

Appendix

Appendix 1: East Dunbartonshire Local Biodiversity Plan (2005) Species and Habitat Action Plans

Species Action Plans	Partners Involved (Lead first)
Adder's Tongue Fern	EDC, MCP, BSBI
Bennett's Pondweed	BW, EDC
Bog Rosemary	EDC BSBI
Juniper	MCP, BSBI, MCP, PS
Round-leaved Sundew	EDC, BSBI
Tufted Loosestrife	EDC, BW, BSBI
Bats	LBG, EDC, SNH, MCP
Black Grouse	RSPB, EDC, FCS
Farmland Birds I (waders)	EDC, RSPB, BTO, FWAG, CRG
Farmland Birds II (non-waders, including Grey Partridge)	EDC, RSPB, FWAG, SAC, SNH, CRG
Great Crested Newt	EDC, CARG, SEPA
Mud Snail	EDC, SW, SEPA
Small Pearl-bordered Fritillary	BC, EDC, MCP
Habitat Action Plans	
Farmland (general)	EDC, CRF, SEPA, FORK, FWAG, SAC, CE, SLF, NFUS, SEERAD
Farmland I	EDC, FWAG, SAC, SLF, NFUS
Farmland II (arable)	EDC, FWAG, SAC, SLF, NFUS
Floodplain Grazing Marsh	FWAG, SAC, EDC, SEPA
Forth & Clyde Canal	BW, EDC, SEPA
Golf Courses	SGEG, EDC, SEPA, SNH
Ponds, Lochs and Reservoirs	EDC, FWAG, SAC, SNH, SEPA
Raised Bog	EDC, SNH
Rivers, Burns and Terrestrial Margins	EDC, FWAG, CRF, FORK
Semi-natural Grasslands	FWAG, SAC, EDC, SNH
Urban	EDC, SNH
Wetlands	EDC, FWAG, SAC, SNH
Woodland	EDC, FWAG, CSCT, FCS
Habitat Statements	
Blanket Bog	
Quarries, Bings and Sandpits	
Reedbed	
Scrub	

Appendix 2: Scottish Forestry Strategy

The new Scottish Forestry Strategy was produced in October 2007, following an extensive review of the previous strategy. It is based on four key principles:

- Sustainable development, underpinned by sustainable forest management;
- Social inclusion, through helping to provide opportunities for all, and helping to build stronger communities;
- Forestry for and with people; and
- Integration with other land uses and businesses.

Actions have been devised under 7 themes: Climate Change, Timber, Community Development, Environmental Quality, Business Development, Access & Health, and Biodiversity. A suite of Implementation Plans has been written to ensure that these actions are taken forward. The Biodiversity Implementation Plan 2008-2011 details ambitious plans to:

- Bring at least 3,000ha of designated woodland features and 3000ha of other native woodlands into management towards favourable condition.
- Bring at least 1,000ha of non-native PAWS into restoration towards native woodland to help meet HAP targets and develop habitat networks.
- Publish costed management programmes for key woodland species: juniper, pearl bordered fritillary and chequered skipper butterfly.
- Publish a final set of red squirrel stronghold sites after consultation.
- Develop advice and guidance for Scottish Rural Development Programme applicants on woodland management for priority conservation species and invasive non-native species.
- Develop and implement Rural Development Contract measures and guidance for restoration of open habitats.
- Recognise the importance of woodlands of high conservation value in revised Scottish planning policy on natural heritage.
- Publish revised guidance on use of Ancient Woodlands Inventory.

In addition, the SFS lays out regional targets. For Central Scotland, these are focused on the Climate Change, Community Development and Biodiversity themes. The main biodiversity action is to develop and deliver priority Integrated Habitat Networks projects in Central Scotland, based on the outcomes of the Glasgow Clyde Valley Network (see above) and the amalgamation of the Edinburgh & Lothians and Falkirk networks (lead partner: Central Scotland Forest Trust).

Appendix 3: Statutory framework

- *The National Parks and Access to the Countryside Act 1949* introduced the concept of National Nature Reserves (NNRs) and Sites of Special Scientific Interest (SSSIs), that are areas of importance for their flora, fauna, geology or landform features. This Act also conferred powers on local authorities to establish Local Nature Reserves (LNRs).
- *The Countryside (Scotland) Act 1967* strengthened the powers conferred under the 1949 Act and imposed on every public body a duty to have regard to the desirability of conserving the natural heritage of Scotland in the exercise of their functions relating to land.
- *The Wildlife and Countryside Act 1981 (& as amended)* strengthened the protection accorded to SSSIs, provided additional safeguarding for particular types of area, and restricted the killing, taking from the wild and disturbance of various species. A wide range of wild animals and plants are protected under the Wildlife and Countryside Act 1981. The deliberate killing, injury or taking of protected species, or damage, destruction or obstruction of places used by such species for shelter or protection is an offence under the Act unless the action is the incidental result of a lawful action and could not reasonably be avoided.
- *The Natural Heritage (Scotland) Act 1991* established Scottish Natural Heritage and charged it with responsibility for protecting, enhancing and facilitating the enjoyment of Scotland's natural heritage.
- *Protection of Badgers Act 1992* was written to protect badgers against harm and sett disturbance, primarily as a result of badger baiting activities. A licence must be obtained from SNH where development would result in interference with a badger and/or a sett.
- *The Town and Country Planning (Scotland) Act 1997* consolidated the statutory framework for the control of development. It requires that development plans include measures for the conservation of natural beauty and amenity and the improvement of the physical environment.
- *The Nature Conservation (Scotland) Act 2004*, which will provide opportunities within all public bodies as they take steps to meet their new obligations to further the conservation of biodiversity.

Key international obligations are identified below:

- *The Ramsar Convention on Wetlands of International Importance, especially Waterfowl Habitat (Cm 6464)* requires the conservation of wetlands, especially sites listed under the Convention.
- *The EC Council Directive on the Conservation of Wild Birds (79/409/EC)* (the Birds Directive) provides for the protection of all wild birds and their habitats within the European Community. It requires Member States to take measures to preserve a sufficient diversity of habitats for all species of wild birds naturally occurring within their territories in order to maintain populations at ecologically sound levels, and to take special measures to conserve the habitats of rare and migratory species.
- *The EC Council Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (92/43/EC)* (the Habitats Directive) contributes to the conservation of biodiversity by requiring Member States to take measures to maintain or restore the conservation status of natural habitats or species across the territory of the Community.

- *The EC Council Directives on the Assessment of the Effects of certain Public and Private Projects on the Environment (85/337/EC and 97/11/EC)* require environmental assessment to be carried out before a decision is taken on whether development consent should be granted for certain types of projects likely to have significant environmental effects.

The Conservation (Natural Habitats &c.) Regulations 1994 place a statutory duty on planning authorities to meet the requirements of the Habitats Directive. The EC Directive on Environmental Assessment (85/337/EC) as amended by Directive 97/11/EC also seeks to ensure that a formal environmental statement must be prepared where a development is likely to have significant effects on the environment. The Town and Country Planning Environmental Assessment (Scotland) Regulations 1999 brought this amended directive into force, superseding the Environmental Assessment (Scotland) Regulations 1988.

Measures to protect our coastline - Scottish Marine Bill

The Scottish Government recently published the document [Sustainable Seas for All - A Consultation On Scotland's First Marine Bill](#) included the following proposals:

- Improved conservation to sustain healthy populations of Scotland's unique marine wildlife, including internationally populations of important seabirds
- Details of a new marine planning system, with streamlined licensing that encourages economic investment in areas such as renewable energy
- Plans to ensure the sustainability of Scotland's traditional and new marine industries
- The formation of *Marine Scotland* that would bring together the expertise of existing organisations that would work to protect and promote Scotland's seas

This legislation is important to better manage human activities around our coast in order to minimise conflict between sectors and safeguard the marine environment on which these activities depend. The legislation proposes to establish a single organisation, Marine Scotland, to manage Scotland's seas.

Appendix 4: Local plan policies of relevance to biodiversity in East and West Dunbartonshire

Key Local Plan policies for the environment include:

East Dunbartonshire Local Plan (adopted 2005)

Open Space and Recreational Land

- OS 1 Maintenance & improvement of existing parks and open spaces
- OS 2 Existing Parks and Open Spaces
- OS 3 Provision of new or enhanced open space and recreational land

Green Belt

- GB 1/GB 2 Green Belt

Design Quality

- DQ 3 Assessment of Impact
- DQ 12A Sustainable Urban Drainage Systems
- DQ 12B Drainage Impact Assessment

Natural Environment

- NE 1 Natural Environment Strategies
- NE 2A Natural Environment Protection – Protected Sites
- NE 2B Enhancement of Sites of Nature Conservation Interest
- NE 2C Native Planting
- NE 3 Greenspace Strategy
- NE 4 Landscape Character
- NE 4A Campsie Fells Regional Park
- NE 4B Campsie Fells and Kilpatrick Hills Regional Scenic Areas
- NE 5A/5B Designed Landscapes and Historic Gardens
- NE 6A Tree Protection
- NE 6B Trees in the Landscape and Community Woodlands
- NE 6C Tree planting

Tourism

- TO 4C Campsie Fells, Clachan of Campsie and the Kilpatrick Hills
- TO 4F Mugdock Country Park
- TO 4G Milngavie Reservoir Complex

West Dunbartonshire Local Plan (Finalised draft 2007)

General Development

- GN 1 Green Network
- GB 1 Green Belt
- WC 1 Wider Countryside
- RSA 1 Regional Scenic Area
- SUS 1 Sustainable Development
- GD 1 Development Control
- GD 2 Redevelopment Opportunities

Economic Development

- LE 9 Agricultural Diversification

Housing

- H 4 Housing Development Standards

Environment

- E 1 Biodiversity
- E 2A International Nature Conservation Sites (Natura 2000)
- E 2B National Nature Conservation Sites (SSSI)
- E 3A Local Nature Conservation Sites
- E 4 Tree Preservation Orders
- E 5 Development Affecting Trees
- E 6 Woodland Strategy
- E 7 Woodland and Parkland retention
- E 8 Environmental Improvement Opportunities
- E 9 Landscape Character
- BE 1 Conservation Areas and Article 4 Directions

- BE 7 Gardens and Designed Landscapes
- Open Space, Access and Recreation
 - R 1 Retention of Open Space
 - R 2 Open Space Provision
 - R 3 Enhancement of open space and sports facilities
 - R 4 Forth & Clyde Canal
 - R 5 Access Opportunities
 - R 6 Golf Courses
- Public Services
 - PS 4 Waste Management
- Development Control
 - DC 6 Renewable Energy
 - DC 7 Micro-renewable energy in new developments
 - DC 8 Minerals
- Flooding and Sustainable Urban Drainage
 - F 2 Waste Water, Sustainable Urban Drainage, Drainage Impact Assessment and Culverts

Appendix 5: East Dunbartonshire Biodiversity Grants Scheme

To help the implementation of LBAP projects in East Dunbartonshire, members of the Dunbartonshire Biodiversity Partnership are eligible to apply for grants from the East Dunbartonshire Biodiversity Grants Scheme, co-funded by East Dunbartonshire Council and SNH. The level of grant available is based on the projected spend and outcomes (generally 50% to 75%), however grants of up to 100% of the total project costs are available at the discretion of the Grant Awards Advisory Board. The maximum amount of available is £2000. For West Dunbartonshire, no such grant scheme is available at the present time, and consequently external funding is required to implement projects in the area.

Appendix 6: Urban Forests in East Dunbartonshire

Urban woods are becoming an ever increasingly important habitat for wildlife in constant threat from encroaching development. In addition, they provide a landscape backdrop and distinctiveness to local areas, and allow excellent opportunities for recreation and environmental education.

Ancient semi-natural woodland is the most important type of woodland within East Dunbartonshire, comprising 20% of the 31 woodland WIAT areas surveyed. There are currently around 370 TPOs in East Dunbartonshire Council and they vary in size between those covering individual trees to those comprising a group, area or woodland. One particular TPO (TPO 5 Bearsden) comprises some 185 individual TPOs. The Council has, however, delivered a high quality service in terms of management of requests for tree works including giving professional advice in this regard and in respect of protection and planting of new trees in landscaping proposals for new developments.

Urban Woodland Strategy

East Dunbartonshire Council is in the final stages of producing an Urban Woodland Strategy that will help fully complement the range of Council policies. Having a well-managed urban woodland positively contributes to sustainable development and integrates with key Council objectives that relate to biodiversity, greenspace, community involvement, economic development, health, access, recreation and cultural agenda.

The main drivers for the development of the East Dunbartonshire Urban Woodland Strategy are:

- Concern that the existing urban woodland resource is not being properly maintained or managed, particularly in the face of continued budget cuts.
- The need to address, in an integrated manner, the urban woodland resource in relation to other Council plans and policies relating to health, access (core footpath networks), recreation and the continued implementation of the East Dunbartonshire Greenspace Strategy.
- To involve key stakeholders and user groups in the development of the Strategy and the resultant outputs from Strategy implementation including Management Plans.
- A desire to assess the potential for an urban woodland habitat network by identifying areas for urban woodland expansion.
- The availability of external funding through the SFGS and WIAT CF to help address the issues raised above.

In essence the Urban Woodland Strategy is founded on the following principles:

Environmental Sustainability Integration and Positive value

Within this context, three Strategic Directions and seven Priorities for Action have been identified:

<i>Strategic Development</i>		
To ensure that the urban woodland resource is positively managed (and where possible expanded) to maintain and enhance its natural heritage, landscape and cultural value.	To create opportunities for more people to enjoy and be engaged with the urban woodland resource.	To help communities benefit from the urban woodland resource.
<i>Priorities</i>		
To ensure <i>positive management and expansion</i>	To help ensure <i>public engagement</i> with urban	To ensure <i>community engagement</i> in the decision

of the urban woodland resource.	woodlands.	making and management input processes that relate to the urban woodland resource
Actions		
<p>Improve the management of East Dunbartonshire's urban woodlands</p> <p>Expand the urban woodland resource by developing an Urban Woodland Habitat Network</p> <p>Improve the setting of existing and new urban developments</p>	<p>Maintain, upgrade and provide new opportunities for urban woodland recreation.</p> <p>Increase interpretation and education facilities.</p>	<p>Increase opportunities for community consultation over decisions taken about the management of the urban woodland resource.</p> <p>Increase opportunities for greater community, stakeholder and user group involvement in the management of the urban woodland resource.</p>

The Urban Woodland Strategy has been formulated with the aim of maintaining the existing tree resource in addition to establishing, where possible, new peri-urban woodland and greenspace areas. Connecting and creating new areas of urban woods are key priorities of Local Plans, and by adopting an integrated approach would help address the effects of fragmentation of wooded landscapes on biodiversity.

In East Dunbartonshire, a 5 year programme of fully funded capital and revenue works from Council budget, Forestry Commission SFGS (Scottish Forestry Grant Scheme) and WIAT (Woodlands in and around towns) grants across 31 Council owned sites has been prepared at a total cost of £304, 778. East Dunbartonshire Council has made a successful application to the Woodlands In and Around Town (WIAT) Challenge Fund administered by the Forestry Commission Scotland as part of the Scottish Forestry Grant Scheme (SFGS).

MAP OF WIAT SITES TO BE INCLUDED

Appendix 7: Definition of nutrient status of ponds and threats to watercourses

Oligotrophic (nutrient poor) waters are poor in plant nutrients and are typical of northern and western Britain. They generally have clear water with low plankton cover and little diversity of flora and fauna. These lochs tend to be found in geological areas of hard igneous rock and poor soils leading to poor levels of nutrients (in particular phosphorus). Lily Loch in the Kilpatrick Hills is the only recognised oligotrophic loch in Dunbartonshire.

Mesotrophic (intermediate nutrient status) waters are relatively uncommon in the UK, and are critically dependant on nutrient levels such as inorganic nitrogen and total phosphorus. Such waters never reach very high or low nutrient, levels and as such can have the highest levels of biodiversity of any standing waters. Typically they have clear water containing a higher proportion of nationally scarce and rare aquatic plants. Macro invertebrates are well represented including indicator groups such as dragonflies, water beetles, stoneflies and mayflies. As an increasingly rare type of lake, this habitat has its own UK HAP. Bardowie Loch is one of the few examples in Dunbartonshire.

Eutrophic (nutrient rich) waters are naturally rich in plant nutrients, though many receive additional input from agricultural or sewage discharge. Eutrophic waters can support a large amount of vegetation, and commonly plankton is found in abundance. These lochs tend to be found in lower lying areas with base rich soils that supply high levels of nutrients. The majority of lochs in Dunbartonshire belong to this category, with Mugdock Reservoir and Craigmaddie Reservoir being prime examples. The best example of a eutrophic loch in the district is Caldarvan Loch that holds SSSI status. This site is well known for supporting a well established sedge-swamp community.

Threats to Watercourses in more detail:

Pollution

Water quality and pollution control fall under the remit of SEPA. Through European instruction in the form of the Water Framework Directive, transposed into Scottish law as the Water Environment and Water Services Act, they have the ability to impose rectification notices and fines on polluters. The table below shows a summary of the main water management issues in Scotland (taken from the SEPA publication Significant water management issues in the Scotland River basin district).

Pressure type	Key sectors
Diffuse source pollution	Agriculture Forestry Urban development Sea and coastal water transport
Point source pollution	Collection and treatment of sewage Aquaculture Manufacturing Refuse disposal Mining and quarrying
Abstraction and flow regulation	Electricity generation Public water supplies Agriculture
Changes to morphology	Historical engineering Agriculture Electricity generation Urban development Land claim Sewage/water pipes
Invasive alien species	All sectors

Some of the main causes of pollution in Dunbartonshire relate to:

Diffuse pollution

Examples: Contaminated run-off from streets and yards, the deposition of acid pollutants from air, leaks or overflows from the sewerage system, run-off of pesticides and soils and nutrients caused by agriculture and forestry.

Point source pollution

Examples: Discharges from factories and sewage treatment works, overflows from sewers during heavy rain and inputs from fish farms.

Abstractions and flow regulation (impoundments)

Examples: Hydropower and water supply schemes which take water from one catchment and divert it to another, the building of dams and weirs and the drilling of boreholes to extract groundwater.

Changes to morphology (i.e. transformation of the physical structure of water bodies)

Examples: Engineering works that straighten rivers, building work on flood plains or estuary mudflats and land use practices such as intensive livestock farming, which can degrade vegetation and lead to riverbank erosion.

Non-native species

There are a number of species of plants, animals and fish that have invaded the rivers of Dunbartonshire. Several plant species are already well established. Japanese Knotweed, Giant Hogweed and Himalayan Balsam have all been recorded in the area, while American Mink has contributed to a significant decline in the number of Water voles.

Construction and Engineering works

Economic development pressures are still high throughout the catchment area. Present high costs of land result in developers minimising the area taken up by river corridors. This can result in watercourses being squeezed and manipulated into minimal channel dimensions and sometimes being culverted altogether, which severely negatively impacts on biodiversity. Developers who are carrying out construction works near watercourses must ensure they use sedimentation traps in order to protect water quality.

Public attitudes

Although one of the most interesting and diverse habitats the UK has to offer, there are still some sections of the public that perceive river corridors to be waste ground. Fly tipping and litter is a major problem in certain areas of Dunbartonshire and is detrimental to habitat quality and general attractiveness. Negative discrimination on rivers and streams can also be formed with many associating such habitats with rats, midges or unpleasant odours. Even though the water quality of some streams can be poor, cognisance should always be given to the fact that many act as major wildlife corridors and provide invaluable riparian habitats to a number of flora and fauna.