

## **Section 4**

### **Improving the sustainability of existing buildings**

## Planning permission and building warrants

### Planning Permission

Some improvements to existing buildings may require planning permission, Listed Building Consent, and / or a building warrant. Works which can be undertaken without the need for planning permission are set out in the General Permitted Development Order [www.opsi.gov.uk](http://www.opsi.gov.uk). If in doubt, consult the relevant Planning Authority:

Highland Council  
Telephone: 01463 702000  
Website: [www.highland.gov.uk](http://www.highland.gov.uk)

Aberdeenshire Council  
Telephone: 08456 08 12 07  
Website: [www.aberdeenshire.gov.uk](http://www.aberdeenshire.gov.uk)

Moray Council  
Telephone: 01343 563501  
Website: [www.moray.gov.uk](http://www.moray.gov.uk)

Angus Council  
Telephone: 08452 777 778  
Website: [www.angus.gov.uk](http://www.angus.gov.uk)

### Listed Buildings

Historic Scotland maintains a database of all Listed Buildings. To check if your building is listed go to: [www.historicscotland.gov.uk](http://www.historicscotland.gov.uk).

The relevant Planning Authority will also be able to advise on Listed Building Requirements.

### Building Warrants

The Scottish Building Standards Agency (SBSA) website provides information on works which require a building warrant: [www.sbsa.gov.uk](http://www.sbsa.gov.uk).

Advice on works requiring a building warrant can also be obtained from the Building Standards section of the relevant Planning Authority.

## Sustainability principles

Largely the same principles apply to improving the sustainability of an existing building as to the construction of a new building. However, with existing buildings the biggest gains are usually to be made through addressing the issue of resource efficiency (for example the amount energy and water consumed by users of the building). Gains can also be made in protecting and enhancing the wildlife, but can also improve the quality of life of those using the building and of its neighbours.

### (a) Resource efficiency

A simple way of looking at the issue of resource efficiency is to think about it as a series of steps to follow. Steps lower down the chain shouldn't be undertaken without first addressing the step above it – this is known as a hierarchy.

#### (1) Energy

An Energy Hierarchy which follows the series of steps promoted by the Energy Saving Trust would include:

- **Reduce** the amount of energy used for example insulation, draft proofing, efficient appliances;
- **Generate your own energy** using renewable energy technologies;
- **Responsibly source** any remaining energy needed for example buy through green tariffs.

Further information on energy efficiency, energy generation and grants can be found at:

- [www.energysavingtrust.org.uk](http://www.energysavingtrust.org.uk)
- [www.carbontrust.co.uk](http://www.carbontrust.co.uk)
- [www.sbsa.gov.uk](http://www.sbsa.gov.uk)
- [www.cat.org.uk](http://www.cat.org.uk)
- [www.energysavingtrust.org.uk](http://www.energysavingtrust.org.uk)
- Wind energy [www.bwea.com/noabl/index.html](http://www.bwea.com/noabl/index.html)
- CNPA SPG – energy generation (under development 2009)
- CNPA SPG – Carbon emissions from new developments (draft 2009)

## (2) Water

For a Water Hierarchy, the same principles would also apply;

- **Reduce the amount of water used** for example using low flow appliances, collecting rainwater;
- **Reduce the amount of waste water requiring treatment** for example use grey water from showers / baths for flushing toilets, watering gardens, washing cars;
- **Treat surface water locally** for example allow rainwater to drain away naturally by using permeable surfacing for paths and driveways;

Further information on sustainable drainage options, water conservation and rainwater harvesting systems is available from:

- Green roofs [www.ciria.org.uk/acatalog/C644.html](http://www.ciria.org.uk/acatalog/C644.html)
- SUDS manual [www.ciria.org.uk/acatalog/C697.html](http://www.ciria.org.uk/acatalog/C697.html)
- Highland Housing Alliance – Sustainable Drainage Design Guide for housing in the countryside (draft 2009)
- Regulations and habitat enhancement [www.sepa.org.uk/water.aspx](http://www.sepa.org.uk/water.aspx)
- Recycling rainwater and grey water – [www.environment-agency.gov.uk/subjects/waterres/286587/286911/548861/861599/](http://www.environment-agency.gov.uk/subjects/waterres/286587/286911/548861/861599/)

## (3) Waste

The Waste Hierarchy is quite well known:

- **Reduce** the amount of waste produced for example plan your project carefully to avoid over-ordering materials;
- **Re-use “waste”** for example use construction “waste” such as timber or bricks on-site for creating paths, or raised beds in the garden;
- **Recycle** for example compost garden and kitchen waste;
- **Disposal** – following the above steps should mean there will be little left which requires disposal.

Information on household waste and recycling including identifying what can be recycled and where can be found at:

- [www.wrap.co.uk](http://www.wrap.co.uk)

- Composting [www.wasteawarescotland.org.uk/html/compost.asp](http://www.wasteawarescotland.org.uk/html/compost.asp) and [www.soilassociation.org](http://www.soilassociation.org)

Advice on managing construction and demolition waste is available from:

- [www.constructingexcellence.org.uk/resources/publications/view.jsp?id=2568](http://www.constructingexcellence.org.uk/resources/publications/view.jsp?id=2568)
- [www.ice.org.uk/knowledge/specialist\\_waste.asp](http://www.ice.org.uk/knowledge/specialist_waste.asp)
- [www.aggregain.org.uk/demolition/the\\_ice\\_demolition\\_protocol/index.html](http://www.aggregain.org.uk/demolition/the_ice_demolition_protocol/index.html)

#### **(4) Materials**

There is a growing range of sustainable construction materials available. Advice on selecting and specifying sustainable construction materials is available from a variety of sources including:

- [www.greenshop.co.uk](http://www.greenshop.co.uk)
- [www.greenspec.co.uk](http://www.greenspec.co.uk)
- [www.aecb.net](http://www.aecb.net)
- [www.livingethically.co.uk](http://www.livingethically.co.uk)
- [www.greenbooklive.com](http://www.greenbooklive.com)

Information on embodied energy of construction materials can be found at:

- <http://people.bath.ac.uk/cj219>
- [www.forestry.gov.uk/pdf/carbonbenefitsoftimberinconstruction.pdf/\\$FILE/carbonbenefitsof timberinconstruction.pdf](http://www.forestry.gov.uk/pdf/carbonbenefitsoftimberinconstruction.pdf/$FILE/carbonbenefitsof%20timberin%20construction.pdf)

Timber specific information is available from:

- Forestry Commission Scotland [www.forestry.gov.uk/forestry/infd-6b2jfb](http://www.forestry.gov.uk/forestry/infd-6b2jfb)
- Green Oak in Construction [www.trada.co.uk](http://www.trada.co.uk)
- Centre for Timber Engineering [www.cte.napier.ac.uk](http://www.cte.napier.ac.uk)
- Central Point of Expertise in Timber (CPET) [www.proforest.net/cpet](http://www.proforest.net/cpet)

Consideration should also be given to the materials used for decoration and furnishing. Up to 90% of the internal surface area of a building may be covered in synthetic petrochemical based coverings, and studies have also shown that the indoor environment can be much more polluted than the external environment as a result of some of these materials. Choosing sustainable materials will help to reduce this pollution.

For example, using water-based paints and finishes, which are low in volatile organic compounds (VOCs) will help buildings breathe thereby help to regulate moisture and reduce mould, and it's easier to clean your brushes.

Sustainable options for carpets and floor coverings include natural products such as linoleum, cork, rubber, grasses, straw and bamboo.

### **Further sources of advice**

There are various sources of advice on this topic including a leaflet produced by the Scottish Building Standards Agency (SBSA) aimed at those seeking to improve the sustainability of their homes - [www.sbsa.gov.uk/homeimprovements](http://www.sbsa.gov.uk/homeimprovements). This is supported by more detailed guidance on the website which covers a wide range of topics including:

- Energy efficiency
- Roof insulation
- Draught-proofing
- Secondary glazing
- Kitchens and bathrooms
- Central heating
- Conservatories
- Gardens

### **(b) Conserving and enhancing the natural environment**

There are many opportunities in, on, and around existing buildings to enhance opportunities for wildlife. Some of these are quick and easy, others take more time to plan and construct. In most cases some maintenance will be required – even if this is simply cleaning out bird boxes before the nesting season.

Some simple ideas include:

- Install a water butt to provide water for your garden
- Use a composting bin or wormery for garden and organic kitchen waste
- Plant native species of trees, shrubs and flowers to encourage natural predators such as frogs, and ladybirds which will keep the greenfly at bay
- A pond or bog area will also encourage frogs, toads and insects
- Put up bird and bat boxes
- Give yourself a rest and encourage wildlife by letting an area of your garden go wild
- Lighting in gardens can be detrimental to wildlife especially birds and moths
- Use permeable surfaces for paths and parking to allow rainwater to drain away naturally.

### **Further sources of advice**

Information and advice on the natural environment of the Cairngorms National Park is available from:

- Biodiversity Planning Guidance Note for the Householder, CNPA  
[www.cairngorms.co.uk/resource/docs/projects/04102005/CNPA.Project.11Biodiversity%20leaflet.pdf](http://www.cairngorms.co.uk/resource/docs/projects/04102005/CNPA.Project.11Biodiversity%20leaflet.pdf)
- Local Biodiversity Action Plan (LBAP) Project  
[www.cairngorms.co.uk/parkauthority/projects/projects.php?project\\_id=11&h=lbap](http://www.cairngorms.co.uk/parkauthority/projects/projects.php?project_id=11&h=lbap)
- Natural Heritage Guidance, CNPA (2009 draft)

General information on the natural environment is available from a variety of sources including:

- SEPA Habitat Enhancement Initiative – [www.sepa.org.uk/guidance/hei/guidance.htm](http://www.sepa.org.uk/guidance/hei/guidance.htm)
- Information on the use of native species in planting is available from Scottish Natural Heritage – [www.snh.org.uk/about/initiatives/g4l/gardening.asp](http://www.snh.org.uk/about/initiatives/g4l/gardening.asp)
- Biodiversity by design – TCPA (2004) [www.tcpa.org.uk/publications.asp](http://www.tcpa.org.uk/publications.asp)
- Green roofs – [www.ciria.org/acatalog/C644.html](http://www.ciria.org/acatalog/C644.html)

Information on organic gardening and grow-your-own is available from a variety of sources including:

- [www.soilassociation.org](http://www.soilassociation.org)
- [www.gardenorganic.org.uk](http://www.gardenorganic.org.uk)

**NB These links will also be made available on the CNPA website ([www.cairngorms.co.uk](http://www.cairngorms.co.uk)) and the CNPA will endeavour to keep them up to date.**