

### Biodiversity

#### ■ **OBJECTIVE**

Maintaining and enhancing biodiversity is central to the overall aim of sustainable development. The objective of this guideline is to support the Council's aim of promoting a healthy and sustainable environment by providing advice on how the principles of biodiversity can be incorporated into development proposals. The guideline is supplementary to local plan environmental policies.

Biodiversity can be defined as:

*“the whole rich variety of life that surrounds and sustains us”*

#### ■ **POLICY CONTEXT**

Biodiversity planning requires a wide focus, investigating and promoting the interest of both habitats and species in the wider environment. A Local Biodiversity Action Plan for Edinburgh has been prepared by the Edinburgh Biodiversity Partnership. The Council is a key member of the Partnership. Specific details relating to habitats and species significant to Edinburgh can be found in the Edinburgh Biodiversity Action Plan, which is available from the Department of City Development or on line on the Council web site [www.edinburgh.gov.uk](http://www.edinburgh.gov.uk). A copy is also available for consultation at the Planning Enquiry Counter, 1 Cockburn Street.

The Edinburgh Biodiversity Action Plan (EBAP) was updated in 2004 and contains targets and actions for biodiversity conservation, focusing on 97 priority species and 8 key habitats. These actions collectively seek to ensure the protection of species or habitats through the planning system. However the Plan covers many other species which could also benefit from protection/positive action.

This guideline is complementary to the Edinburgh Urban Nature Conservation Strategy (EUNCS) 1992, which focuses on named or designated urban wildlife sites. The Edinburgh Biodiversity Action Plan includes the urban environment but also extends to the agricultural lands of Rural West Edinburgh, parts of the Pentland Hills and Edinburgh's coastline.

NPPG 14 “Natural Heritage” 1999 explains that planning authorities should make an important contribution to the achievements of biodiversity targets by adopting policies which promote and afford protection to species and habitats identified as priorities

in Local Biodiversity Action Plans (LBAPs). Furthermore, it notes that the presence of any protected species or habitat is a material consideration in the assessment of development proposals. It also advocates the identification of international, national and local designations in development plans as well a need for planning authorities to safeguard and enhance the wider natural heritage beyond the confines of designated areas. It states that planning authorities should take particular care to avoid harm to species or habitats protected by legislation or identified as priorities in the UK Biodiversity Action Plan. PAN 60 Planning for Natural Heritage 2000 reinforces the vital role that the planning system has to play in safeguarding the natural heritage.

Local Plan policies seek to protect sites, features and species of national and local nature conservation interest. The Rural West Edinburgh Local Plan (policy E1) states: "Development which is clearly inconsistent with local plan objectives of sustainable development will not be permitted. In assessing individual development proposals, account will be taken of the extent to which the development would: ....(e) maintain or increase biodiversity".

## ■ **SCOPE OF GUIDANCE**

This guideline applies on a city-wide basis. However as species / habitats do not respect administrative boundaries cooperation with neighbouring local authorities may be appropriate in certain instances.

## ■ **STATUTORY AND OTHER REQUIREMENTS**

One of the outcomes of the United Nations Conference on Environment and Development was The Convention on Biological Diversity. This is concerned not just with single species or single issues, nor is it limited to nature reserves and designated wildlife sites. Instead it encompasses the whole range of living things - plants, animals and people, fungi and micro-organisms, habitats and ecosystems, rare or common species both within protected nature reserves and out in the everyday environment of ordinary people: in short, biodiversity.

The UK Biodiversity Action Plan (BAP) 1994 identifies more than 400 priority species and a range of broad habitats of conservation concern. The Scottish Biodiversity Group was set up to take forward UK action plans relevant to Scotland.

The Framework for statutory site and species protection is provided by current international and national legislation, in particular the Conservation (Natural Habitats, &c.) Regulations 1994, (detailed advice on the requirements of this Directive are provided in SERAD Circular 6/1995 updated in June 2000), and the Wildlife and Countryside Act 1981(as amended).

The Nature Conservation (Scotland) Act 2004 received Royal Assent in June 2004 with the majority of its provisions coming into force on 29 November 2004. The Act places duties on public bodies in relation to the conservation of biodiversity, increases protection for Sites of Special Scientific Interest (SSSI), amends legislation on Nature Conservation Orders, provides for Land Management Orders for SSSIs and associated land, strengthens wildlife enforcement legislation and requires the preparation of a Scottish Fossil Code.

The Act requires that all public authorities are obliged to further the conservation of biodiversity in the course of exercising their functions. Each public body is also now required to act with reference to the aims and objectives of the new Scottish Biodiversity Strategy - Scotland's Biodiversity: It's in Your Hands; a strategy for the conservation and enhancement of biodiversity in Scotland. The required actions under the Scottish Biodiversity Strategy are grouped under the following five strategic objectives:

**Species & Habitats:** To halt the loss of biodiversity and continue to reverse previous losses through targeted action for species and habitats.

**People:** To increase awareness, understanding and enjoyment of biodiversity, and engage many more people in conservation and enhancement.

**Landscapes & Ecosystems:** To restore and enhance biodiversity in all our urban, rural and marine environments through better planning, design and practice.

**Integration & Co-ordination:** To develop an effective management framework that ensures biodiversity is taken into account in all decision making.

**Knowledge:** To ensure that the best new and existing knowledge on biodiversity is available to all policy makers and practitioners.

Through the preparation of the Development Plan and the consideration of planning applications, the Council will seek to promote the implementation of these objectives. Private sector organisations should also seek to promote biodiversity by utilising the increasing resource of best practice guidance and initiatives. Where guidance does not exist, there is an opportunity for organisations to work together to develop it, and to link it to business benefits. Best practice should be seen as a normal business responsibility and marketing opportunity, rather than as a production constraint.

There are other pieces of species-specific legislation which are also pertinent to planning authorities, in particular the Protection of Badgers Act 1992 and those species listed on Schedules of the Wildlife and Countryside Act 1981. Interim guidance for local authorities is also available from Scottish Executive Environment and Rural Affairs Department (SERAD) in relation to European protected species, development sites and the planning system.

Note - At the time of drafting this policy SERAD is in the process of reforming certain aspects of the implementation of the Habitats Directive in Scotland to see a closer integration between the land-use planning system and arrangements to safeguard European protected species. When published this reform will need to be taken into consideration.

The Environmental Impacts Assessment (Scotland) Regulations 1999 implement Council Directives No. 85/337/EEC on the assessment of the effects of certain public and private projects on the Environment (the EIA Directive), as amended by Council Directives No.97/11/EEC. Certain major developments will require a formal Environmental Impact Assessment (EIA). The Regulations require that an Environmental Statement includes, inter alia, descriptions of the receiving environment, likely significant effects and mitigation measures.

## General Principle

The Council supports the maintenance and enhancement of biodiversity as part of new development and will promote EBAP priorities and actions.

A major contribution to sustainable development in relation to the protection and enhancement of the city's biodiversity can be made through the planning process. When considering development the existing and potential natural heritage value of the site should be taken into account. Early identification of natural heritage issues and survey requirements will prevent unnecessary delay later in the planning process. The following table constitute a check-list of matters with which there will be a presumption of compliance.

<b>Summary Check-list of Natural Heritage Considerations for Site Development</b>	
<b>1</b>	<b>On all development sites; survey and protect existing features of natural heritage value</b> – Following an evaluation of the important habitats and species on site, features of natural heritage value should be retained and protected from damage during construction works, where appropriate.
<b>2</b>	<b>Survey protected sites</b> - Sites identified as having statutory protection or local natural heritage value in the local plans (Appendix 1) will automatically need to be surveyed for natural heritage interest. The appropriate level of survey and the survey methodology should be agreed with the Natural Heritage Section, City Development, prior to the production of detailed designs.
<b>3</b>	<b>Assess potential impact of development proposals on sites in close proximity to protected sites</b> - Where development proposals lie within, or nearby to designated sites, developers should assess the potential impact upon that designated site both directly and indirectly.
<b>4</b>	<b>Protected species and surveys</b> - When it is considered likely that a protected species might inhabit or use a site for forage or passage etc, a presence / absence survey should be carried out. The Natural Heritage Section, City Development, should be consulted to identify any likely protected species issues.
<b>5</b>	<b>Encourage habitat creation and enhancement</b> – Developers should seek to improve habitats for wildlife and reinforce existing habitats where possible. The creation of new or improved habitats for EBAP priority species should also be considered.
<b>6</b>	<b>Long-term management of habitats</b> – Detailed landscape plans should be supported by habitat management plans to ensure that the nature conservation value of new and existing habitat is safeguarded in the long-term.
<b>7</b>	<b>Creation and enhancement of access provision to areas of natural heritage interest</b> – Where appropriate, sympathetic access improvements to areas of natural heritage interest should be promoted.

## **1 Survey and protect existing features of natural heritage value – all development sites**

- In order to assess the potential impact of a development, planning applications should be supported by surveys of existing natural features. These features may include trees, woodland, hedgerows, ground cover plants, rivers, streams and ponds. The 'Quality of Landscaping in Developments' DQ Guideline sets out the requirement for a 'survey plan of existing features' to be submitted as part of the landscape proposals for a planning application. This level of detail will be adequate for minor applications.
- Where there are extensive areas of existing habitat or features of particular interest, it may be appropriate for a Phase 1 or Phase 2 Habitat Survey to be carried out. Phase 1 and Phase 2 Habitat Surveys map the extent of all habitats on a site and highlight features of interest through the presentation of target notes. Should important habitat features or species be identified, a more detailed ecological appraisal will be required.
- Where the retention of existing natural features is proposed, protective fencing will be required to avoid damage during the construction period. In the case of tree protection, the minimum area that should be fenced will be the same as the extent of the tree's canopy. This will protect roots from compaction or severance and branches from breakage by excavators or high-sided vehicles. Protective fencing should be strong enough to prevent vehicles from entering the protected area and should not be used for any other purpose during construction i.e. the storage of materials. Fencing should be erected prior to any other works on site. Refer to British Standard 5837: 1991 'Trees in relation to Construction'.

## **2 Protected sites**

The location and status of all statutorily and locally designated sites are included in the relevant local plans and listed in Appendix 1. These sites represent some of the best examples of habitats and landforms in Edinburgh. Sites identified as having statutory protection or local natural heritage value in the local plans will automatically need to be surveyed. Data may be available from the Edinburgh and Lothians Wildlife Information Centre.

Certain rare and/or vulnerable habitats and species are protected under national and European legislation. It is therefore particularly important that the scale and significance of any impact on habitat or species within these categories should be properly assessed. For example in Edinburgh, an Appropriate Assessment (AA) of any proposed development within or adjacent to the Firth of Forth Special Protection Area may be required under the Conservation (Natural Heritage &c) Regulations, 1994. Advice should be sought from Scottish Natural Heritage (SNH).

The Edinburgh Urban Nature Conservation Strategy (EUNCS) and the local plans identify sites which have regional and local natural heritage value. Brownfield sites may contain some features of value, or they may have been colonised by other specialised species. Structures such as buildings, walls and bridges are often used by wildlife, particularly birds and bats for nesting and roosting. Site layouts should make provision for their retention in situ where possible or, failing that, their suitable replacement.

Developers are encouraged to retain features in context rather than as an isolated habitat fragment within the development. This could be as part of the site landscape or open space provision. Where loss of existing features is unavoidable, their replacement either on site or in a suitable alternative location should be considered. However, habitat translocation or re-creation should not be viewed as an adequate alternative to the retention of existing important habitats.

### 3 Proximity to designated site

Where development proposals lie within, or nearby to designated sites, developers should assess the impact upon that site both directly and indirectly. This is required to examine feasibility and any opportunity for the mitigation of possible effects such as:

- loss of all or part of a site, increased disturbance, noise and lighting which can have an impact on some sensitive species;
- downstream watercourses and waterbodies which could be affected by run-off or other contamination from a site, particularly during construction;
- development which may alter the hydrology of a site which can affect nearby wetlands and or trees;
- off site drainage works which may affect features along the route.

### 4 Protected species and surveys

For individual species the level of protection varies, but for most species it is illegal to kill, injure or take such a species from the wild or to disturb the species while it is in its place of shelter. In addition, the eggs of most wild birds are protected, as are their nests while in use.

Presence / likely absence surveys for protected species are possible for most species at any time of year, but an absence cannot be treated as conclusive outside of the optimum survey periods. These optimum survey periods are as follows:

#### **Barn Owls**

Survey period - March to August

#### **Badgers**

Survey period - Autumn (during mating season) and spring when cubs are present. Surveys for signs of badger activities can also be carried out in winter.

#### **Bats**

Survey period - This will depend on the method of survey that is chosen. Advice should be sort from a licensed bat specialist to ascertain the most appropriate method of survey and when this can be carried out. The optimum period for survey attics and buildings for bats is May – September.

**Otter**

Survey Period - Year round.

**Water Vole**

Survey period - Spring to Autumn (Summer vegetation will make survey harder).

**Great Crested Newt**

Survey periods - A combination of the following survey methods would produce optimal results:

- Terrestrial refuges survey: April – September
- Egg searching: April – June
- Netting: April – May (Relatively unreliable)
- Torching: March – May
- Bottle trapping: March – May

The combination of methods required will be determined on a case by case basis. Presence / absence surveys should only be carried out when water temperature is 5°C and optimum results can be ascertain after mid April.

A license may be required from the SERAD or SNH for certain operations affecting protected species therefore consultation should take place with SNH as early as possible when considering a development which may have an impact on a protected species.

The presence of a protected species or habitat on a site will not necessarily prevent development, but it is a material consideration and it is likely to affect the layout, timing or other aspects of the development. Where protected or important species are known or suspected to be present on a site, a detailed survey should be carried out. This should determine the likely impact of the proposals on the species and should examine the feasibility and any opportunity for the mitigation of the possible effects. The most commonly encountered protected species include barn owl, badger, bats, great crested newt, otter and water vole. Appendix 2 outlines construction and design criteria, which the Council will take into consideration in determining development proposals likely to impact on some of these species.

Some rare UK and EBAP priority habitats and species do not receive statutory protection. However, development proposals affecting these habitats and species should include provision to enable their long-term conservation. More details can be found in the Edinburgh Biodiversity Action Plan.

## **5 Encourage habitat creation and enhancement.**

Many new developments can provide opportunity to include provision for biodiversity. Habitat creation and enhancement should be encouraged on all appropriate sites. However where habitats are lost through development, provision should be made for the creation of new habitats or enhancement of existing features. Enhancement measures may include new planting, roosting or nesting sites and encouraging natural regeneration. The use of appropriate materials and management techniques are also important. More detailed guidance is included in Appendix 3 and Appendix 4.

Habitat creation proposals should include provision for long term management.

## **6 Encourage sympathetic and long-term management of habitats.**

Where retention of existing nature conservation features and/or the creation of new habitats has been required as a condition of granting planning permission, the long term management of these features or habitats to ensure their continued nature conservation value will be a planning requirement. This may be achieved through the submission and implementation of a management plan and/or the payment of a commuted sum where the management of a site may be the subject of a planning agreement.

## **7 Creation and enhancement of access provision to areas of natural heritage interest.**

Developments should be sympathetic to the provision and enhancement of access for all sectors of society (subject where appropriate, to reasonable restrictions in sensitive areas) to areas of natural heritage interest.

The Council is in the process of developing an access strategy, which recognises that people benefit, both physically and mentally from having access to and enjoyment of their natural environment. Once complete, this strategy should assist developers identifying particular areas where provision for responsible access should be supported.

## ■ **PLANNING CONDITIONS AND AGREEMENTS**

Planning permission is usually subject to conditions which accord with Circular 4/1998 or subject to the issuing of a legal agreement in accordance with Circular 12/1996. These can be used to protect biodiversity or to provide for the creation, enhancement or long term management of habitats. The Addendum to Circular 4/1998 section E Landscape and F Nature Conservation provide examples of appropriate wording. Examples of subjects for which conditions or agreements may be used include:

### **Conditions:**

- Protective fencing to prevent damage to habitats during construction work;
- Control over the timing of development to avoid disturbance to species, such as bats and breeding birds;
- Provision of bat ‘bricks’, boxes or roost sites where bats are known to be nest;
- Provision of suitable bird boxes in areas where species are known to nest;
- Submission of a “method statement” to include measures to protect hedgerows/ trees or adjacent watercourses from disturbance, including root compaction or pollution during construction work;
- Submission of landscape or restoration schemes to include habitat creation or enhancement proposals.

### **Agreements:**

- Preparation and implementation of a management plan for associated habitats or habitats created as part of site landscape or restoration schemes;
- Long term monitoring of habitats and species in accordance with agreed management plan objectives.

## ■ **REASONED JUSTIFICATION**

Biodiversity is a measure of the variety of life itself. Sustainable development promotes the conservation of biodiversity in recognition of the complex relationship between ecological systems and the planet’s “life support system” – for example the role of plants in regulating the atmospheric balance of oxygen and carbon dioxide. However, biodiversity has a wide economic, aesthetic and social value in today’s society.

The planning system has a well-established role in the delivery of sustainable development, particularly in the role of evaluating the environmental costs and benefits of new development. Biodiversity is one of the key principles of sustainable development. It is widely accepted that a sustainable way of living cannot be achieved if the populations of other species are continuing to decline as a result of adverse impacts upon habitats on which they depend. This also supports the Council’s Sustainable Development Strategy, itself part of Edinburgh’s commitment to Local Agenda 21 (a global environmental action plan agreed at the Rio Earth Summit in 1992).

# Statutory and Locally Designated Sites in Edinburgh

## Appendix 1

National Sites of Special Scientific Interest	International sites
Agassiz Rock Arthur's Seat Volcano Balerno Common Duddingston Loch Firth of Forth (parts of) Wester Craiglockhart Hill	Firth of Forth Special Protection Area (part of) Firth of Forth Ramsar Site (part of)
	<b>Urban Wildlife Sites</b>
<b>Local Nature Reserve</b> Hermitage of Braid Corstorphine Hill Meadows Yard Ravelston Woods Easter Craiglockhart Hill	Braid Burn Complex Braidburn Valley Park Braid Hills and Mortonhall Brunstane Burn Bruntsfield and Royal Burgess Golf Courses Calton Hill and Regent Gardens The Coastline Corstorphine Hill and Ravelston Wood Craiglockhart Hills Craigmillar Castle Hill & Hawkhill Wood
<b>Sites of Importance for Nature Conservation</b> Proposed Sites in the Rural West Edinburgh Local Plan The Coastline Hopetoun Road Newbridge/South Queensferry Walkway Dalmeny Estate Dalmeny Ponds Craigie Hill River Almond Cammo Estate Dundas Estate Pepper Wood Pikes' Pool Lindsay's Crag Hallyards' Wood Gogar Burn Golden Acre Pond Union Canal (See also Urban Wildlife Sites) Dalmahoy Hill Water of Leith Tributaries Clubbiedean Reservoir Harlaw Reservoir Threipmuir Complex (walkway) Black Springs Linn Mill Burn	The Dells - Colinton, Craiglockhart and Woodhall Mains Disused Railway Network Drum Wood Duddingston Golf Course Duddingston Loch and Bawsinch Edmonstone Figgate Burn Park Gogar Burn Granton Pond Hermitage of Braid and Blackford Hill Holyrood Park and Meadowfield Park Lochend Niddrie Burn Complex Redford Brae and Laverockdale River Almond Royal Botanic Gardens Silverknowes Union Canal Water of Leith Warriston Cemetery

## Construction And Design For Protected Species

# Appendix 2

Where acceptable in principle, development proposals must make specific provision for species protected under the Conservation (Natural Habitats, &c.) Regulations 1994, (detailed advice on the requirements of this Directive are provided in SERAD Circular 6/1995 updated in June 2000), Wildlife and Countryside Act 1981 as amended and the Protection of Badgers Act (1992). This Appendix outlines construction and design criteria which the Council will take into consideration in determining development proposals likely to impact on species protected under these Acts.

### All Protected Species

Building works should be timed to avoid the animals' breeding season:

Barn Owls	-	March to August
Badgers	-	December to June
Bats	-	May to August
Otter	-	No specific breeding season
Water Vole	-	March to October
Great crested newts	-	March to July

The Nature Conservation Act (Scotland) 2004 makes it an offence, with certain exceptions, to recklessly or deliberately take, damage or destroy the nest of any wild bird while it is in use or being built. As a guide, any works that could potential disturb or destroy the nest of a wild bird should be avoided between 1st March and 1st September. As most but not all bird species nest between within this period, in some circumstances it may necessary to extend this period.

Scottish Natural Heritage should be notified where there is any evidence of possible occupation of protected species within the site of, or likely to be affected by, a development proposal. They can then advise what work is required and also whether a licence is required from SERAD.

### Barn Owls

- (i) Provision for Barn Owls should be incorporated in barn or agricultural building conversions, where appropriate, in the form of nestboxes unless the site is within an urban area or more than 300 m above sea level;
- (ii) Provision for Barn Owls should be incorporated in new agricultural buildings, where appropriate, over 3 metres high;
- (iii) New tree plantings and overhead wires should be positioned to allow clear flight paths for the birds to and from the access hole(s) provided for them.

- (iv) Where appropriate, sites should be landscaped to provide areas of rough grassland as foraging areas;

### **Badgers**

- (i) Development affecting badger setts will only be permitted where steps are taken to ensure the survival of badgers, reduce disturbance to a minimum or provide adequate alternative habitats;
- (ii) A licence is likely to be required for any works within 30 metres of a badger sett. Conditions for a licence are listed in the SNH booklet 'Badgers and Development, and they should be contacted for advice at an early stage';
- (ii) Where setts are identified, proposed site layouts should provide a buffer zone of open space between setts and proposed buildings incorporating protective planting;
- (iii) Roads and footpath should be routed away from setts and tunnels/culverts provided for badgers where road proposals affected established badger routes. Badger proof fencing should be used to prevent badgers having access to existing roads and to guide them to use culverts provided for them below new roads;
- (iv) Proposed site layouts should incorporate green links to enable badgers to reach feeding areas and water sources and possibly disperse onto neighbouring land;
- (v) Drains and services should be routed away from setts.
- (vi) Where appropriate, proposed open spaces within development proposals should be managed to replace any lost foraging grounds.

### **Bats**

- (i) Provision for bats should be incorporated in all barn and agricultural building conversions in the form of roosting boxes or access holes, (no larger than 20 mm wide), in the eaves of proposed buildings or at gable apexes;
- (ii) In buildings where a bat roost is identified, SNH should be consulted on proposals for roof replacement, loft alterations, wall repainting or repairs to eaves.

### **Otter**

As there is no set breeding season it is not possible to time works to ensure the avoidance or prevent disturbance to a bitch with cubs, therefore extreme care is required.

- (i) Developments affecting otters holts will only be permitted where steps are taken to ensure the survival of otters, reduce disturbance to a minimum or provide adequate alternative habitat. SNH should be consulted at an early stage for advice.

## Appendix 2

- (ii) Disturbance during the course of works should be minimised by declaring an area within 20 m of a shelter, out of bounds to everyone at all times. This should be clearly fenced and marked with bunding to prevent disturbance.
- (iii) Disturbance after completion of the works can be minimised by maintaining as much tree and shrub cover as possible and enhancing this by planting thicket type vegetation.
- (iv) The destruction of a place of shelter may only be carried out in consultation with SNH and on receipt of a licence.

**Water Vole**

- (i) Proposals affecting any wetland supporting populations of water voles should be designed to avoid water vole habitats. Development will only be permitted where measures are taken to protect and enhance the existing water vole habitats. These measures should include fencing off a six metre wide riparian habitats zone from both construction and long-term disturbance or damage, maintaining any flood-plain areas and maintaining any water vole winter refuge areas.
- (ii) Where management of/or damage to wetlands is essential, for example involving changes in water levels, dredging, laying pipes, re-profiling, bank clearance, bank mowing or replanting etc then all measures must be taken to minimise disturbance to the habitats not directly affected and to maintain the continuity of the water vole populations. Such measures would include fencing off unaffected areas, avoiding fragmentation of the habitat by maintaining continuity of habitat between different units of the vole population. Any such works will require a license from SNH.
- (iii) Where new wetlands are being created, including those required for SUDS, amenity or anti-flooding measures, the water levels should be as stable as possible, the bank profiles should be water vole friendly, the wetland habitat should tie in with any existing water vole populations through the creation of habitat corridors, and the wetland habitat should be as extensive as possible.

**Great Crested Newt**

- (i) Proposals directly affecting any ponds or other water bodies supporting populations of great crested newt should be designed to avoid impact on these water bodies. Development will only be permitted where measures are taken to protect and enhance the existing water body, and protect the great crested newts during works. These measures should include fencing around the water body to prevent damage to the habitat or the newts. Advice should be sought from SNH as early as possible.
- (ii) Great crested newts also spend a lot of time on the land around ponds, in woodland and grassland up to 500m from the pond, and therefore pre-clearance searches of terrestrial habitats such as log piles, long grass, tree roots and walls are also required at known sites.

- (iii) Development or survey works where Great Crested Newts are present will require a licence from SERAD.
- (iv) Where appropriate, proposed open spaces within the development proposals should include creation of further great crested newt habitat, such as small pond creation, and ensure connectivity between all waterbodies and retention of the terrestrial habitat where possible. In addition, buffer zones should be created around existing ponds with great crested newts, of long vegetation and scrub or tree planting to provide shelter for newts and protection from disturbance. The provision of log and stone piles should also be considered where appropriate.

## Construction And Design For Ebap Priority Species

# Appendix 3

### Swifts

- (i.) In 2004 a national survey reported a 62% decline in swift numbers in Scotland since 1994.
- (ii.) The population of swifts is declining particularly due to the loss of nesting sites in buildings. Swifts like to nest in buildings when they can gain access through gaps and cracks. Due to the nature of modern building methods, natural access to buildings is often restricted. The Council wishes to promote the construction of new swift accommodation in new developments through the installation of swift bricks and the use of soffit access holes.

### Guidance Note for Accommodating Swifts in New Developments and Existing Buildings

#### Introduction

Over the centuries, swifts have chosen to make use of buildings rather than naturally occurring features for nesting. As a result of this behaviour, swift populations are declining as they find it difficult to gain access to modern and refurbished buildings. Modern materials and building methods are reducing opportunities for swifts to access buildings through incidental holes, cracks and gaps. This situation is now particularly serious as a national survey in 2004 reported a 62% decline in swift numbers in Scotland since 1994. This leaflet wishes to help address this population decline by providing guidance to developers on how they can accommodate swifts in new developments and building refurbishments.



The City of Edinburgh was recognised as an important area for swifts in EBAP 2000 and a species action plan written in 1999 (and revised in 2004) to focus attention on the declining numbers of the species, survey the existing swift population, and identify actions to halt the decline in nesting sites lost through re-development of the older areas of the City.

A survey completed in 1999 and 2000 has been used to assess suitable areas in the City with potential for more swifts. As expected there was a strong positive correlation between tenement areas and reported nesting sites. However in 2004, swifts were reported in new developments and in peripheral part of the City eg Portobello, Longstone and Colinton which demonstrates that swifts do extend their range should suitable nesting sites be available.

A systematic survey is being done in 2005-06 to update the previous survey and record changes in the last five years in the core swift areas. Additionally sites with nesting bricks or cavities provided by developers will be monitored for swift occupation.

## Swifts

Swifts are the country's fastest bird which visit in the in summer months. They are migrants arriving in Scotland from Central Africa in May and departing for the winter months in August. Their aerial acrobatics and screaming is an evocative summer occurrence which adds to the richness and diversity of city living. They are clean, exciting to watch and bring wildlife interest into the heart of Edinburgh.

Furthermore, swifts are extremely hygienic birds and don't create a mess around the nest or on building frontages. The birds empty their nests by carrying waste away from the building and dropping it a significant distance away at high altitude.

## What Type of Buildings are Suitable for Nesting Swifts?

### Old Buildings

Swifts are traditionally found in older buildings such as tenements and churches. They nest inside the fabric of a building. Nesting places include spaces under tiled roofs, just inside the roof space under eaves where they gain access via gaps or cracks in stonework and in holes in walls throughout the city. Prior to any refurbishment work during the breeding season (May to August), it is essential to check buildings for nesting sites, as it is illegal to disturb any wild bird or its nest while in use. It is important to note that the nest cannot be seen from outside the building. For older buildings, nest sites should be retained or recreated wherever possible. Suitable nesting accommodation can be installed easily when repair work is taking place to roofs, render, brick and stonework. Contractors should take care not to obstruct access to existing swift nesting sites when undertaking external repairs.

### New Buildings

Although nests are mainly found in older buildings, swifts can also be found in new buildings when there are suitable spaces for them to nest. Nests can be found inside the roof space and in small holes in the fabric of walls or within soffits. The ideal site for new nests are under the eaves, on the gable end or other high location on building elevations.

As new buildings are generally well sealed, the use of swift bricks or purpose built internal cavities or nest boxes can provide ideal nest accommodation.

## What Options are Available?

### Swift bricks

Swift Bricks are made of concrete and are designed to be built into the walls of buildings, they are similar in construction to a breeze block. They must be positioned at least 4m from the ground and the flight path to the access hole should not be directly obscured by trees or other buildings. The bricks should preferably be installed on the north or east facing walls of a building, though, anything but south facing is appropriate.

Each brick measures 260mm x 220mm x 180mm high and weight 8.8kg. The outer face of the brick can be rendered or faced with brick or stone so that they appear inconspicuous on a façade (see Figure 2 and 3).

It is recommended that groups of bricks be installed as swifts nest together in colonies. Depending on the number of appropriate elevations, the number of bricks appropriate to a building should be decided on a case by case basis.

Supplier of Swift bricks: Jacobi Jayne & Company, Wealden Forest Park, Herne Common, Canterbury, Kent CT6 7LQ Tel. 01227 714314 Fax: 01227 719235. They cost £21.99 each.

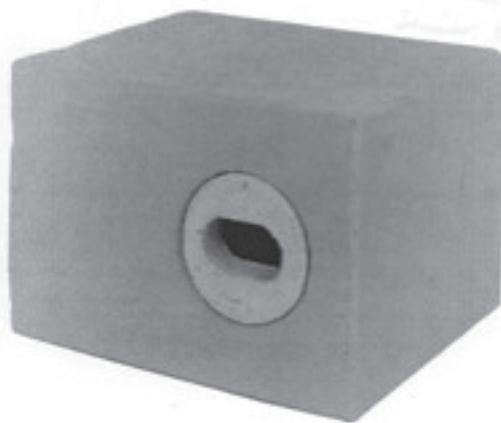


Figure 1 - Swift Brick



Figure 2 - Swift bricks behind brick work on a new development

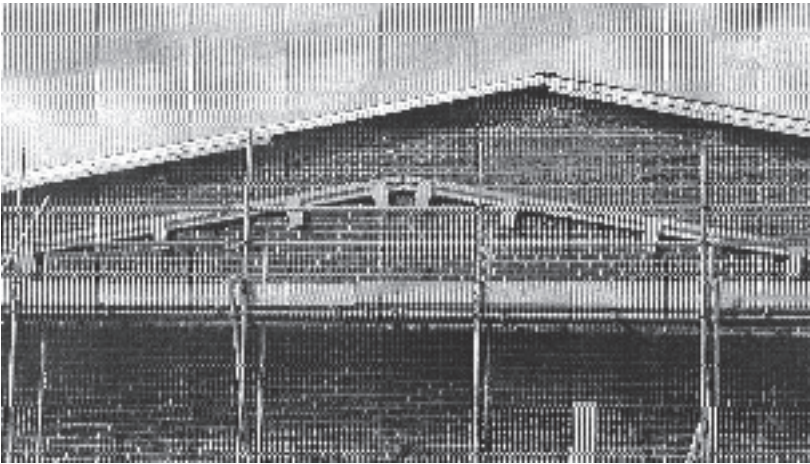


Figure 3 - Swift bricks under eaves

### Open Access Eaves

Nests can be created by a simple conversion and adaptation of eaves and lofts spaces to house swifts cleanly. This method is only suitable for unheated buildings. Nest place dimensions are 30cm wide by 50cm long by 20cm high. A sloping roof of lesser height is acceptable as long as there is adequate space further back for the swifts to be able to stretch their wings. The entrance hole should ideally be 30mm high x 65mm long, round or oval, in either the base or side wall of the nest space (See Figure 4).

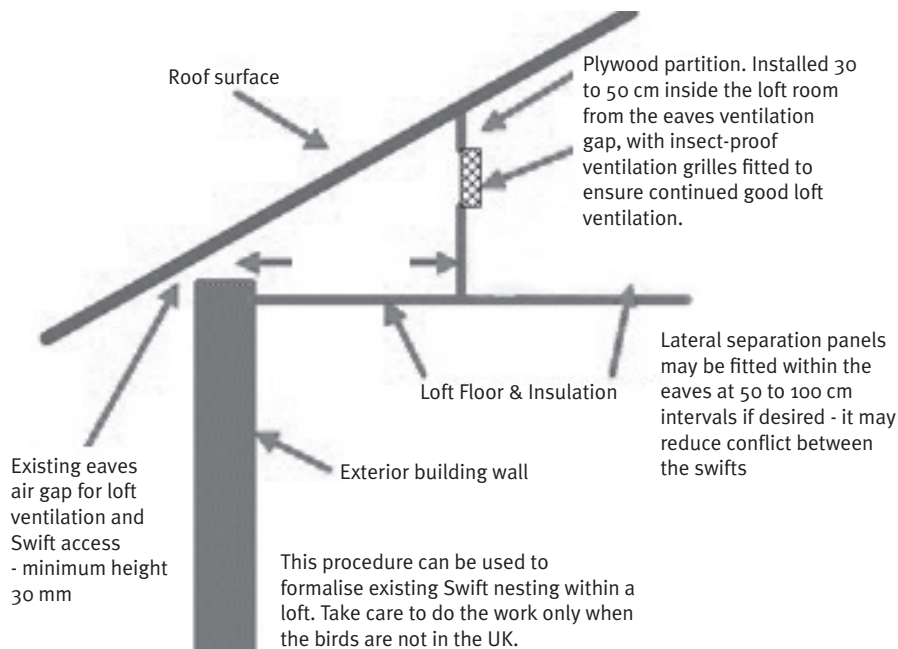


Figure 4 - Open access diagram eaves

**Soffit Access – hollow eaves**

Another method is to design and build hollow eaves with suitable access holes (See Figure 5). They can be constructed from 8mm plywood and there will normally be two fitted in each property of normal residential size. They are made on site as each roof is exposed or constructed. Each nest can be made up to exactly fit the space available which varies from property to property.

**Locating Nests in Historic Buildings and Conservation Areas.**

External alterations to listed buildings, buildings in conservation areas and other historic buildings need to be sympathetic to the existing special architectural character. The following text outlines methods that can be used to install swift nesting accommodation in such buildings. It should be noted that for some historic buildings, it may not be possible to locate swift nesting accommodation in a sensitive manner. Advice should be sought from the CEC Natural Heritage Section. It is important to consider the retention of existing nesting spaces during work.

Although the standard swift bricks are not specifically designed for use in historic buildings, it may be possible to incorporate them during refurbishment by concealing them within a facade. This can be done through the use of render or real / reconstituted stone facing in front of the installed nesting brick. There are also external boxes available (Figure 6). It would have to be demonstrated that these can be used without detriment to the historic or architectural character of the building. More innovative individual design solutions to accommodate swift nesting accommodation within historic buildings will also be encouraged.

Alternatively, the eaves or soffit access method may be achievable in conservation areas or on historic buildings. Obviously this will only be possible on buildings that have soffits or open eaves as an existing feature.

Where it is not possible to accommodate swift nesting accommodation internally, there are external swift boxes that are designed for historic buildings (See Figure 6). These swift boxes can be supplied by Jacobi Jayne & Company, Wealden Forest Park, Herne Common, Canterbury, Kent CT6 7LQ Tel. 01227 714314 Fax: 01227 719235. They cost £32.95 each.

Most importantly, contractors should take care not to obstruct access to existing swift nesting sites when undertaking external repairs.

**Where should swift nests be located on a building?**

Nests should be positioned at least 4m above ground level and the flight path to the nest should not be obscured by trees or other buildings. All new nests should be provided out of direct sun, ideally on a north or east-facing aspect.

**How many nesting devices should be installed?**

Swifts nest in colonies, therefore groups of bricks or access points should be installed. This should be determined on a case by case basis depending on the development size and any constraints on site.

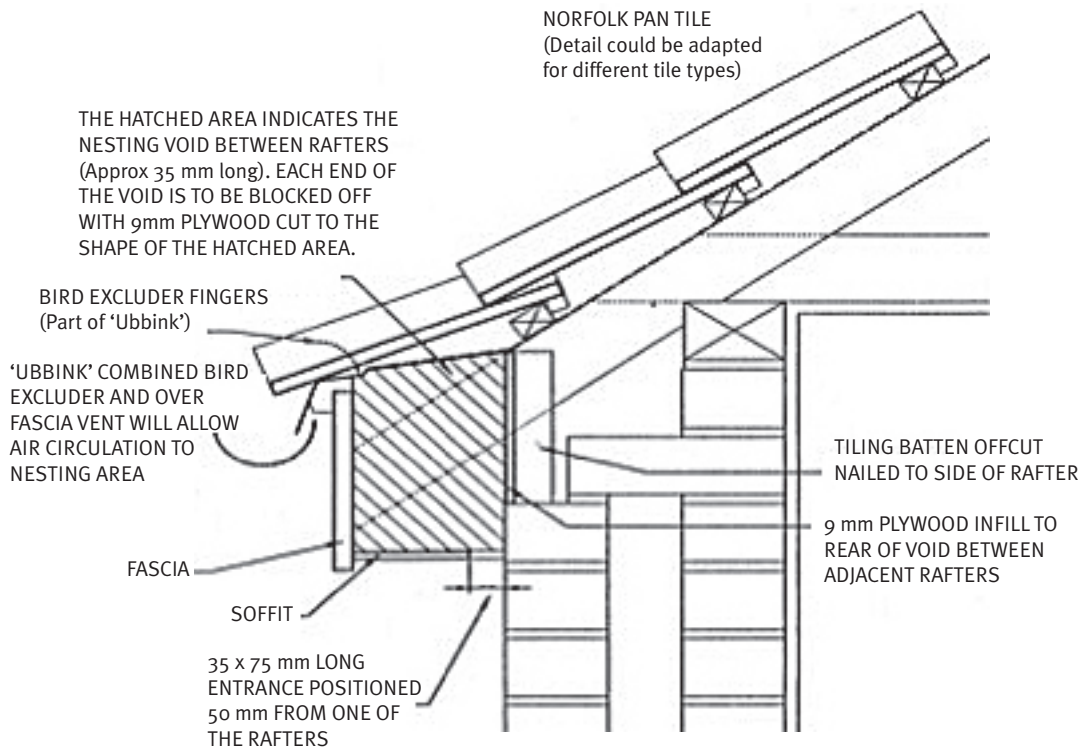


Figure 5 - Soffit /hollow eaves with access hole – designed for Norwich City Council, 1997



Figure 6 - Swift boxes installed on Culzean Castle, A Listed Building, Ayrshire

### When should a swift nesting brick or box be installed?

Swifts arrive in Scotland in May for breeding and leave in August, therefore, the best time to install nest boxes and bricks is during winter months (September to April), although they can be incorporated at any time.

### Building Warrant

Most construction works require a Building Warrant to demonstrate that the proposals comply with the current Building Standards under the Building (Scotland) Act 2003 and the Building (Scotland) Regulations 2004. Please contact the CEC Building Control Section, 329 High Street, Edinburgh, EH1 1PN if you require any advice.

### Further help and advice

Please contact CEC Natural Heritage Section 0131 469 3920

## Smaller Scale Benefits For Wildlife

### Appendix 4

On sites where larger scale wildlife benefits are not possible or appropriate the following measures should be considered as a way of making the development more attractive to wildlife:

- use locally appropriate plant species of local origin, where possible, in site landscape schemes. Any plants or seeds used should be from nursery grown UK stock and preferably of local provenance;
- use climbing plants on walls and fences to provide shelter and a food source;
- put up bird boxes on suitable walls and trees and consider incorporating bat bricks and boxes as part of the development;
- consider the use of a 'green roof' or a roof garden. As well as benefiting wildlife, these features can also improve the appearance of flat roofs;
- where possible use sustainable drainage techniques, such as permeable surfacing, swales or soakaways to enable the infiltration of surface water. Large areas of impermeable hard surfacing can prevent water from reaching the roots of nearby trees and other vegetation. Uncontrolled surface water runoff can also have an adverse impact on receiving watercourses. Appropriately designed balancing ponds can be valuable for wildlife.
- consider linking habitat development on site to areas beyond the site boundary where appropriate.

#### ■ WIDER ISSUES

The materials used for the development itself may have implications for wildlife far beyond the site boundary. When specifying materials the source of the material and the possible impact of its extraction and processing should be taken into account (refer to the Guideline: Site Planning for Sustainable Development). The following are particularly relevant:

- consider timber in preference to less sustainable/renewable materials;
- avoid the use of timber from unsustainable sources. Timber obtained from an independently certified source (such as the Forest Stewardship Council - FSC) should be specified;
- maximise the use of recycled materials and aggregates. Mineral extraction can have an impact on wildlife habitats;
- specify peat free composts for site landscape planting. Peat extraction can damage important wildlife habitats;
- minimise the amount of waste produced during construction. Efficient use of materials reduces costs and decreases the amount of waste going to landfill.

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**For further details contact:**

**Head of Planning, The City of Edinburgh Council, 1 Cockburn Street, Edinburgh, EH1 1ZJ.  
Tel: 0131 469 3557 Fax: 0131 529 7478**

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