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3.1 An explanation of conservation designations, plans and initiatives

There are hundreds of terms, definitions, strategies, designations and initiatives used in conservation. This chapter aims to outline the main ones relevant to local Earth heritage conservation. It is important not only to understand their meaning but to recognise how they relate to RIGS. Many of these terms are used throughout the RIGS Handbook in a variety of contexts.

3.2 Internationally used terms

3.2.1 UNESCO Sites 1 – World Heritage Sites

The United Nations Educational, Scientific and Cultural Organisation (UNESCO) has a unique mandate endorsed by its 186 Member States. For more than 50 years the organisation has contributed to peace and security around the world through education, science, culture and communications. The Convention Concerning the Protection of the World Cultural and Natural Heritage (the World Heritage Convention) was adopted by UNESCO in 1972. The main aim was to bring together the concepts of nature conservation and the preservation of cultural sites on a global scale. To date, more than 150 countries have signed the Convention, making it one of the most universal international legal instruments for the protection of the cultural and natural heritage.

The Convention defines the kind of natural or cultural sites which can be considered for inclusion on the World Heritage List and sets out the duties of States in identifying potential sites and their role in protecting and preserving them. By signing the Convention, each country pledges to conserve not only the World Heritage sites situated on its territory, but also to protect its national heritage.

Through the World Heritage List the convention seeks to protect sites of universal value for their cultural or natural properties. This recognition includes biological and Earth heritage sites. For the latter, they should be outstanding examples, representing major stages of the Earth's history, including the record of life, significant ongoing geological processes in the development of landforms, or significant geomorphic or physiographic features.

UNESCO's Division of Earth Sciences provides Member States with support in the areas of both sustainable management and development of the Earth's mineral and energy resources, as well as hazard mitigation. The Division's annual budget of over \$1 million covers research and training programmes, the promotion of co-operation in geoscience and the encouragement of Earth heritage conservation. As a logical extension of existing national and international initiatives for the conservation of nature, UNESCO's Earth Science division has devised the Geoparks programme to recognise Earth heritage sites worldwide ( www.unesco.org/whc).

3.2.2 UNESCO Sites 2 – Geoparks

In response to the perceived need for an international initiative for recognition of sites and terrains of specifically Earth science interest, UNESCO plans to launch the Geopark programme. This programme has the dual objectives of enhancing the value of sites which act

as key witnesses to the Earth's history whilst creating employment and promoting regional economic development. A new internationally recognised label of a 'UNESCO Geopark', destined to become synonymous with environmental protection and development, will be awarded every year to some twenty territories which merit this distinction. Eventually up to 500 Geoparks will be recognised worldwide.

UNESCO's Division of Earth Sciences has worked together with the International Union of Geological Sciences (IUGS) and governmental institutions and took the initiative to co-ordinate and combine several national and international efforts dealing with geoconservation, 'geotopes', 'geosites', or general geological heritage. The resulting Geopark Programme will operate in synergy with UNESCO's World Heritage Centre and Man and the Biosphere (MAB) World Network of Biosphere Reserves.

A UNESCO Geopark will:

- ◆ be a territory encompassing one or more sites of scientific importance, not just for geological reasons but also by virtue of their archaeological, ecological or cultural value
- ◆ have a management plan designed to foster socio-economic development that is sustainable. This is likely to be based on geotourism
- ◆ demonstrate methods for conserving and enhancing geological heritage and provide a means for teaching geoscientific disciplines and broader environmental issues
- ◆ be proposed by public authorities, local communities and private interests acting together
- ◆ be part of a global network which will demonstrate and share best practice in respect of Earth heritage conservation and its integration into sustainable development strategies.

The intention is that Geoparks will be territories where the geological heritage of the Earth is safeguarded and sustainably managed but it is also recognised that success can only be achieved through strong local involvement. Geopark nominations must therefore come from local communities and local authorities with a strong commitment to developing and implementing a management plan. This plan should meet the economic needs of the local population whilst protecting the landscape in which they live. This new initiative, which draws on four billion years of geological history in preparation for tomorrow, is an excellent means of gaining international recognition for locally or regionally important geological sites.

3.3 European designations

3.3.1 Special Areas of Conservation (SACs)

Special Areas of Conservation (SACs) came about through the European Commission's '*Council Directive on the Conservation of Natural Habitats and Wild Flora and Fauna*'. This Habitats Directive is a legal instrument providing some unified aims for conservation across the EC's member states. In particular, it defines rare and endangered habitats and species.

Under this directive, adopted by the UK parliament in 1994, signatories "...agree to establish a series of protected sites for habitats and species of community interest". These protected sites are the SACs.

The EC's 'Annex 1' of the 169 '*natural habitat types of EC interest*' includes many habitats of relevance to general conservation in Britain. Amongst the 'Priority Habitats' of direct interest to geologists and geomorphologists are tufa formations, limestone pavements and raised bogs.

3.3.2 Special Protection Areas (SPAs)

The European Commission's Directive 79/409, '*Conservation of Wild Birds*', obliges signatories to classify "...sufficient areas of habitat...to ensure the survival and breeding...of certain species of vulnerable birds listed in Annex 1 of the Directive". These areas of habitat are defined as 'Special Protection Areas'.

3.3.3 Natura 2000

The sites which have been identified and protected across the European Union under 1979 EC Birds Directive and the 1992 EC Habitats and Species Directive are known as Natura 2000. Whereas the selection of SSSIs focuses on features, which are rare and valuable across the UK, these Directives identify species and habitats, which are rare and valuable in Europe as a whole.

3.4 Nationwide or countrywide designations and initiatives

3.4.1 The Geological Conservation Review (GCR)

Initiated in 1977 by the Nature Conservancy Council, the aim of the GCR was to review systematically Britain's Earth science sites and identify sites of national scientific importance. The main phase of the review, which involved a large network of outside advisers and contributors, was completed in 1990, by which time some 3,000 GCR sites had been identified. Some modest additions continue to be made to the GCR as new discoveries being made and the changing physical character of site changes.

The GCR list of sites supports statutory Earth Science Conservation - many of the GCR sites have now been designated as geological Sites of Special Scientific Interest (SSSIs) by the statutory nature conservation agencies.

To make sure that the GCR site series encompassed the full range and diversity of Britain's best Earth science sites, criteria and guidelines were developed and site selection categories devised. One hundred Earth science selection categories or 'GCR blocks' were defined, each corresponding to divisions of geological time or major events within those periods. They can be grouped into seven broad themes:

- 1 Stratigraphy (35 blocks)
- 2 Structural and metamorphic geology (10 blocks)
- 3 Igneous petrology (6 blocks)
- 4 Mineralogy (7 blocks)
- 5 Palaeontology (16 blocks)
- 6 Quaternary geology and geomorphology (16 blocks)
- 7 Geomorphology (10 blocks)

Within each block, potentially suitable sites were identified by literature review and consultation with recognised experts; of these, a high proportion were visited. Candidate site lists were drawn up and refined by considering the GCR criteria.

Three overlapping components can be recognised in the GCR site series:

- 1 Sites of international importance
- 2 Sites that are nationally important because they show exceptional (atypical, rare or 'classic') features
- 3 Sites that are nationally important because they are representative of a key Earth science feature, event or process in Britain.

The final list of GCR sites for a block will be the minimum number that forms a representative series for the subject of the block. The series will naturally include all the international and exceptional sites.

By selecting a minimum number of sites for a block, true national importance and minimum duplication of features of interest between sites is ensured. If two candidate sites show similar features, only one is selected, and preference is given to the one that:

- ◆ is more practically conservable
- ◆ demonstrates a greater assemblage of geological features
- ◆ shows a more complete or extended record of feature of interest
- ◆ has been studied in greater detail
- ◆ has greater potential for future study
- ◆ has played a more significant part in the development of Earth sciences.

Through this methodology, each GCR site would have the potential for notification as a Site of Special Scientific Interest.

The GCR is being documented in a series of 42 thematic volumes, describing the key geological and geomorphological features of the selected GCR sites in detail. An early volume of the series (*An Introduction to the GCR*, Ellis et al. 1996, JNCC Peterborough) describes how sites were identified in the GCR in more detail. Formerly published by Chapman & Hall, the series is now published in house by the JNCC GCR unit and consequently the cost of purchasing volumes should reduce considerably.

GCR sites do not have statutory protection although they are candidate SSSIs. It is possible to designate GCR sites in Scotland and Wales as RIGS to ensure them some protection as official notification of GCR sites is not complete in these countries.

3.4.2 The Earth Science Conservation Review (Northern Ireland)

The overall objective of the Earth Science Conservation Review (ESCR) is to identify and describe earth science localities within Northern Ireland which achieve minimum scientific quality standards. These sites would then be considered for designation as Areas of Special Scientific Interest. The approach of the ESCR is broadly similar to that of the Geological Conservation Review in Great Britain. A number of particular differences are outlined here.

The rationale behind the ESCR hinges on a number of specific points:

- ◆ the statutory obligation placed on the Department to designate geological and physiographical (geomorphological) Area of Special Scientific Interest (ASSI). Implicit in this is the need to identify candidate ASSIs and determine their 'specialness' by using ranking criteria to select those of special scientific interest
- ◆ the ability to define geological sites, by placing a boundary around the feature of importance
- ◆ recognition of the scientific and wider importance of geological and geomorphological sites
- ◆ recognition that there are real threats. These take the form of developments which can obliterate features of importance, interfere with natural processes required for the sites' continued existence or detract from the integrity of landforms.

How the ESCR has progressed

The ECSR has been progressed in a number of distinct stages:

- 1 A framework has been drawn up covering the range of earth science interest in Northern Ireland. Sites were evaluated within these subject blocks.
- 2 Site selection criteria have been determined. These have been applied to all sites that are theoretically within the subject block framework. This will determine which will be progressed as ESCR sites. The term 'national significance' applies to Northern Ireland as a single entity. Site selection has been carried out through consultation between the Environment and Heritage Service, the subject block worker and any other relevant parties.
- 3 Those sites which achieve the site selection criteria are documented in a standard format. This provides a full description of the site based on existing literature and expert knowledge. Further research or field investigations have only been undertaken in exceptional circumstances. Standard reports include scientific description and interpretation, detailed site boundary maps and land use descriptions together with information necessary for site management decisions.
- 4 ESCR localities will be progressed as ASSIs either as discrete sites or as part of a more extensive Earth science or biological site.
- 5 A computerised database has been established to hold summary information for all ESCR sites. This is housed on the GD2 (Advanced REVelation platform) Earth Science Database. Copies of this database are held by Environment and Heritage Service and the Ulster Museum. To date over 1,100 site records have been entered. Some 250 of these contain complete site and management information.

ESCR versus GCR

While the ESCR broadly follows the framework of the GCR, a number of differences are worth noting.



- ◆ Frequently, the research history for specific subject blocks was poor or the resource was poorly defined. In these instances, the construction of full inventories were undertaken, notably for karst and caves and Pleistocene Midlandian sand and gravel deglacial complexes. Outputs from these exercises were assessed against more rigorous criteria to define those which achieved a minimum for National Significance
- ◆ Site documentation was undertaken as site selection progressed. Consequently, there was no time lag between the two components
- ◆ Given the absence of RIGS groups or programmes in Northern Ireland, it was considered worthwhile to include the identification of locally important sites within the site selection exercise. This aspect of the ESCR only commenced during the latter stages of the programme and so the local network is currently incomplete. However, it is intended that, once the full ESCR site list is available (due March 2000), the full identification of locally significant sites will be completed. This task will involve all relevant geological groups in Northern Ireland

How the ESCR relate to other Environment and Heritage Service activities

Many aspects of the ESCR relate to other Environment and Heritage Service activities. These include:

- ◆ linkage to the biological ASSI programme particularly through biogeomorphological sites such as peatland, coastal and rivers, together with those sites with strong associated habitat interest such as karst with limestone grassland and sands and gravels with heath
- ◆ provision of information for planning and wider policy decisions. These decisions cover coastal sites and coastal zone management, quarries, sand and gravel exploitation and landfill sites
- ◆ provision of information for other Environment and Heritage Service sites such as Country Parks, National Nature Reserves and Scheduled Monuments.

3.4.3 Sites of Special Scientific Interest (SSSIs) and Areas of Special Scientific Interest (ASSIs)

The term Site of Special Scientific Interest (SSSI) applies to areas of land that have been notified under the provisions of the Wildlife and Countryside Act 1981, as being of '*special interest by reason of any of its flora, fauna, geological or physiographical features*'. Areas of Special Scientific Interest (ASSIs) in Northern Ireland are designated under the Nature Conservation and Amenity Lands (Northern Ireland) Order 1985. SSSIs and ASSIs together comprise a nationally important series of areas representing the best of our natural heritage and the SSSI/ASSI system is the main nature conservation designation in Great Britain.

The Geological Conservation Review (GCR) and Earth Science Conservation Review (ESCR) in Northern Ireland formed the basis for the systematic selection of nationally important Earth heritage sites. Each site selected by the GCR is at least of national importance and so is a candidate for notification as a SSSI/ASSI. It may subsequently be given statutory protection

under the Wildlife and Countryside Act 1981 if notified as an SSSI/ASSI but GCR/ESCR sites as such do not have formal statutory protection.

Designation as a SSSI/ASSI provides a legislative mechanism which ensures that the statutory conservation agencies are always consulted about any development or activity that would damage the scientific interest for which the site is notified. A potentially damaging operation can only be carried out on an SSSI/ASSI if the relevant statutory conservation agency has given its consent, if the operation is undertaken in accordance with a management agreement, or if the statutory period (at least 4 months) has expired since notice was given of the intention to undertake the work.

How SSSIs and ASSIs are designated

Firstly, a site is surveyed and identified as a GCR/ESCR of national importance. Then the relevant statutory conservation agency, be it English Nature, the Countryside Council for Wales, Scottish Natural Heritage or the Environment and Heritage Service Northern Ireland, recommends to its Council or Board that they approve a proposal to notify a site as a SSSI/ASSI. The proposal package includes a citation detailing the interest of the site, a map defining the boundary of the site and a list of operations which are likely to damage the interest of the site (see below). This is provided, together with any relevant information to that will contribute to the decision made by the Council or Board. This could include details of any preparatory work on surveys.

Once approval to notify is given, the process of formal notification is entered into and carried out by the relevant Local Team or Area Office staff. SSSIs are notified to every owner and occupier of the land, the local planning authority, the Secretary of State for the Environment/the Secretary of State (Scotland)/The National Assembly (Wales) as well as relevant water, drainage and river authorities. They receive a notification letter, the site citation, boundary map and a list of operations likely to cause damage to the interest of the site.

There is then a three month period during which representations or objections about the notification of the SSSI can be made to the relevant statutory conservation agency. The period allowed for the whole notification process is nine months and within that period, the site must once more be considered by the Council/Board and a decision made as to whether the formal notification as a SSSI should be confirmed. At this point any unresolved objections are considered. Based on this decision letter is sent out once more either confirming or withdrawing the notification.

In Scotland, the Natural Heritage (Scotland) Act 1991 established an independent Advisory Committee on SSSIs which examines notifications where the owner or occupier questions the scientific basis for the designation. Confirmation of notification cannot proceed without Scottish Natural Heritage having considered their advice. Even so, SNH is not legally bound to follow it.

In Northern Ireland, the relevant legislation requires the Environment and Heritage Service to consult with the Committee for Nature Conservation and the Countryside (the Northern Irish statutory Council). Again there is no legal obligation to follow the advice, but adverse comment would be carefully noted. The designation process is broadly similar the main difference being that the authority responsible for site designation and confirmation is the Department for the Environment for Northern Ireland. Following designation, a similar three month period for receipt of objections exists, with confirmation following four months later.

How internal statutory conservation agencies are structured

Internal structures differ according to which country's agency they are in. This is explained in more detail below.

- ◆ **England and Wales – the council:** the council is the legal entity ultimately responsible for the employment of the staff and the delivery of the work of the statutory conservation agencies. Council members are appointed by the Secretary of State for the Environment or National Assembly for Wales and represent a wide range of interests including farming, land management and local government and a diversity of specialist interests such as ecology and the Earth sciences. The decision of the Council ultimately determines whether or not a SSSI notification is confirmed.
- ◆ **Scotland – the board:** the Secretary of State for Scotland appoints a board of 12 members whose responsibility it is to determine the objectives, strategies and policies and the nature of the resources offered by Scottish Natural Heritage. They then guide the staff in their implementation. There are three Area Boards and a Scientific Advisory Committee to support the main committee. Area Board members, who have extensive knowledge and experience of particular topics, advise and assist staff. The Scientific Advisory Committee reviews the scientific basis for the notification of an SSSI and any consents.
- ◆ **Northern Ireland – the council:** in Northern Ireland, the statutory constituted Council for Nature Conservation and the Countryside are consulted prior to any ASSI designation, but the process of site designation and confirmation are undertaken by the Government Agency, the Environment and Heritage Service for the Department of the Environment (Northern Ireland).

An explanation of Potentially Damaging Operations (PDOs)

Operations likely to cause damage include all operations that could conceivably damage the flora, fauna or geological features of a SSSI. Details are sent to owners and occupiers as part of the notification procedure. These operations require consent from the relevant statutory conservation agency before they can be undertaken. Alternatively, four months must have elapsed before they can be carried out. This list of operations is essentially a mechanism for consultation between the site owner or occupier and the Statutory Agency on the management of the SSSI.

The equivalent schedule in Northern Ireland is known as Notifiable Operations. These Operations would not include activities for which planning permission would be required.

How to find out more about SSSIs



Information available about each SSSI across the UK includes:

- ◆ a citation (description of the scientific interest)
- ◆ a boundary map
- ◆ a list of operations likely to cause damage to the scientific interest
- ◆ a record of relevant work and consultations relating to its management

In addition, for geological SSSIs in England, a Site Management Brief is also available. This is a summary of the geological interest which identifies relevant references and key management issues. In Wales, this is set out in a site management plan. The scientific interest and management prescriptions (known as site management statements) for most Earth science SSSIs and GCR sites in Scotland have been set out in a series of Site Documentation Reports which are held in the local Area offices. A detailed scientific description of each Earth science interest on a SSSI is currently being published as part of the GCR thematic volume series. SNH is required to compile and maintain a register of notifications in respect of each planning

authority. The planning authority is obliged to keep a copy of the register relating to their area available at their offices for inspection by the public free of charge.

In Northern Ireland a full geological/geomorphological description is available for all ESCR sites. Once confirmed, a site management plan and a summary of conservation objectives are written. There is currently no plan to include the ESCR site list within the GCR published volumes. There is, however, an ongoing series of excursion style publications featuring many of the selected localities.

SSSI citations, boundary maps and published GCR volume reports are readily available. The agencies produce a range of publications including booklets on SSSIs.

RIGS and SSSIs

Normally there is little advantage in notifying a RIGS for a geological interest already notified as a SSSI given that the SSSI notification affords a high level of statutory protection.

However, SSSIs and RIGS sometimes overlap. For example, a SSSI may be notified for its stratigraphical interest but also contain an igneous intrusion which is not part of the formal notification. In such circumstances it may be advantageous to identify the igneous intrusion as a RIGS and so raise its status within the planning system.

Alternatively, a biological SSSI may have been identified that also contains an Earth science feature that is not included as a reason for notification. Here again, bearing in mind the sensitivities that may be associated with the statutory designation, there are clear merits in establishing a RIGS site which encompasses the Earth science interest. Some SSSIs have a 'mixed' interest – with both biological and Earth science features mentioned on the citation (i.e. both biological and Earth science interests are notified features).

If the amenity or educational value of a SSSI is not recognised in a SSSI designation, there may also be grounds for overlap.

How RIGS relate to statutory sites

RIGS are seen as complementary to the existing statutory sites in the UK and are selected using different criteria. RIGS are not understudy SSSIs but sites of regional and local importance in their own right. A combination of the statutory and non-statutory sites determines the minimum natural resource which must be maintained at both a local and UK level. However, there are three key differences between these systems.

- ◆ RIGS are not statutorily designated, but may receive some statutory protection through development plans
- ◆ The RIGS scheme aims to select the most representative sites which meet the given selection criteria and record a variety of other sites to support this system
- ◆ RIGS are also identified as areas important for educational opportunities, research and for the wider appreciation of Earth heritage.

While no RIGS network exists in Northern Ireland it is anticipated that in the future, when such a scheme is running, that RIGS will serve much the same function as in The British Isles.

3.4.4 Conservation of the wider countryside

As wildlife and natural features are not confined to special reserves or protected sites, the statutory conservation agencies have identified the need to view wildlife and landscapes as a whole rather than solely within protected sites. The identity of the countryside and its local distinctiveness is of vital importance for the natural environment. The agencies have begun to examine the interactions between wildlife distribution, underlying and surface geology, land use, natural processes and landscape pattern. This will identify character areas that have consistent landscape, wildlife and natural features.

- ◆ **Natural Areas:** English Nature has identified Natural Areas. Their boundaries are based upon the distribution of wildlife and natural features, the land use pattern and human history of each area. They do not follow administrative boundaries. They are therefore a more effective framework for planning and achievement of nature conservation objectives. Each of the 120 Natural Areas identified in England has a Natural Area Profile outlining local objectives and targets for that particular area. They are not designations.
- ◆ **Natural Heritage Areas (NHAs):** NHAs, identified by Scottish Natural Heritage, are intended to be special large discrete areas of the countryside of outstanding natural heritage value in Scotland. They should contain a wide range of nature conservation and landscape interests where integrated management will be encouraged to take account of recreational use and wider socio-economic activities. Powers to designate Natural Heritage areas are set out in the Natural Heritage (Scotland) Act 1991. None had been designated up to the end of 1998.
- ◆ **Landmap landscape assessment (Wales):** CCW are undertaking a programme which takes an holistic approach to all aspects of landscape management. Landmap is a single method of gathering, understanding and interpreting information about the landscape. It has an integrated approach, aiming to conserve the quality and character of the landscape and the wider environment. It also includes information about the physical, natural and historical aspects of the landscape.

3.4.5 National Nature Reserves (NNRs)

NNRs are designated under the National Parks and Access to the Countryside Act 1949 and under section 35 of the Wildlife and Countryside Act 1981. They are designated when they are of national or international importance for nature conservation and are owned by or managed under agreement with the relevant statutory conservation agency. They include some of the most important natural and semi-natural habitats in the British Isles. They are designated for the purpose of study, research and the conservation of flora, fauna, geological and zoological interests. Wren's Nest, Dudley, in the West Midlands of England is an example of an important geological NNR.

3.4.6 Areas of Outstanding Natural Beauty (AONBs)

AONBs are designated under the National Parks and Access to the Countryside Act 1949. Their primary purpose is the conservation and enhancement of natural beauty, which includes protecting flora, fauna, geology and landscape features. AONBs also include Heritage Coasts.

In landscape terms, AONBs enjoy equal status with National Parks. There are three main priorities for AONBs:

- ◆ The primary purpose of designation is to conserve and enhance natural beauty. However, nature conservation is not a formal objective

- ◆ In pursuing the purpose of designation, the needs of agriculture, forestry, rural communities and the rural economy must be taken into account
- ◆ Recreation is not an objective of designation but the demand for recreation should be consistent with the need to conserve natural beauty and encompass agriculture, forestry and other uses

Policies for the protection of AONBs should be set out in regional planning guidance, structure plans and local plans. The planning and administrative responsibilities for AONBs lie with local planning authorities. Local authorities are encouraged to produce statements of intent for AONBs which should be available to the public. Most AONBs should have management plans drawn up with the support and approval of all involved. The Countryside Agency is able to provide more information on AONBs.

3.4.7 Natural Scenic Areas (NSAs)

NSAs are nationally important areas of outstanding natural beauty in Scotland. They were identified by the Countryside Commission for Scotland (since incorporated into Scottish Natural Heritage) in the report 'Scotland's Scenic Heritage' and introduced by the Government in 1980 under the Town and Country Planning Legislation.

3.4.8 Areas of Great Landscape Value (AGLVs)

AGLVs are areas of regional or local landscape importance in Scotland. They are defined by local authorities in development plans with a view to safeguarding these areas from inappropriate developments. They are set out in Circular 2/1962.

3.4.9 National Parks

National Parks were set up through the 1949 National Parks and Access to the Countryside Act. The 1995 Environment Act amended their purposes which are now:

- ◆ to conserve and enhance the natural beauty, wildlife and cultural heritage of the National Parks
- ◆ to promote opportunities for public understanding and enjoyment of their special qualities

There are 11 National Parks in England in Wales. Scotland is soon to have its first National Park in the form of Loch Lomond and the Trossachs.

3.4.10 Environmentally Sensitive Areas (ESAs)

The Ministry of Agriculture, Fisheries and Food (MAFF) introduced ESAs in 1987 to help protect those areas where nationally important landscape, wildlife and historic sites are threatened by agricultural activities.

MAFF selects ESAs with advice from the Department of the Environment, Transport and the Regions, the Countryside Agency and the statutory conservation agencies. ESAs range from coastal marshland to rolling chalklands, to river valleys and open moorland.

3.5 An explanation of regional and local designations

3.5.1 Regionally Important Geological and Geomorphological Sites (RIGS)

RIGS, identified by locally-developed criteria, are currently the most important places for Earth science outside statutorily protected land such as SSSIs/ASSIs. The designation of RIGS is one way of recognising and protecting important Earth Science and landscape features for future generations to enjoy.

RIGS are selected in a different way to Earth science SSSIs. RIGS are selected on a local or regional basis using four nationally agreed criteria:



- ◆ The value of a site for educational purposes in life long learning
- ◆ The value of a site for study by both professional and amateur Earth scientists
- ◆ The historical value of the site in terms of important advances in Earth science knowledge, events or human exploitation
- ◆ The aesthetic value of a site in the landscape, particularly in relation to promoting public awareness and appreciation of Earth sciences

Local RIGS groups often devise additional criteria based on these national parameters depending on local or regional circumstances.

RIGS are broadly equivalent to local Wildlife Sites and other non-statutory wildlife designations in their level of protection through the planning system. They can be listed in local authorities' development plans and shown on 'alert maps'. RIGS can be protected through the planning system if a RIGS group recommends sites to the local planning authority. Conservation and management of sites will usually depend upon agreements and cooperation with landowners. RIGS are described in Planning Policy Guidance Note 9: *Nature Conservation*, paragraph 17 (England and Wales) and National Planning Policy Guideline 14 (62): *Natural Heritage* (Scotland).

RIGS groups assess, select and often manage RIGS in their area. Most RIGS groups operate on a voluntary basis although their members may be professional Earth scientists, consultants, planners, teachers and conservationists as well as amateurs and volunteers.

RIGS were originally set up in 1990 by the Nature Conservancy Council and are actively supported by the successor conservation agencies. The Royal Society for Nature Conservation (RSNC) and the Countryside Council for Wales currently support RIGS work across the UK. Recent developments have led to the formation of the Association of UK RIGS Groups representing the whole of the UK. This Association aims to unify RIGS work and give RIGS a strong UK-wide identity.

3.5.2 Local Nature Reserves (LNRs)

LNRs are declared and managed by local authorities under powers given by Section 21 of the National Parks and Access to the Countryside Act (1949), on land in their jurisdiction and owned or leased by them.



A definition of LNRs

LNRs are land managed for the purpose:

- 1 of providing, under suitable conditions and control, special opportunities for the study of, and research into, matters relating to the flora and fauna of Great Britain and the physical conditions in which they live, and for the study of geological and physiographical features of special interest in the area
- 2 of preserving flora, fauna, or geological or physiographical features of special interest in the area; or for both of these purposes

Source: Section 21, National Parks and Access to the Countryside Act, 1949)

In England and Wales the local authority may delegate its powers to a Parish Council to undertake the role of designation. Local authorities in Scotland cannot delegate these powers. In Scotland, legislation relating to LNRs is amended in the Local Government and Planning (Scotland) Act 1982.

Sites proposed for the designation of a LNR should be one or more of the following:

- ◆ Of high natural interest in the local context (SSSI or near equivalent)
- ◆ Of some reasonable natural interest and of high value in the parish/district/borough/county context for environmental education or research
- ◆ Of some reasonable natural interest and of high value in the parish/district/borough/county context for the informal enjoyment of nature by the public

Additionally, the site must be capable of being managed with the conservation of nature and/or the maintenance of special opportunities for study or research as a priority concern.

3.5.3 Wildlife Sites

Wildlife Sites, identified by locally important criteria, are the most important places for wildlife outside legally protected land such as SSSI and ASSIs. These non-statutory sites are normally identified by local partnerships including local authorities, Wildlife Trusts and the statutory conservation agencies.

Wildlife Sites are usually identified in local development plans and afforded a degree of protection through associated policies.

A range of local terms for these sites are also used including:



- ◆ Sites of Importance for Nature Conservation (SINCs)
- ◆ Sites of Nature Conservation Importance (SNCIs)
- ◆ Sites of Biological Importance
- ◆ County Wildlife Sites

Wildlife Sites and RIGS

RIGS are selected and conserved primarily for their Earth heritage importance. However, in many instances, RIGS will also have wildlife interest and some Wildlife Sites systems are

integrated or run in parallel with those for Earth heritage interests or vice versa. Conservation of Earth heritage sites can occasionally be contrary to the conservation requirements of wildlife. In some areas Wildlife Sites and RIGS are managed together. There can be benefits in managing the two systems together.

3.6 Plans and policies

3.6.1 Local authority development plans

Throughout this document, Development Plans are referred to in a planning context. A Development Plan is the broad planning term given to plans that are drafted by local authorities under Government Guidance. The role of the Development Plan is to prepare for sustainable future development whilst safeguarding existing resources and the environment. Development Plans should also direct opportunities for enhancing the environment and therefore should not be restrictive on appropriate development.



- ◆ Development plans are the main guide to planning decisions by local authorities and others
- ◆ Both the Town and Country Planning Act 1990 and the Planning and Compensation Act 1991 have specific requirements for development plans to include policies in respect of the conservation of natural beauty and amenity of land

In England and Wales Development Plans are prepared by unitary authorities, county councils, metropolitan districts and district councils. They include structure plans, local plans, unitary development plans, minerals plans and waste plans. The following table shows which type of local planning authority would be responsible for drafting each plan.

3.6.2 Planning authorities and development plans – who does what?

Type	Also called	Unitary/ Two tier	Mineral & waste planning authority?	Kind of development plan
<i>County Council</i>	N/A	Two tier	Yes	Structure plan; minerals and/or waste local plan
<i>District Council</i>	District, Borough or City Council	Two tier	No	Local plan
<i>Metropolitan District</i>	Metropolitan Borough or City Council	Unitary	Yes	Unitary development plan (UDP) (incl. minerals and waste issues)
<i>English Unitary</i>	Council, District, City or Borough Council	Unitary	Yes	Unitary development plan (incl. minerals and waste issues)
<i>Welsh Unitary</i>	Council, County Borough Council, County Council, City & County	Unitary	Yes	Unitary development plan (incl. minerals and waste issues)

In Scotland, the main primary planning legislation is the Town and Country Planning (Scotland) Act, which has been substantially amended over the last twenty years. In Scotland, the general principle under which the planning system operates is that decisions should be taken at the most local administrative level unless there are strong reasons for taking them at a higher level. The Structure Plan and the Local Plan together make up the statutory Development Plan and in the determination under the planning legislation, the presumption is in favour of those proposals which comply with the Development Plan. The Structure Plan sets the strategic policy framework and must be approved by the Secretary of State. The Local Plan sits within this strategic framework and conveys the essential local development guidance which forms the basis for development control. The adopted Local Plan should be altered or revalidated least every five years.

General objectives for development plans and development control in Scotland are:

- ◆ to set the land use framework for promoting economic development
- ◆ to encourage economic, social and environmental regeneration
- ◆ to maintain and enhance the quality of the natural heritage and built environment.

In Northern Ireland such plans are referred to as Area Plans and are prepared by the Planning Service of the Department of the Environment for Northern Ireland. The need to have Area Plans is also a statutory requirement in Northern Ireland.

3.7 An explanation of planning guidance notes

3.7.1 Planning Policy Guidance (England) (PPG), National Planning Policy Guidance (Scotland) (NPPG), Technical Advisory Notes (Wales) (TANs), Planning Advisory Notes (Scotland) (PANs)

PPG, NPPG (formerly known as National Planning Guidelines), TAN and PAN notes set out level from a central government perspective, broad national guidelines on the use and development of land. They specified how local planning authorities should treat broad policy subjects or particular planning issues. The guidance is a material consideration to be taken into account by the authorities in determining planning applications and, in the case of appeals, by the Secretary of State (England and Wales), The Secretary of State for Scotland and their Inspectors or Reporters. In Scotland, Planning Advice Notes (PANs) are also used to identify and disseminate good practice and provide advice and other relevant information. PAN 13, entitled Planning and Geology is of most interest to RIGS groups.

3.7.2 Minerals Planning Guidance (MPG)

MPG sets out broad guidelines at a national level. It addresses how local planning authorities should treat policy and planning issues relating to the strategic development and planning of the UK's mineral resources. The guidance covers all aspects of mineral planning including directing the UK's provision of mineral resources, specific areas of mineral planning including coal and open cast mining and the environmental impacts of mineral extraction. The MPG series does not apply to Scotland. Scottish Mineral Planning issues are dealt with through the NPPG series. More specifically, they are included in NPPG 4 which relates to all minerals, NPPG 16 which relates to opencast coal and through several PANs. This includes PAN 50 which concerns the environmental impacts of surface mineral workings.

3.7.3 Regional Planning Guidance (RPG)

RPG sets out broad strategic policies for a 15 to 20 year period at the regional level where there are matters which apply across regions or parts of regions that need to be considered on a scale wider than that of a single planning authority. There is no equivalent of RPG in Scotland.

3.7.4 Supplementary Planning Guidance (SPG)

SPG may be prepared by local planning authorities to supplement the policies and proposals in a development plan. For example, the Peterborough Geology Audit (see appendix 4.9) will be adopted by Peterborough Unitary Authority as SPG to give them guidance on Earth heritage information and sites. The guidance should be consistent with national and regional planning guidance and the appropriate Development Plan and it should be clearly cross-referenced to the relevant plan policy or proposal. In Scotland, supplementary policy guidance in the form of an interim policy statement may be used where there is a need for an immediate policy response. It is also helpful for issues which would benefit from a more targeted approach such as special interest groups.

3.7.5 Planning Policy Statement (PPS) (Northern Ireland)

The PPS series does not as yet address all planning matters e.g. there are no PPS for Minerals Planning. The range of PPS documents will expand in due course. Given the fundamentally different planning structure in Northern Ireland, PPS's are effectively a statement of the framework within which the planning authority itself operates.

3.8 Other useful planning terms

3.8.1 Section 106 / Section 50 Agreement

Under Section 106 of the Town and Country Planning Act 1990, as amended by the Planning and Compensation Act 1991 (England and Wales), a planning obligation may be entered into by means of a unilateral undertaking by a developer or by agreement between a developer and local planning authority. The most usual form of planning obligation is by agreement. It consists of an undertaking set out in a civil contract which does not involve central government. In Scotland, planning authorities have the power under Section 50 of the Town and Country Planning (Scotland) Act 1972 to enter into voluntary agreements with persons having an interest in land in their area for the purpose of restricting or regulating the use of that land.

3.8.2 Environmental Impact Assessments (EIAs)

EIAs are procedures where environmental information is collected and produced in the form of an Environmental Statement (ES) for a project or development. The ES is made available for public consultation. The ES and any comments made are taken into account by the planning authority when considering a planning application. Assessments are produced by the applicant in support of a proposed project or development. In Scotland, the proposals that may be subject to Environmental Assessment were specified in the Schedules to the Regulations.

3.9 Other relevant plans and initiatives

3.9.1 Local Environment Action Plans (LEAPs) (England and Wales)

LEAPs are non-statutory plans, which identify local environmental issues and set out joint actions to address them. LEAPs are based on the surface water catchment of one or more rivers.

Through the LEAP process, the Environment Agency aims to promote integrated environmental management in partnership with other organisations by:

- ◆ focusing attention on the environment of a specific area
- ◆ involving interested parties and the local community in planning for the future of the area
- ◆ agreeing a vision for the area which guides all Environment Agency activities over the next 10-20 years

- ◆ establishing an integrated plan of action for managing the local environment over the next five years



The Environment Agency was formed in 1996 by amalgamating three previous organisations – the National Rivers Authority, Her Majesty's Inspectorate for Pollution, and the Waste Regulation Authorities

Local Environment Agency Plans (LEAPs) define the work of the Environment Agency in each catchment region. They describe the existing state of the catchment, the desired state and detail the issues which require attention. Issues include those related to water quality, water quantity and physical features, air pollution and waste management.

LEAPs can highlight areas of high conservation value, including RIGS. The inclusion of LEAPs in Local Plans can add weight to their protection. LEAPs can emphasise the importance of controlling development in flood plains. They also address situations where the installation of new water supply systems could have a detrimental impact on water tables.

3.9.2 Biodiversity Action Plans (BAPs)

Biodiversity action planning represents the latest approach to wildlife conservation and has resulted from the Convention on Biological Diversity signed by Governments at the Earth Summit in Rio in 1992. The UK response to the Convention has been to develop the UK Biodiversity Action Plan (BAP), a national strategy to maintain and enhance biodiversity.

The UK BAP

The UK Biodiversity Action Plan is not a single document, but is made up of a series of reports that outline generic work and specific action needed for species and habitats:

Biodiversity: The UK Action Plan

In January 1994, the Government produced *Biodiversity: The UK Action Plan*. This document sets out the framework for action on biodiversity in the UK by Government, statutory agencies and voluntary organisations.



The UK BAP goal: "to conserve and enhance biological diversity within the UK and to contribute to the conservation of global biodiversity through all appropriate mechanisms"

Biodiversity: The UK Steering Group Report

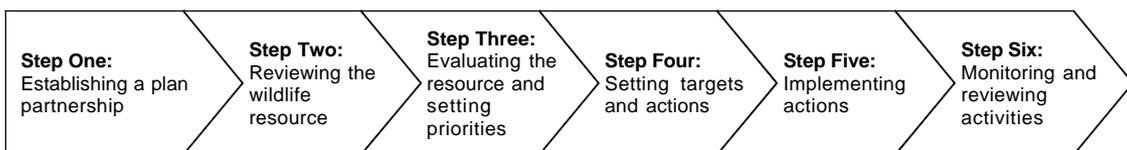
A UK Biodiversity Steering Group was formed following production of the UK Action Plan. *Biodiversity: The UK Steering Group Report* was published in December 1995 and consists of two volumes giving detailed recommendations to Government. Volume 1, *Meeting the Rio Challenge*, represents a fundamental shift in the focus of biodiversity conservation, endorsing a partnership approach with strategic targets and actions for work. Volume 2 illustrates this approach with UK-wide costed action plans for priority species and habitats. The report was endorsed by Government in May 1996.

Subsequent tranches of action plans have also been produced for priority species and habitats, representing those in most urgent need of conservation action. Collectively, these documents contain more than 400 priority species plans and over 40 priority habitat plans. A structure of steering groups covering different countries and technical issues has also been developed to provide a framework to oversee delivery of the UK BAP.

The Steering Group Report also describes a mechanism for implementing these action plans at a local level through the production of local biodiversity action plans. The principle is for local BAPs to inter-connect to cover the whole of the UK, and so add up to meet the actions and targets set out in the national action plans.

Local BAPs

The local BAP represents a long-term process for biodiversity conservation in the local area and a means of monitoring progress. It is intended to focus on species and habitats of national priority, and also to take into account local considerations. In this way, it encompasses the total biodiversity of an area. The principle behind local BAPs, as with the UK BAP, is that they are developed in partnership and so provide a common agenda for agencies working on conservation issues. Local partnerships aiming to develop BAPs generally comprise local authorities, statutory and voluntary conservation agencies, and farming and land-owning organisations. The process of developing a local BAP reflects this partnership principle with a series of stages designed to establish an ongoing process.



A set of guidance notes and case studies has been developed to help assist the development of local BAPs throughout the UK. These provide broad guidance only. Consequently, all local BAPs are developing to different time scales, at various geographical levels with a tendency to be inconsistent in format. However, this does mean that each local BAP can adapt to suit local circumstances rather than rigidly following a standard blueprint.

There are now well over 100 local BAP initiatives at different stages underway across the UK. Because of the relationship between this work on biodiversity and the broader work on sustainability under Local Agenda 21, local BAPs are seen as the vehicle to deliver the nature conservation component of a Local Agenda 21 strategy.

More background on local BAPs is available in the guidance notes listed in the references (appendix 3.1), and details of local activity can be obtained by contacting the relevant local authority or Wildlife Trust. A database of local BAPs has also been developed to help identify which initiatives are underway in different parts of the UK. This can be accessed on the Joint Nature Conservation Committee's website: www.jncc.gov.uk/ukbg.

There is scope to include Earth heritage conservation in local BAPs. This could vary from the geological, geomorphological and landscape resources of the area to the wildlife systems as a whole. Alternatively, it may include a reference to Earth heritage conservation and RIGS as in the Devon local BAP (see appendix 3.2).

3.9.3 Local Agenda 21

Local Agenda 21 is underpinned by the concept of sustainable development:



Two definitions of Sustainable Development:

“Development which meets the needs of the present without compromising the ability of future generations to meet their own needs” (The Brundtland Commission 1987)

“Sustainable development means improving the quality of life whilst living within the carrying capacity of the supporting ecosystem” (IUCN – The World Conservation Union, the United Nations Environment Programmes and the World Wide Fund for Nature, 1991)

Sustainable development is a complex concept, involving concepts of social justice, equity and concern for the future, as well as environmental and development issues. Education is crucial in achieving a move towards using resources and living sustainably.

A second Convention focusing on sustainability for the 21st century was also signed at Rio. This Convention, termed Agenda 21, has been taken forward in the UK as a programme called Local Agenda 21 (LA21), and complements the work on biodiversity.



Agenda 21 is the blue-print for sustainable development agreed by 180 of the world’s leaders at the Rio Earth Summit in 1992. It stresses the importance of involving all sectors of the community in order to move to more sustainable ways of life and calls for local authorities to develop Local Agenda 21 strategies, in collaboration with their communities

Local Agenda 21 is the process of developing local strategies for sustainable development. Agenda 21 requires local authorities to build partnerships with all sectors of the community, from local businesses, voluntary groups (such as RIGS groups) and young people. Through this they will develop a Local Agenda 21 Action Plan

3.9.4 Nature conservation strategies

A nature conservation strategy is a non-statutory document, which is produced by the planning authority to outline policies and define priorities for the conservation and enhancement of natural resources. The strategy will require assessment of the existing natural resource and should include prescriptions for its maintenance and enhancement.

PPG9 does define a link between Nature Conservation Strategies and local plans:



Local plans “should take account of locally prepared nature conservation strategies, which should, in turn, be consistent with development plan policies”

Some counties and areas have adopted a nature conservation strategy that encompasses Earth science and Earth heritage sites (such as the English Nature publication, *Sites of Importance for Nature Conservation in the West Midlands*, 1997). Other counties have chosen to produce a geological strategy (see appendix 4.10).