawk	G		S					<b>Nesting</b> ; common in the area
Starling	G(2)			Amb	Med			<b>Nesting</b> commonly and wintering in large numbers
Stonechat	G	C	S	Amb		S		<b>Nesting</b> , locally common; mainly coastal
Swallow	G	C	S					<b>Nesting</b> ; common in the area
Swan, Bewick's	1	R	S	Amb		W		Wintering in low numbers; coast & Kenfig
Swan, mute	1		S			S		<b>Nesting</b> in low numbers; wintering in moderate

Birds	Wildlife & Countryside Act	UK Red Data Book Species	UK BAP Species	RSPB Birds of Conservation Concern	BTO Alert Species	Glamorgan Notable Species	Bridgend Notable Species	Notes
								numbers
Swan, whooper	G	R	S	Amb		W		Wintering in low numbers; mainly Kenfig
Swift	G							<b>Nesting</b> ; common in the area
Teal	G(1)	R	S	Amb		R		<b>Nesting</b> rarely; wintering in low numbers
Thrush, mistle	G				Med			<b>Nesting</b> ; reasonably common in the area
Thrush, song	G		P	Red	High			<b>Nesting</b> ; common in the area, although declining
Tit, bearded	1	R	S	Amb		W		Wintering in low numbers; may nest in future; Kenfig
Tit, blue	G		S					<b>Nesting</b> ; common in the area
Tit, coal	G		S					<b>Nesting</b> ; common in the area
Tit, great	G		S					<b>Nesting</b> ; common in the area
Tit, long-tailed	G							<b>Nesting</b> in moderate numbers
Tit, marsh	G		S	Amb	Med	S		<b>Nesting</b> in very low numbers
Tit, willow	G		S	Amb	Med	S		<b>Nesting</b> in low numbers
Treecreeper	G		S					<b>Nesting</b> ; common in the area
Turnstone	G	R	S	Amb		W		Passage & non-breeding resident in low numbers; coastal
Wagtail, grey	G		S		Med			<b>Nesting</b> in moderate numbers along main rivers & streams
Wagtail, pied	G		S		Med			<b>Nesting</b> ; common in the area
Warbler, aquatic	G		P	Red				Autumn passage species, in low-moderate numbers, mainly at Kenfig: a Bridgend 'speciality'
Warbler, Cetti's	1	R	S	Amb		R/W		<b>Nesting</b> in very low numbers, and wintering, at Kenfig & perhaps elsewhere
Warbler, garden	G		S					<b>Nesting</b> in moderate numbers
Warbler, grasshopper	G		S	Amb	High	S		<b>Nesting</b> in low numbers; mainly coastal & Kenfig
Warbler, reed	G		S			S		<b>Nesting</b> ; locally common, mainly at Kenfig
Warbler, sedge	G	C	S			S		<b>Nesting</b> ; locally common, mainly at Kenfig
Warbler, willow	G		S		Med			<b>Nesting</b> ; common in the area
Warbler, wood	G		S			S		<b>Nesting</b> in low-moderate numbers
Water rail	G		S	Amb		R/W		<b>Nesting</b> rarely, wintering in low numbers; mainly Kenfig
Wheatear	G	C	S			S		<b>Nesting</b> in low numbers; wintering in moderate numbers; mainly coastal
Whinchat	G	C	S			S		<b>Nesting</b> in low numbers

<b>Birds</b>	<b>Wildlife &amp; Countryside Act</b>	<b>UK Red Data Book Species</b>	<b>UK BAP Species</b>	<b>RSPB Birds of Conservation Concern</b>	<b>BTO Alert Species</b>	<b>Glamorgan Notable Species</b>	<b>Bridgend Notable Species</b>	<b>Notes</b>
Whitethroat	G	C	S					<b>Nesting</b> ; reasonably common in the area
Whitethroat, lesser	G		S		Med	S		<b>Nesting</b> ; reasonably common in the area
Wigeon	G(1)	R	S	Amb				Wintering in low numbers, mainly Ogmores Estuary & Kenfig
Woodcock	G(1)		S	Amb	High	R		Wintering in low numbers; much declined and no longer nesting
Woodpecker, great spotted	G		S					<b>Nesting</b> ; moderately common in the area
Woodpecker, green	G		S	Amb				<b>Nesting</b> in moderate numbers
Woodpecker, lesser spotted	G		S			R		Probably nesting occasionally, in low numbers
Wren	G							<b>Nesting</b> ; common in the area
Yellowhammer	G		S		Med	S		<b>Nesting</b> in moderate numbers, but declining

<b>Amphibians &amp; Reptiles</b>	<b>Wildlife &amp; Countryside Act</b>	<b>UK Red Data Book Species</b>	<b>Nationally Scarce Species</b>	<b>UK BAP Species</b>	<b>Glamorgan Notable Species</b>	<b>Bridgend Notable Species</b>	<b>Notes</b>
<b>Amphibians</b>							
Newt, great crested	5		NS	P	S		Scarce in the area
Newt, palmate				S			Probably frequent in the area
Newt, smooth				S			Probably frequent in the area
Common frog				S			Probably frequent in the area
Common toad				S			Probably frequent in the area
<b>Reptiles</b>							
Adder	5a			S			Reasonably common in the area
Grass snake	5a			S			Reasonably common in the area
Lizard, common	5a						Reasonably common in the area
Slow-worm	5a			S			Reasonably common in the area

<b>Fish</b>	<b>Wildlife &amp; Countryside Act</b>	<b>UK Red Data Book Species</b>	<b>Nationally Scarce Species</b>	<b>UK BAP Species</b>	<b>Glamorgan Notable Species</b>	<b>Bridgend Notable Species</b>	<b>Notes</b>
Bullhead				S	*		
Common marine fish (cod, plaice, sole etc)				P			
Lamprey, brook				S	*		
Lamprey, river				S	*		
Lamprey, sea				S	*		
Salmon, Atlantic				S	*		Requires confirmation
Shad, allis	5			P	*		Old records only
Shad, twaite	5a			P	*		Old records only
Shark, basking	5			P			
Skate, common				P			

<b>Butterflies</b>	<b>Wildlife &amp; Countryside Act</b>	<b>UK Red Data Book Species</b>	<b>Nationally Scarce Species</b>	<b>UK BAP Species</b>	<b>BC National Action Plan</b>	<b>Glamorgan Notable Species</b>	<b>Bridgend Notable Species</b>	<b>Notes</b>
<i>Argynnis adippe</i> High brown fritillary	5	R		P	High	R		Rare in the area; three sites; associated with grazed bracken slopes
<i>Argynnis aglaja</i> Dark green fritillary						S		Scarce in the area; three known sites; associated with grazed bracken slopes & woodlands
<i>Argynnis paphia</i> Silver washed fritillary				S	Med	R		Rare in the area; one known site, not recorded recently; associated with semi-natural woodlands
<i>Aricia agestis</i> Brown argus						S		Scarce in the area; about six sites; associated with species-rich calcareous grassland, chiefly near coast
<i>Boloria selene</i> Small pearl-bordered fritillary				S	Med	S		Scarce in the area; about 15 sites; associated with light-cover bracken slopes & marshy grasslands
<i>Callophrys rubi</i> Green hairstreak						S		Scarce in the area; four known sites; heathlands, acid grasslands and marshy grasslands
<i>Cupido minimus</i> Small blue				S	High	S		Rare in the area; three sites; associated with species-rich calcareous grassland, chiefly near coast

<b>Butterflies</b>	<b>Wildlife &amp; Countryside Act</b>	<b>UK Red Data Book Species</b>	<b>Nationally Scarce Species</b>	<b>UK BAP Species</b>	<b>BC National Action Plan</b>	<b>Glamorgan Notable Species</b>	<b>Bridgend Notable Species</b>	<b>Notes</b>
<i>Erynnis tages</i> Dingy skipper					Med	S		Scarce in the area; about 5 sites; species-rich calcareous and neutral grasslands
<i>Eurodryas aurinia</i> Marsh fritillary	5		NS	P	High	S		Scarce in the area; about 15 sites; associated with species-rich marshy grasslands
<i>Hipparchia semele</i> Grayling						S		Scarce in the area; about ten known sites; associated with broken ground, screes, quarries etc
<i>Pyrgus malvae</i> Grizzled skipper					High	R		Rare in the area; three sites; species-rich calcareous and neutral grasslands, often near coast
<i>Satyrium w-album</i> White-letter hairstreak			NS		Med	S		Rare in the area; one known site, not recorded recently; associated with semi-natural woodlands and hedges with elm

<b>Moths</b>	<b>Wildlife &amp; Countryside Act</b>	<b>UK Red Data Book Species</b>	<b>Nationally Scarce Species</b>	<b>UK BAP Species</b>	<b>BC National Action Plan</b>	<b>Glamorgan Notable Species</b>	<b>Bridgend Notable Species</b>	<b>Notes</b>
<b>Larger Moths</b>								
<i>Abraxas sylvata</i> Clouded magpie						S		Broadleaved woodlands, parklands etc with elm
<i>Abrostola triplasia</i> Dark spectacle						S		Hedges, rough grasslands, gardens etc with nettle or hop
<i>Acronicta menyanthidis</i> Light knot-grass						R		Heathland, moors and marshy grasslands
<i>Agrotis cinerea</i> Light feathered-rustic			NS	S	Med	R		Generally calcareous habitats, often coastal, with thyme
<i>Agrotis ripae</i> Sand dart			NS		Med	S		Coastal dunes
<i>Agrotis trux</i> Crescent dart					Med			Coastal cliffs and dunes
<i>Amphipoea lucens</i> Large ear						S		Moorland & marshy grasslands with purple moor-grass

<b>Moths</b>	<b>Wildlife &amp; Countryside Act</b>	<b>UK Red Data Book Species</b>	<b>Nationally Scarce Species</b>	<b>UK BAP Species</b>	<b>BC National Action Plan</b>	<b>Glamorgan Notable Species</b>	<b>Bridgend Notable Species</b>	<b>Notes</b>
<i>Anarta myrtilli</i> Beautiful yellow underwing						S		Heathlands
<i>Apamea furva</i> The confused						R		Coastal grasslands
<i>Aplocera efformata</i> Lesser treble-bar						R		Grasslands and downlands with St John's-wort species
<i>Apocheima hispidaria</i> Small brindled beauty						R		Woodlands and parklands, especially with oak
<i>Apoda limacodes</i> Festoon			NS	S	Med	R		Woodlands with oak and beech
<i>Archanara dissoluta</i> Brown-veined wainscot						S		Reedbeds
<i>Archanara geminipunctata</i> Twin-spotted wainscot						S		Reedbeds; a local speciality; Kenfig
<i>Archiearias parthenias</i> Orange underwing						S		Birch woodlands
<i>Autographa bractea</i> Gold spangle						S		Various habitats; waste ground etc
<i>Boarmia roboraria</i> Great oak beauty			NS		Med	R		Oak woodlands
<i>Callimorpha dominula</i> Scarlet tiger						S		Marshy grasslands and wetlands with comfrey
<i>Cerastis leucographa</i> White marked			NS		Med	R		Open woodland and scrub
<i>Charissa obscurata</i> Annulet						S		Usually in coastal, calcareous habitats
<i>Chilodes maritimus</i> Silky wainscot					Med	S		Reedbeds; a local speciality; Kenfig
<i>Clostera curtula</i> Small chocolate-tip			NS		Med	R		Wet woodlands, woods and scrub with aspen and willow
<i>Cossus cossus</i> Goat moth			NS	S	Med	S		Larvae burrow in solid wood of trees, especially willow and poplar
<i>Craniophora ligustri</i> Coronet						S		Various habitats with ash or privet
<i>Cucullia asteris</i>			NS	S	Med	R		Various coastal habitats with <i>Aster</i> species; rare in

<b>Moths</b>	<b>Wildlife &amp; Countryside Act</b>	<b>UK Red Data Book Species</b>	<b>Nationally Scarce Species</b>	<b>UK BAP Species</b>	<b>BC National Action Plan</b>	<b>Glamorgan Notable Species</b>	<b>Bridgend Notable Species</b>	<b>Notes</b>
Star-wort								the area
<i>Diarsia dahlia</i> Barred chestnut						S		Moorland and woodland, with birch, bilberry etc
<i>Diarsia florida</i> Fen square-spot						R		Wetlands and marshy grasslands
<i>Discoloxia blomeri</i> Blomer's rivulet					Med			Woodland and hedgesrows etc with elm
<i>Epirrhoe tristata</i> Small argent & sable						S		Acid habitats with heath bedstraw
<i>Epirrita autumnata</i> The autumnal						S		Woodland and heathland etc, with birch and alder
<i>Eugnorisma depuncta</i> Plain clay			NS		Med	R		Woodland edges, scrub
<i>Euphyia biangulata</i> Cloaked carpet					Med	R		Woods and hedges etc, with stitchwort and chickweed species
<i>Euphyia unangulata</i> Sharp-angled carpet						S		Woods and hedges etc, with stitchwort and chickweed species
<i>Eupithecia absinthiata</i> <i>goosensiata</i> Ling pug						S		Moorland and heathland, with ling heather
<i>Eupithecia expallidata</i> Bleached pug			NS		Med			Woodland rides and clearings with goldenrod
<i>Eupithecia indigata</i> Ochreous pug						S		Plantations with Scots pine
<i>Eupithecia inotata fraxinata</i> Ash pug						R		Woods, scrub and hedges etc with ash
<i>Eupithecia subumbrata</i> Shaded pug						R		Coastal habitats
<i>Euxoa cursoria</i> Coast dart					Med	R		Coastal sand dunes
<i>Euxoa obelisca</i> Square-spotted dart					Med	R		Coastal cliffs
<i>Furcula bifida</i> Poplar kitten						S		Poplar plantations, wet woodlands
<i>Graphiphora augur</i>						S		Woodlands, scrub, hedges etc; feeds on shrub

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Double dart								species
<i>Hadena confusa</i> Marbled coronet						S		Calcareous grasslands, often coastal, with campion species
<i>Heliophobus reticulata</i> Bordered gothic			NS	P	Med	R		Calcareous habitats, often coastal
<i>Horisme vitalbata</i> Small waved umber						S		Woods, hedges and scrub on calcareous soils, with traveller's-joy
<i>Horsime tersata</i> The Fern						S		Woods, hedges and scrub on calcareous soils, with traveller's-joy
<i>Hydrelia sylvata</i> Waved carpet			NS	P	Med			Woodlands and scrub, formerly in coppice woods now more often in wet woodlands
<i>Idaea fuscovenosa</i> Dwarf cream wave						R		Scrub and hedges
<i>Idaea subsericeata</i> Satin wave						S		Grassland habitats, including woodland rides and clearings
<i>Idaea trigeminata</i> Treble brown-spot						R		Various shaded habitats with ivy, knotgrass etc
<i>Lampropteryx otregiata</i> Devon carpet			NS		Med			Wet woodlands and marshy grasslands with marsh bedstraw
<i>Leucoma salicis</i> White satin						R		Wetlands, wet woodlands and scrub with willow and poplar
<i>Lithophane ornitopus</i> Grey shoulder-knot						S		Woodland and parklands with oak
<i>Lithophane semibrunnea</i> Tawny pinion						R		Open woodlands, parklands and scrub with ash
<i>Lygephila pastinum</i> Blackneck						S		Grassland habitats with tufted vetch, including woodland rides and clearings etc
<i>Lymantria monarcha</i> Black arches						S		Woodlands, mainly on oak
<i>Macaria wauaria</i> v-moth						R		Gardens, allotments etc with currant species
<i>Mythimna litoralis</i> Shore wainscot			NS		Med	S		Sand dunes; Kenfig
<i>Mythimna obsoleta</i> Obscure wainscot						S		Reedbeds; Bridgend speciality; Kenfig

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<i>Mythimna straminea</i> Southern wainscot								Wetlands and marshy grasslands; Bridgend speciality; Kenfig
<i>Mythimna turca</i> Double-line			NS	P	Med			Mature woodlands and marshy grasslands
<i>Ochropleura praecox</i> Portland moth			NS		Med			Dunes, dune slacks, river shingles; Bridgend speciality; Kenfig
<i>Orthonama vittata</i> Oblique carpet						S		Wetlands and marshy grasslands with bedstraw species
<i>Orthosia opima</i> Northern drab						S		Various habitats, often coastal; a local speciality; Kenfig
<i>Orthosia populeti</i> Lead-coloured drab						S		Scrub and wet woodlands with aspen
<i>Panemeria tenebrata</i> Small yellow-underwing						S		Coastal grasslands with common mouse-ear
<i>Papestra birens</i> Glaucous shears						S		Upland habitats
<i>Parastichtis suspecta</i> Suspected						S		Woodland and wooded heath, with birch, willow
<i>Perizoma bifasciata</i> Barred rivulet						R		Rough grassland with red bartsia, eyebright
<i>Perizoma blandiata</i> Pretty pinion			NS		Med	R		Upland grasslands with eyebright
<i>Phibalapteryx virgata</i> Oblique striped			NS		Med	R		Calcareous, coastal habitats with bedstraw
<i>Philereme transversata</i> Dark umber						S		Calcareous scrub and woods with buckthorn
<i>Polymixis flavicincta</i> Large ranunculus								Various habitats, often coastal; includes gardens
<i>Polyplocia ridens</i> Frosted green						R		Mature oak woodlands
<i>Pterapherapteryx sexalata</i> Small seraphim						S		Damp habitats with willow; only known site in the county; Kenfig
<i>Rhizedra lutosa</i> Large wainscot						S		Reedbeds
<i>Sesia bembeciformis</i>						R		Damp habitats with willow trees

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Lunar hornet moth								
<i>Sideridis albicolon</i> White colon			NS		Med			Heathlands and coastal dunes; Bridgend speciality
<i>Spaelotis ravida</i> Stout dart						S		Various habitats
<i>Thera juniperata</i> Juniper carpet						R		Typically on juniper in calcareous grasslands, but more recently on cultivated cedars
<i>Thumatha senex</i> Round-winged muslin						S		Wetlands, on mosses and lichens
<i>Triphosa dubitata</i> Tissue						S		Calcareous habitats with buckthorn and alder buckthorn
<i>Xanthia aurago</i> Barred sawfly						S		Woodlands, scrub, hedges etc with field maple and beech
<i>Xanthia gilvago</i> Dusky-lemon sawfly						R		Woodlands, scrub and hedges with elm
<i>Xestia agathina</i> Heath rustic						R		Upland habitats, on heather and willow
<i>Xestia rhomboidea</i> Square-spotted clay			NS	P	Med	R		Broadleaved woodland
<i>Xylena exsoleta</i> Sword-grass			NS	P		R		Various habitats and woodland
<i>Xylena vetusta</i> Red sword-grass						S		Various habitats; woodland
<b>Micro Moths</b>								
<i>Anania funebris</i>			NS					Feeds on goldenrod; dyer's greenweed
<i>Bryotropha terrella</i>			NS					Feeds on grasses
<i>Coleophora conyzae</i>			NS					Feeds on ploughman's spikenard; fleabane
<i>Epiblema incarnatana</i>			NS					Feeds on rose, especially burnet rose
<i>Eudonia lineola</i>			NS			R		Feeds on lichens; only known site in East Glamorgan
<i>Eulamprotes wilkella</i>			NS					Feeds on common chickweed
<i>Mutuaiaia terrealis</i>			NS					Feeds on goldenrod
<i>Pediasia aridella</i>			NS					Feeds on saltmarsh-grass
<i>Phalonidia manniana</i>			NS					Feeds on marsh lousewort
<i>Phlyctaenia stachydalis</i>		R						Feeds on woundwort species

<b>Moths</b>	<b>Wildlife &amp; Countryide Act</b>	<b>UK Red Data Book Species</b>	<b>Nationally Scarce Species</b>	<b>UK BAP Species</b>	<b>BC National Action Plan</b>	<b>Glamorgan Notable Species</b>	<b>Bridgend Notable Species</b>	<b>Notes</b>
<i>Phyllonorycter dubitella</i>			NS					Feeds on goat willow
<i>Phyllonorycter saportella</i>		R						Feeds on oak
<i>Yponomeuta rorella</i>		R						Feeds on willow

<b>Dragonflies &amp; Damselfies</b>	<b>Wildlife &amp; Countryide Act</b>	<b>UK Red Data Book Species</b>	<b>Nationally Scarce Species</b>	<b>UK BAP Species</b>	<b>Glamorgan Notable Species</b>	<b>Bridgend Notable Species</b>	<b>Notes</b>
<i>Coenagrion pulchellum</i> Variable damselfly					S		Recorded from Kenfig in the past, but not recently. Favours overgrown ditches & canals.
<i>Brachytron pratense</i> Hairy dragonfly					S		Kenfig is the main site in Glamorgan for this early emerging species.
<i>Ischnura pumilio</i> Scarce blue-tailed damselfly					S		More widespread than records suggest; favours small shallow pools with minimal vegetation, such as those on former mine spoil and slag heaps.
<i>Orthetrum coerulescens</i> Keeled skimmer					S		Restricted to acidic sites; possibly under-recorded.

<b>Grasshoppers, Crickets &amp; Allies</b>	<b>Wildlife &amp; Countryide Act</b>	<b>UK Red Data Book Species</b>	<b>Nationally Scarce Species</b>	<b>UK BAP Species</b>	<b>Glamorgan Notable Species</b>	<b>Bridgend Notable Species</b>	<b>Notes</b>
<i>Acheta domestica</i> House cricket						R	Only one recent record in the area; lives in heated buildings
<i>Chorthippus albomarginatus</i> Lesser marsh grasshopper						S	Only three known sites in the area; marshy habitats

<i>Conocephalus dorsalis</i> Short-winged cone-head					S		Known from two sites in the area; marshy habitats near coast
<i>Forficula lesnei</i> Lesne's earwig			NS		S		Only one known site in the area; Kenfig
<i>Gryllotalpa gryllotalpa</i> Mole cricket	5	R		P	R		One recent record in the area, probably an introduction; could occur in the wild, however
<i>Metrioptera brachyptera</i> Bog bush-cricket			NS		R		One main site (Hirwaun Common); may occur on other heathlands
<i>Tetrix ceperoi</i> Cepero's ground-hopper			NS		S		Known from two sites in the area; coastal dune-slack habitats
<i>Tetrix subulata</i> Slender ground-hopper					S		Only one confirmed site in the area; marshy habitats

Other Insects	Wildlife & Countryside Act	UK Red Data Book Species	Nationally Scarce Species	UK BAP Species	Glamorgan Notable Species	Bridgend Notable Species	Notes
<b>Flies (Diptera)</b>							
<i>Asilus crabroniformis</i> Hornet robberfly			NS	P	S		Mainly on cattle & horse grazed pastures; one known recent site in the area near Cornelly
<i>Colobaea pectoralis</i> A snail-killing fly		R					Wetlands; rich marginal vegetation around lakes; old record at Kenfig
<i>Delia flavogrisea</i> An anthomyiid fly		R					Old records only
<i>Helina parcepilosa</i> A muscid fly		R					Old records only
<i>Homoneura limnea</i> A lauxaniid fly		R					
<i>Pherbellia knutsoni</i> A snail-killing fly		R		S			Ancient broadleaved woodlands on calcareous soils
<i>Raphium penicillatum</i> A long-legged fly		R					Old records only
<i>Rymosia connexa</i> A fungus gnat		R					Old records only
<i>Thereva cinifera</i> A stilleto fly		R					Recently added to British list
<b>Bees &amp; Wasps</b>							

<b>(Hymenoptera)</b>						
<i>Bombus distinguendus</i> Great yellow bumble bee			NS	P		In Glamorgan, coastal dunes; old records only; Kenfig
<i>Bombus humilis</i> Brown-banded carder bee				P		Species-rich grasslands
<i>Bombus sylvarum</i> Shrill carder bee				P		Species-rich grasslands, often coastal
<i>Colletes cunicularius</i> Vernal colletes bee		R		S		Sand dunes; old records only; Kenfig
<i>Stelis phaeoptera</i> A bee		R				
<b>Beetles (Coleoptera)</b>						
<i>Dicronychus equiseti</i> A click beetle		R				Sand dunes
<i>Eurynebria complanata</i> Strandline beetle			NS			Beaches, especially along the strandline

<b>Other Invertebrates</b>	<b>Wildlife &amp; Countryside Act</b>	<b>UK Red Data Book Species</b>	<b>Nationally Scarce Species</b>	<b>UK BAP Species</b>	<b>Glamorgan Notable Species</b>	<b>Bridgend Notable Species</b>	<b>Notes</b>
<i>Catinella arenaria</i> Sandbowl snail	5			P			Dune slacks; old records only; Kenfig
<i>Hirundo medicinalis</i> Medicinal leech	5	R		P			Prefers unpolluted, stock-grazed ponds; Kenfig
<i>Metatrichonisoides celticus</i> A woodlouse		R		S			Rocky shores and coastal turf; occasionally in limestone quarries
<i>Ostrea edulis</i> Native oyster				P			Offshore maritime sediments
<i>Sabellaria alveolata</i> A honeycomb-worm				S			Forms offshore reefs
<i>Sabellaria spinulosa</i> A honeycomb worm							Forms offshore reefs

## KEY TO TABLES

Wildlife & Countryside Act: Protected Species

8 Protected Plants (Schedule 8)

8a Plant protected against unauthorised trade or sale

UK Red Data Book (RDB) Species

R Species listed as endangered, rare or vulnerable in UK Red Data Books

Nationally Scarce Species (UK National Review series)

UK BAP (Biodiversity Action Plan) Species (UKBG 1998; 1999; UKSG 1995)

P Priority Species

S Species of Conservation Concern

Glamorgan Notable species (Clements & Pryce 2000)

R Rare in Glamorgan

S Scarce in Glamorgan

E? Extinct in Glamorgan?

Vascular Plants	Wildlife & Countryside Act	UK Red Data Book Species	Nationally Scarce Species	UK BAP Species	Glamorgan Notable Species	Bridgend Notable Species	Notes
<i>Agrimonia procera</i> Fragrant agrimony							Unimproved neutral/acid soils: field edges, grasslands, verges etc
<i>Althea officinalis</i> Marsh-mallow			NS		S		Ditch banks, slacks and marshy edges, usually coastal, brackish; Kenfig
<i>Anacamptis pyramidalis</i> Pyramidal orchid					S		Calcareous grasslands & dunes; Kenfig
<i>Anagallis minima</i> Chaffweed					R		Damp sandy places, pool margins; Kenfig; not seen since 1974
<i>Anthriscus caucalis</i> Bur chervil					R		Sandy places near coast & sea cliffs; Kenfig
<i>Apium graveolens</i> Wild celery					S		Upper saltmarsh zone; Kenfig; old records

<b>Vascular Plants</b>	<b>Wildlife &amp; Countryside Act</b>	<b>UK Red Data Book Species</b>	<b>Nationally Scarce Species</b>	<b>UK BAP Species</b>	<b>Glamorgan Notable Species</b>	<b>Bridgend Notable Species</b>	<b>Notes</b>
<i>Apium inundatum</i> Lesser marshwort					S		Shallow water, ponds, canals & slacks; Kenfig
<i>Armeria maritima</i> Sea-thrift						R	Coastal dunes, seas cliffs & maritime grasslands; Kenfig; Merthyr Mawr
<i>Asparagus officinalis prostratus</i> Wild asparagus		R		P	R		Sandy sea cliff slopes; old records from duneland areas
<i>Asperula cyanichica</i> Squinancywort					S		Short calcareous grassland and fixed dunes, coastal; Kenfig
<i>Atriplex laciniata</i> Frosted orache					S		Drift lines on sand or shingle beaches; Kenfig
<i>Baldellia ranunculoides</i> Lesser water-plantain					S	R	Marshes, pond margins, slacks; Kenfig
<i>Bidens cernua</i> Nodding bur-marigold					S		Waters edge habitats, marshy grassland; Kenfig
<i>Calamagrostis epigejos</i> Wood small-reed					S		Grassy heaths on sea cliffs, slacks, hedgebanks, verges; usually coastal; Kenfig
<i>Carduus tenuiflorus</i> Slender thistle					S		Sea cliff grasslands, dunes; old records from near coast
<i>Carex acuta</i> Slender tufted-sedge					S		Streamsides and marshes; Kenfig
<i>Carex disticha</i> Brown sedge					S		Marshes & wet meadows; Kenfig
<i>Carex elata</i> Tufted sedge					R		Poolsides, fens; Kenfig; old records only
<i>Carex extensa</i> Long-bracted sedge					S		Saltmarsh & tidal river banks; Kenfig
<i>Carex spicata</i> Spiked sedge					S		Damp verges; Kenfig
<i>Carex strigosa</i> Thin-spiked sedge					R		Woodlands
<i>Carex viridula brachyrryncha</i> Long-stalked yellow-sedge						S	
<i>Carex viridula viridula</i> Small-fruited yellow-sedge					R		Kenfig

Vascular Plants	Wildlife & Countryside Act	UK Red Data Book Species	Nationally Scarce Species	UK BAP Species	Glamorgan Notable Species	Bridgend Notable Species	Notes
<i>Carum verticillatum</i> Whorled caraway				S	S		Neutral unimproved marshy grasslands and hay meadows
<i>Centaurea cyanus</i> Cornflower		R		P	R		Cornfield weed, occasional on verges and waste ground; old records only
<i>Centaureum littorale</i> Seaside centaury			NS		R		Dunes ; Kenfig ; some doubt of authenticity
<i>Cerastium diffusum</i> Sea mouse-ear							Dunes and sea cliffs on shallow soils
<i>Cerastium semidecandrum</i> Little mouse-ear							Calcareous dunes and sea cliffs on shallow soils
<i>Ceratophyllum demersum</i> Rigid hornwort					S		Freshwater ponds, slow waters; Kenfig
<i>Cirsium dissectum</i> Meadow thistle						R	Neutral marshy grasslands, often with basic flushing; bogs, slacks; Kenfig
<i>Cirsium eriophorum</i> Woolly thistle					S		Calcareous grassland, open scrub; usually coastal; Kenfig
<i>Cladium mariscus</i> Great fen-sedge					S	R	Dune slacks, fens, lake margins; Kenfig
<i>Clinopodium acinos</i> Basil-thyme					S		Shallow calcareous soils near outcrops on coast; Kenfig
<i>Dactylorhiza incarnata</i> Early marsh-orchid					S		Dune slacks; Kenfig
<i>Dactylorhiza pupurella</i> Northern marsh-orchid					R		Dune slacks; Kenfig
<i>Dianthus armeria</i> Deptford pink	8	R		P			Dry, short, basic grasslands, frequently disturbed, and occasionally dunes; old records only; Merthyr Mawr
<i>Dianthus deltoides</i> Maiden pink			NS		R		Sandy grasslands or heath near outcrops; dunes; usually coastal; Kenfig
<i>Dryopteris aemula</i> Hay-scented buckler-fern				S	R	R	<i>Woodlands, in sheltered humid situations; only one site; Cwm Dinbath</i>
<i>Dryopteris carthusiana</i> Narrow buckler-fern					S		Woodlands, in sheltered humid situations
<i>Dryopteris oreades</i> Mountain male-fern					R		North-facing cliffs on Pennant grit in uplands

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<i>Eleocharis uniglumis</i> Slender spike-rush					S		Dunes slacks, pond margins, near coast; Kenfig
<i>Epipactis palustris</i> Marsh helleborine					R		Dune slacks; Kenfig
<i>Epipactis phyllanthes</i> Green-flowered helleborine			NS		R		Dune slacks; Kenfig
<i>Equisetum variegatum</i> Variegated horsetail			NS		S		Dune slacks; largest population in county borough is at Kenfig
<i>Eriophorum latifolium</i> Broad-leaved cotton-sedge					R		Calcareous marshes
<i>Erodium maritimum</i> Sea stork's-bill					S		Sea cliffs, shallow soils near coast
<i>Euphorbia paralias</i> Sea spurge					S		Mobile sand dunes, shingle; Kenfig
<i>Euphorbia portlandica</i> Portland spurge			NS		S		Spray zone of sea cliffs & dunes; Kenfig
<i>Filago minima</i> Small cudweed					S		Spoil tips, waste ground, slacks; Kenfig
<i>Frankenia laevis</i> Sea-heath			NS		R		Upper saltmarsh zone; Merthyr Mawr
<i>Galeopsis angustifolia</i> Red hemp-nettle			NS	P	R		Field edges, waste ground; disturbed soils; old records only; Kenfig and elsewhere
<i>Galium uliginosum</i> Fen bedstraw					R		Marshes & fens; Kenfig
<i>Gastridium ventricosum</i> Nit-grass			NS		S		Calcareous sea cliffs; shallow soils
<i>Geranium pyrenaicum</i> Hedgerow crane's-bill					S		Roadsides, hedgebanks, verges, waste ground; Kenfig
<i>Glaucium flavum</i> Yellow horned-poppy				o	S		Shingle beaches; maritime coastal; Kenfig
<i>Gnaphalium sylvaticum</i> Heath cudweed				S	R		Acid dune grassland and dry heaths; Kenfig; old records only
<i>Gymnadenia conopsea</i> Fragrant orchid					S		Damp calcareous grassland and marshes; Kenfig
<i>Hippurus vulgaris</i>					S		Ponds, marshes, canals; Kenfig

Vascular Plants	Wildlife & Countryside Act	UK Red Data Book Species	Nationally Scarce Species	UK BAP Species	Glamorgan Notable Species	Bridgend Notable Species	Notes
Mare's-tail							
<i>Hornungia petraea</i> Hutchinsia			NS		S		Winter annual on dunes and coastal limestone ; Kenfig
<i>Hyacinthoides non-scripta</i> Bluebell	8a			S			Common in woodlands in the area
<i>Hymenophyllum tunbrigense</i> Tonbridge filmy-fern				S	R		Sheltered humid woodlands; one known site only; Cwm Dinbath
<i>Hymenophyllum wilsonii</i> Wilson's filmy-fern				S	R		Sheltered humid woodlands; one known site only; Cwm Dinbath
<i>Hyoscyamus niger</i> Henbane					S		Sandy-gravelly places by coast; wasteground; Kenfig
<i>Hypericum montanum</i> Pale St John's-wort					R		Open woods, cliff scrub, hedgebanks on limestone; old records only; South Cornelly area
<i>Hypochoeris glabra</i> Smooth cat's-ear			NS	S	R		Disturbed light soils; Kenfig
<i>Inula crithmoides</i> Golden-samphire			NS		S		Sea cliffs and saltmarsh; Kenfig; old records only
<i>Isolepis cernua</i> Slender club-rush					R		Slacks and marshes by sea; Kenfig
<i>Juncus acutus</i> Sharp rush			NS		S		Sandy soils near coast; Kenfig
<i>Juncus maritimus</i> Sea rush					S		Saltmarsh and slacks; Kenfig
<i>Juncus subnodulosus</i> Blunt-flowered rush					S		Calcareous marshy grasslands, slacks; Kenfig
<i>Koeleria macrantha</i> Crested hair-grass					S		Calcareous grasslands and dunes; Kenfig
<i>Limonium binervosum</i> Rock sea-lavender			NS		S		Maritime habitats; Kenfig
<i>Limosella aquatica</i> Mudwort			NS		R		Exposed mud at waterside, often non-basic; old record from Kenfig Pool
<i>Limosella australis</i> Welsh mudwort	8	R		S	R		Exposed mud at waterside; Kenfig Pool; old records only
<i>Linum bienne</i> Pale flax					S		Calcareous grassland by coast; Kenfig

<b>Vascular Plants</b>	<b>Wildlife &amp; Countryside Act</b>	<b>UK Red Data Book Species</b>	<b>Nationally Scarce Species</b>	<b>UK BAP Species</b>	<b>Glamorgan Notable Species</b>	<b>Bridgend Notable Species</b>	<b>Notes</b>
<i>Liparis loeselii ovata</i> Fen orchid	8	R		P	R		Dune slacks; Kenfig; internationally significant population
<i>Lithospermum purpureocaeruleum</i> Purple gromwell		R			S		Old records from amongst coastal scrub on limestone
<i>Littorella uniflora</i> Shoreweed					S		Waterside situations, marshes; Kenfig
<i>Malva neglecta</i> Dwarf mallow					S		Verges, wastground, drift lines; Kenfig
<i>Marrubium vulgare</i> White horehound			NS		S		Open, disturbed calcareous soils; Kenfig and elsewhere near coast
<i>Matthiola sinuata</i> Sea stock		R			R		Dunes; Kenfig
<i>Mentha pulegium</i> Pennyroyal	8	R		P	R		Wet sand, slacks, damp grassy heaths; old records only; Kenfig, but probably in error
<i>Menyanthes trifoliata</i> Bog-bean						R	Marsh, swamp and bog, often calcifuge; Kenfig
<i>Moenchia erecta</i> Upright chickweed					R		Dunes, shallow soils by coast; Kenfig
<i>Monotropa hypopitys</i> Bird's-nest					R		Dune slacks; Kenfig
<i>Myosoton aquaticum</i> Water chickweed					S		Waters edge, marshes; Kenfig
<i>Myrica gale</i> Bog myrtle					S		Bog, wet heathland
<i>Myriophyllum spicatum</i> Spiked water-millefoil					S		Ponds, canals, ditches; Kenfig
<i>Oenanthe fistulosa</i> Tubular water-dropwort					S		Streamsides and marshes; Kenfig
<i>Oenanthe lachenalii</i> Parsley water-dropwort					S		Upper saltmarsh zone; Kenfig
<i>Ononis spinosa</i> Spiny restharrow					S	R	Verges and field banks; Kenfig
<i>Ophrys apifera</i> Bee orchid					S		Calcareous grasslands, dunes; Kenfig

<b>Vascular Plants</b>	<b>Wildlife &amp; Countryside Act</b>	<b>UK Red Data Book Species</b>	<b>Nationally Scarce Species</b>	<b>UK BAP Species</b>	<b>Glamorgan Notable Species</b>	<b>Bridgend Notable Species</b>	<b>Notes</b>
<i>Orchis morio</i> Green-winged orchid					S		Calcareous grassland, usually coastal; sea cliffs, dunes
<i>Ornithopus purpusillus</i> Bird's-foot					S		Short turf on dunes; Kenfig
<i>Osmunda regalis</i> Royal fern					S		Damp heathland, acid-neutral marshy grassland
<i>Paris quadrifolia</i> Herb paris					S		Calcareous woodland
<i>Pedicularis palustris</i> Marsh lousewort						S	Calcareous marsh and dune slacks
<i>Platanthera chlorantha</i> Greater butterfly-orchid					S		Calcareous woodlands
<i>Polygonum oxyspermum raii</i> Ray's knotweed					R		Sandy shingle near drift line; Kenfig
<i>Potamogeton berchtoldii</i> Small pondweed					S		Pond and ditches; Kenfig
<i>Potamogeton gramineus</i> Various-leaved pondweed						R	Pools, usually near coast; Kenfig
<i>Potamogeton lucens</i> Shining pondweed					R		Pools; Kenfig
<i>Potamogeton perfoliatus</i> Perfoliate pondweed					R		Canals and pools; Kenfig
<i>Potamogeton pusillus</i> Lesser pondweed					S		Lakes, canals; Kenfig
<i>Potamogeton trichoides</i> Hairlike pondweed			NS		R		Dune pools and slacks; Kenfig
<i>Potentilla palustris</i> Marsh cinquefoil					S		Marshy grassland, bogs; Kenfig
<i>Primula vulgaris</i> Primrose						S	Calcareous-neutral grasslands, verges, woodlands, open scrub; quite common in the county borough
<i>Pyrola rotundifolia</i> Round-leaved wintergreen			NS		S		Dune slacks; Kenfig
<i>Radiola linoides</i> Allseed					R		Damp, open heath, acid dunes; Kenfig
<i>Ranunculus aquatilis</i>					S	R	Streams and ponds; Kenfig

<b>Vascular Plants</b>	<b>Wildlife &amp; Countryside Act</b>	<b>UK Red Data Book Species</b>	<b>Nationally Scarce Species</b>	<b>UK BAP Species</b>	<b>Glamorgan Notable Species</b>	<b>Bridgend Notable Species</b>	<b>Notes</b>
Common water-crowfoot							
<i>Ranunculus auricomus</i> Goldilocks buttercup					S		Calcareous woodlands
<i>Ranunculus baudotii</i> Brackish water-crowfoot					S		Brackish pools and ditches near coast; Kenfig
<i>Ranunculus circinatus</i> Fan-leaved water-crowfoot					S	R	Pools; Kenfig Pool is the only known recent site
<i>Ranunculus hederaceus</i> Ivy-leaved water-crowfoot							Open mud and shallow water
<i>Ranunculus lingua</i> Great spearwort					S		Emergent vegetation in pools; Kenfig
<i>Ranunculus omiophyllus</i> Round-leaved water-crowfoot					S		Open mud and shallow water
<i>Ranunculus parviflorus</i> Small-flowered buttercup					S		Shallow soils near coast; sea cliffs
<i>Ranunculus trichophyllos</i> Thread-leaved water-crowfoot					S	R	Shallow ponds and ditches, usually near coast; Kenfig; the only known site
<i>Rhynchospora alba</i> White beak-sedge					R		Wet peaty moorland
<i>Rorippa islandica</i> Northern yellow-cress		R			R		Damp disturbed ground which is wet in winter
<i>Rosa pimpinellifolia</i> Burnet rose					S		Dunes and limestone cliffs near sea; Kenfig
<i>Rumex hydralopathum</i> Water dock					S		Edges of ponds and ditches; Kenfig
<i>Rumex rupestris</i> Shore dock	8	R		P	R		Lower sea cliffs, standline etc; old records; Kenfig & Merthyr Mawr; may still occur in suitable habitats
<i>Salvia pratensis</i> Meadow clary	8		NS	S	R/E?		Field edges; old record from Merthyr Mawr
<i>Samolus valerandi</i> Brookweed					S		Brackish marshes and ditches by sea ; Kenfig
<i>Scandix pecten-veneris</i> Shepherd's-needle			NS	P	R		Field edges, sea cliffs; old records only
<i>Schoenoplectus tabernaemontani</i>					S		Ponds, marshes, usually by sea; Kenfig

Vascular Plants	Wildlife & Countryside Act	UK Red Data Book Species	Nationally Scarce Species	UK BAP Species	Glamorgan Notable Species	Bridgend Notable Species	Notes
Grey club-rush							
<i>Scorzonera humilis</i> Viper's-grass	8	R		S	R		Damp unimproved lowland grasslands; Cefn Cribwr
<i>Silene gallica</i> Small-flowered catchfly			NS	P	R		Field edges, wasteground, sea cliffs ; old records only
<i>Spiranthes spiralis</i> Autumn lady's-tresses					S		Calcareous sea cliffs, coastal grasslands and dunes; Kenfig
<i>Spirodela polyrhiza</i> Greater duckweed					R		Pools, ditches etc; Kenfig; old records only
<i>Stellaria pallida</i> Lesser chickweed					R		Dunes and shallow soils on sea cliffs; Kenfig
<i>Thalictrum minus</i> Lesser meadow-rue					R		Limestone cliffs by sea; Kenfig
<i>Thelypteris palustris</i> Marsh fern			NS		R		Reedswamp, peaty mires, basic mires; probably extinct
<i>Trichomanes speciosum</i> Killarney fern	8	R		P	R		Sheltered, humid sites, on wet cliffs; one known site only; Cwm Dinbath
<i>Trifolium fragiferum</i> Strawberry clover					S		Dune slacks, saltmarsh, verges near coast; Kenfig
<i>Trifolium onithopodioides</i> Bird's-foot clover					R		Dry open grassland, coastal; Kenfig
<i>Trifolium subterraneum</i> Subterranean clover					R		Shalloe soils on sea cliffs; Kenfig
<i>Triglochin maritima</i> Sea arrow-grass					S		Saltmarsh; Kenfig
<i>Triglochin palustris</i> Marsh arrow-grass					S		Marhes, often near coast; Kenfig
<i>Ulex gallii</i> Western gorse				S			Acid grasslands, heathlands; moderately common in the area
<i>Vaccinium oxycoccus</i> Cranberry					S		Wet heaths and bogs, uplands
<i>Valerianella dentata</i> Narrow-fruited cornsalad				S			Old records only; wasteground, field edges; Kenfig
<i>Valerianella ramosa</i> Broad-fruited cornsalad		R		P	S		Old record; wasteground, field edges; Bridgend/Cowbridge area

<b>Vascular Plants</b>	<b>Wildlife &amp; Countryside Act</b>	<b>UK Red Data Book Species</b>	<b>Nationally Scarce Species</b>	<b>UK BAP Species</b>	<b>Glamorgan Notable Species</b>	<b>Bridgend Notable Species</b>	<b>Notes</b>
<i>Veronica anagalis-aquatica</i> Blue water-speedwell					R		Streams, ditches, slacks; Kenfig
<i>Veronica catenata</i> Pink water-speedwell					S		Calcareous streams and marshes; Kenfig
<i>Vicia lathyroides</i> Spring vetch					S		Fixed, dry dunes; Kenfig
<i>Viola tricolor</i> Wild pansy					S		Field edges, wasteground; or dunes ( <i>spp curtisii</i> ); Kenfig
<i>Vulpia fasciculata</i> Dune fescue			NS		S		Dunes; Kenfig & Merthyr Mawr
<i>Zannichellia palustris</i> Horned pondweed					S		Brackish ditches, saltmarsh; Kenfig

<b>Liverworts &amp; Mosses</b>	<b>Wildlife &amp; Countryside Act</b>	<b>UK Red Data Book Species</b>	<b>Nationally Scarce Species</b>	<b>UK BAP Species</b>	<b>Glamorgan Notable Species</b>	<b>Bridgend Notable Species</b>	<b>Notes</b>
<b>Liverworts</b>							
<i>Petalophyllum ralfsii</i>	8	R		P			Dune slacks; Kenfig; declining in numbers
<i>Drepanocladus sendtneri</i>			NS				Dune slacks; Kenfig

<b>Lichens</b>	<b>Wildlife &amp; Countryside Act</b>	<b>UK Red Data Book Species</b>	<b>Nationally Scarce Species</b>	<b>UK BAP Species</b>	<b>Glamorgan Notable Species</b>	<b>Bridgend Notable Species</b>	<b>Notes</b>
<i>Bacidia incompta</i> A lichen		R		P			On mature trees, often elm; old records from the Bridgend area, but not recorded recently and may now be lost.
<i>Endocarpon pusillum</i> A lichen		R					Compacted calcareous soils, including in railway cuttings

<b>Fungi</b>	<b>Wildlife &amp; Countryside Act</b>	<b>UK Red Data Book Species</b>	<b>Nationally Scarce Species</b>	<b>UK BAP Species</b>	<b>Glamorgan Notable Species</b>	<b>Bridgend Notable Species</b>	<b>Notes</b>
<i>Coprinus ammophilae</i> Marram ink-cap		R					
<i>Physarum psittacinum</i> A slime-mould		R					
<i>Poronia punctata</i> Nail-fungus		R		P			Old records only
<i>Suillus tridentinus</i> A bolete fungus			NS				Parc Slip
<i>Spathalaria flavida</i> A fungus			NS				Larch plantation at Parc Slip

Annex 3

**Current Biodiversity Initiatives in Bridgend County Borough**

*From : Bridgend County Borough Integrated Action Programme Review 2001*

NO.	Projects	Partner(s)	Timetable	Notes
<b>MANAGEMENT OF KENFIG NATIONAL NATURE RESERVE (KNNR)</b>				
<b>NC1</b>	Carry out practical habitat and species management at KNNR. (c.f. NC01)	Kenfig Trust, CCW, BCBC-Planning, BTCV.	On-going.	Further details from the KNNR Reserve Centre. This includes:- 1. Management of 30 hectares of dune grassland to increase diversity by carrying out scrub clearance and mowing. 2. Management of 20 hectares of humid dune slack to benefit the fen orchid and associated plants and invertebrates.
<b>NC2</b>	Carry out monitoring and data collection works at KNNR. (c.f. NC01,3)	BCBC-Planning, BTO, CCW, NMGW, GBC, GMRG, BDS, BSBI.  BCBC-Planning, Volunteers  BCBC-Planning, Volunteers  BCBC – Planning, BTO, Volunteers	On-going  On-going On-going  Twice/month	Includes :- 1. Monitoring the effects of mowing and scrub clearance. 2. Monthly counts for the BTO/WWT Wetland Bird Survey. 3. Butterfly transects 4. Moth trapping 5. Monitoring of beach levels / erosion. 6. Survey of the Strandline Beetle <u>Nebria complanata</u> . 7. Water table measurements. 8. Compiling Daily Wildlife records. 9. Produce an annual 'Kenfig Wildlife Report.' 10. Constant Effort scheme to survey breeding birds in reeds and willow next to Kenfig Pool

NO.	Projects	Partner(s)	Timetable	Notes	
<b>NC3</b>	Provide an education and information service based at KNNR Reserve Centre. (c.f.EAE03,6)	BCBC - Planning, CCW, Education Business Partnership, Volunteers, National Watch Club	On-going	Includes:- 1. Running school visits and guided walks. 2. Inputting to industry training days held at schools 3. Providing a summer holiday scheme. 4. Holding an annual 'Open Day' (held in July / August). 5. Running a children's Watch club once a month	
<b>NC4</b>	Enhance public access and enjoyment of KNNR (c.f.AR02,3,4,5,7)	BCBC-Planning, CCW, GB, Pencoed College	On-going	The 'mini-nature reserve' project is completed and provides access for the less abled. Tape-recorded interpretative material has being produced for the visually disabled (part of this Authority's 'Best Value' pilot project).  GB's Bridleway and Access Study has been completed and identifies equestrian access problems and opportunities throughout the county borough, including Kenfig NNR.	The 'mini-nature reserve' project provides access for the less abled. Tape-recorded interpretative material has being produced for the visually disabled (part of this Authority's 'Best Value' pilot project).  GB's Bridleway and Access Study has been completed and identifies equestrian access problems and opportunities throughout the county borough, including Kenfig NNR.

<b>MANAGEMENT OF LOCAL NATURE RESERVES (LNRs) AND OTHER STATUTORY SITES</b>				
<b>N0.</b>	<b>Projects</b>	<b>Partner(s)</b>	<b>Timetable</b>	<b>Notes</b>
<b>NC5</b>	Management of Craig-y-Parcau LNR. (c.f.NC01)	BCBC-Planning, CCW, BTCV	On-going	<p>'Management Plan' currently being updated. On-going management works being carried out Risk assessment of the site carried out 1999.</p> <p>In 1999 the 3<sup>rd</sup> instalment of Woodland Grant Scheme funding was received for this site (approximately £150).</p>
<b>NC6</b>	Management of Frog Pond Wood LNR (c.f.NC01)	BCBC-Planning, CCW, Pencoed College, BTCV	On-going	<p>'Management Plan' currently being updated. On-going management works being carried out Risk assessment of the site carried out 1999.</p> <p>Woodland grant scheme funding has permitted coppicing in the woodland to encourage ash regeneration. Work undertaken by BTCV</p> <p>Pencoed College students and staff have undertaken pond management, which is on-going</p> <p>KNNR staff have provided an 'outreach function' at Village Farm Meadow, by way of mowing and felling work.</p>
<b>NC7</b>	Declare and establish new LNRs. (c.f.NC016)	BCBC-Planning, CCW	On-going	<p>Lock's Common and Newton Burrows (both in Porthcawl) are currently being put forward as potential LNRs, and draft management plans are in preparation. This also forms part of Kenfig NNR's outreach function.</p> <p>BCBC-Planning have produced a Strategy for the Development of LNRs in the County Borough. Staff from KNNR will carry out an 'outreach function' role at Locks Common and Newton Burrows.</p>

<b>NC8</b>	Establish a Marine Nature Reserve at Sker Point. (c.f.NC016)	Marine Conservation Society, CCW, University of Wales College Cardiff, Cardiff Bay Diving Club, BCBC Planning	2001- On-going	Discussions have taken place to progress this project. Initial work will be concerned with defining the broad habitat types.
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<b>POLICY AND DATA COLLECTION</b>				
<b>N0.</b>	<b>Projects</b>	<b>Partner(s)</b>	<b>Timetable</b>	<b>Notes</b>
<b>NC9</b>	Support the establishment of a local 'Biological Records Centre' (c.f.NC01,3)	BCBC-Planning GWT, CCW, National Biodiversity Network.		Heritage Lottery Bid by NBN Consortium.
<b>NC10</b>	Work towards the production of a Geographical Information System (or GIS) which will contain detailed biological records and other environmental data. (c.f.NC01, LCE01)	BCBC-Planning, CCW, GWT, other key partners and consultees, EAW.	On-going	The Authority is progressing with a GIS based on Map Info. It is the intention to build up layers of data on archaeology, nature conservation and landscape to inform land-use policy development. Elements of this will be developed through Landmap process (also see paragraph 9.4.1 of Countryside Strategy).
<b>NC11</b>	Support the work of the voluntary recording community. (c.f.NC01,3)	BCBC Planning, GMRG, GBC, BDS, BSBI, BTO.		
<b>NC12</b>	Development of Model Planning Conditions for nature conservation. (c.f.NC01)	BCBC-Planning, all key partners.	On-going	
<b>NC13</b>	Develop policies and proposals to increase the nature conservation interest of land in Council ownership. (c.f.NC01)	BCBC- all directorates	Initiate in 1998	

<b>AREA BASED PROJECTS AND INITIATIVES</b>				
<b>N0.</b>	<b>Projects</b>	<b>Partner(s)</b>	<b>Timetable</b>	<b>Notes</b>
<b>NC14</b>	Carry out work related to the UK Biodiversity Action Plan. (c.f.NC01)	Members of 'GBAG'		<p>This currently includes:-</p> <p>The preparation of a number of species and habitat action plans for short and middle list priorities and those species and habitats that are locally important.</p> <p>Support for Butterfly Conservation's Regional Action Plan for Wales and the implementation of an action plan for Lepidoptera in Bridgend.</p> <p>EAW otter survey throughout the Ogmere catchment area, which has identified suitable habitats for key BAP species. This work is on-going and currently being progressed through the Wildlife Trust's Otter and Rivers Project.</p> <p>This project can be cross-referenced to Issue NE/10 of the LEAP. Also EAW are committed to working closely with partners of GBAG as highlighted in the LEAP, Page 7 under Biodiversity Action Plans.</p>
<b>NC15</b>	Support the work of the 'Glamorgan Heritage Coast Project' (c.f.NC01)	BCBC-Planning, VGC	On-going	
<b>NC16</b>	Support the work of the Coed Cymru Woodland Project. (c.f.NC01,9)	BCBC-Planning	On-going	This includes both BCBC sites and those in private ownership.

<b>NO.</b>	<b>Projects</b>	<b>Partner(s)</b>	<b>Timetable</b>	<b>Notes</b>
<b>NC17</b>	Management of Coed Iestyn Woodland. (c.f.NC01,9)	GWT, Mid Glamorgan Probation Service, Pencoed College, Pencoed Town Council,	On-going	The management is based on a partnership agreement, which Pencoed College uses for practical education work. The Probation Service also undertake practical works.
<b>NC18</b>	Management of Trafalgar Wood, Porthcawl	Woodland Trust, BCBC Planning, Porthcawl Town Council	On-going	Development of management objectives through community involvement.
<b>NC19</b>	Woodland Project Pencoed. (c.f.NC01,9)	Dunraven Estate, Pencoed College, Pencoed Town Council,	On-going	This project has received Millennium funding through Dunraven Estates. Millennium funding through Dunraven Estate has also been agreed in principle for a nature Reserve feature at Heol-y-Cyw (see EAE3)
<b>NC20</b>	Management of The Wilderness, and Pwll y Waun, Porthcawl	BCBC Planning & Leisure & Legal, Services, EAW, local angling group	Autumn 2000 start?	Management Plan developed and a Heritage Lottery bid submitted in 1999. Health and Safety work completed in 2000 (railings)
<b>NC21</b>	Support local agri-environment schemes. (c.f.NC011)	BCBC-Planning, CCW, WO	On-going	KNNR staff are currently giving advice and support to the Sker Farm Habitat Scheme e.g. ragwort control.
<b>NC22</b>	GWT Nature Reserve Management Plan Strategy. (c.f.NC01)	GWT	1999-on-going	Outlines the on-going progress of nature reserves in the old Glamorgan area that come under the control of GWT.

<b>N0.</b>	<b>Projects</b>	<b>Partner(s)</b>	<b>Timetable</b>	<b>Notes</b>
<b>NC23</b>	Development and production of a 'Coastal Zone Management Plan' for the County Borough (c.f.NC04, LCE01, ELM09)	BCBC-Planning, CCW and key partners.		The Authority supports 'Arfordir', a grouping of local authority officers involved in the Coastal Zone Management. Support is also provided to 'Green Sea Initiative'. This is a joint venture involving more than 30 organisations to protect and improve the marine environment around Wales.
<b>NC24</b>	Investigate the opportunities for setting up a countryside management service. (c.f. all NC0s,)	All key partners	On-going	This would involve the coming together of all countryside agencies operating in the County Borough and developing a system by where resources and information could be shared. This could also provide a focus for on-going management and maintenance of sites.
<b>NC25</b>	Carry out improvements to river corridors. (c.f.NC012, LCE02,5, AR06, EAE03)	BCBC-Planning, EAW, Keep Wales Tidy, Otters and Rivers Project Wales	On-going	<p>These include litter clearance, access improvements and habitat creation. EAW have created wetlands at Waterton and tree management along river corridors. The Clean Rivers Project (part of Keep Wales Tidy), work in partnership with local organisations and residents to achieve improvements to the River Ogmore.</p> <p>See Neath, Port Talbot and Bridgend LEAP issue NE/13, produced by the Environment Agency Wales. This considers the merits of considering the designation of 'buffer zones' along river corridors.</p>
<b>NC26</b>	Develop a Strategy to protect and manage the Ogmore River Estuary. (c.f.NC04,12)	BCBC-Planning, BTO, EAW, JNCC, CCW, VGC		Will include the collation of nature conservation data and the examination of threats and opportunities.

<b>N0.</b>	<b>Projects</b>	<b>Partner(s)</b>	<b>Timetable</b>	<b>Notes</b>
<b>NC27</b>	Develop a strategy for the selection and management of road verges of biodiversity interest. (c.f.NC01)	BCBC-Planning, GWT, Education and Leisure	On-going	This project seeks to enhance the biodiversity of the roadside verges of the County Borough.
<b>NC28</b>	Provide a nature conservation input into land reclamation schemes. (c.f.NC01,5)	BCBC-Planning, WDA, FA	On-going	See 'Landscapes Working for Bridgend County Borough'. Also see Ogmore Catchment Management Plan and Local Environment Agency Plan for Neath Port Talbot and Bridgend (produced by the Environment Agency)
<b>NC29</b>	Develop policies for the management and control of invasive plants and weed species. (c.f.NC01)	BCBC-Planning, EAW, FA, BHS,	On-going	<p>These plants include Japanese Knotweed, Sea Buckthorn, Rhododendron, and Himalayan Balsam and ragwort.</p> <p>EAW provides advice and have prepared publications on the control of Japanese knotweed and Himalayan Balsam. This forms part of EAW's contribution to a co-ordinated approach to the control of these species "and links with Issue NE/12 of the LEAP Action Plan.</p> <p>BHS operate an annual 'Ragwort Pulling Week'.</p>

<b>GENERAL</b>				
<b>NO.</b>	<b>Projects</b>	<b>Partner(s)</b>	<b>Timetable</b>	<b>Notes</b>
<b>NC30</b>	Draw up a list of 'Sites of Importance for Nature Conservation' (or SINC). (c.f.NC03)	BCBC-Planning, GWT	On-going	A completed list is held on GIS along with associated ecological information. The database is constantly being reviewed and update on both a regular basis, and as and when new information comes to light.
<b>NC31</b>	Support nature conservation fora and working-groups. (c.f. all NCOs).		On-going	Support and input is currently being provided to the 'Glamorgan Biodiversity Advisory Group'.
<b>NC32</b>	Support pollution control initiatives. (c.f.NCO1)	BCBC-Planning, EAW	On-going	Two oil booming sites were validated in 1999. These two points would completely protect the estuary in the event of an accident.  Relevant LEAP issues that relate to pollution prevention are NE/23, NE/24, NE/26, NE/27, NE/31, NE/34, NE/ 35 and NE/36.
<b>NC33</b>	Support the 'Trees of Time and Place' Initiative. (c.f.NC01)	Various	On-going	An initiative aimed at growing trees from seed.  GB continues to support the Rockwool Tree Nursery Initiative, which collects local indigenous seed and growing it on prior to planting on local projects
<b>NC34</b>	Support for community based projects to protect species of local interest including birds of prey (c.f. NCO1)	BCBC-Planning, EAW, Police Wildlife Liaison Officer, RSPB.	On-going	

<b>N0.</b>	<b>Projects</b>	<b>Partner(s)</b>	<b>Timetable</b>	<b>Notes</b>
<b>NC35</b>	Pond management project at Royal Porthcawl Golf Club. (c.f.NC01,14)	BCBC-Planning, Royal Porthcawl Golf Club	1999-on-going	This has involved partial reedbed removal and providing advice on future management of the pond and other areas of nature conservation on the golf course. In 1998 Royal Porthcawl Club received an award from the British and International Golf Green Association in recognition of its work to improve the nature conservation interest of the site.
<b>NC36</b>	Pond Survey for Bridgend County Borough	NMGW, EAW, BCBC Planning	2001-2002	Work has commenced on this project, which is being jointly funded by the three partners.