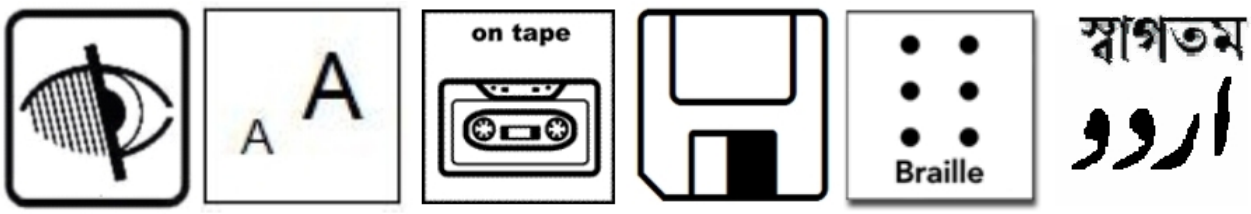
Draft Geodiversity Action Plan 2009 - 2010



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Version Control		
Version	Date	Author
1.0	30 – 10 – 2008	P Mepham, Environmental Health Manager
1.1	04 – 11 – 2008	A. Joyce Technical Officer
1.2	30 – 11 – 2009	A. Joyce Technical Officer
2.0	17 – 01 – 2009	P Mepham Environmental Health Manager

1.0 Introduction

1.1 What is Geodiversity?

Geodiversity can be defined as the "Variety of rocks, fossils, minerals, natural processes, landforms and soils that underlie and determine the character of our landscapes and environment"

Geodiversity is fundamental to almost every aspect of life, and is the bedrock of our environment. The natural resources provide the essential raw materials required by civilisation ranging from the fuel, water supply, metal ores and industrial minerals and building materials.

There needs to be an understanding of the geology of the land in the design and buildings of roads, railways and airports as well as other activities such as the disposal of waste, especially nuclear, and the management of a huge range of natural and man-made hazards.

1.2 Links between Geodiversity and Biodiversity

Geodiversity links everything together, including people, culture, landscape and biodiversity. It underpins all our activities from farming (providing arable land) to engineering (providing the essential raw materials) and gardening to waste management.

Geology plays a part in everything we do, despite us sometimes being unaware. The range and diversity of earth science features, and the geodiversity of the area, is just as important a part of our heritage as wildlife and culture.

Due to Rossendale's location we have a rich landscape value; geodiversity is key to integrated management and conservation. The geology of the area is potentially a considerable asset for tourism and recreation.

Like biodiversity, it is important that policies reflect the importance of geodiversity. Geodiversity also requires conservation, sustainable management, education and interpretation to maintain and increase knowledge and the status of the sites.

The aim of this plan is to widen the audience and make people more aware of geodiversity.

1.3 Why Geodiversity is important

Geodiversity, as already stated, links everything together, from people to their cultures, and is fundamental to every day life. There should be an appreciation and understanding of geodiversity and this will help contribute toward a clearer understanding of biodiversity, as the geology has a significant influence on where habitats and species are found.

Geological resources are extremely important to everyone's everyday lives, as they provide the raw materials from buildings to medicine and water. The minerals, which we extract and take for granted, provide us with everything from homes to hospitals and schools.

The most important objective of geodiversity conservation is understanding and having an awareness of it as the Earth's finite resources are needed for sustainable development. By encouraging sustainability and protecting the environment, both people and the planet will be protected.

1.4 Benefits of Protecting Geodiversity

In the past, many geologically important sites have been conserved on an individual basis, but it is recognised that in the future it will be important to work together with others to conserve geodiversity in the wider landscape and not just sites here and there.

An understanding of the nature and scope of existing conservation measures is an essential basis for information proposals and recommendations for future sustainable management, conservation and interpretation of the district's geodiversity.

Geological conservation has traditionally had a lower profile than wildlife conservation, but continues to grow in both profile and practical involvement of official bodies and voluntary organisations. This is due partly to an increased recognition of the importance of geology to society, science and education and also reflects the increasing threat of damage and destruction faced by the natural environment including geological sites.

2.0 Policy Background to Geodiversity

2.1 National context

Nationally, there has recently been a move to create Geodiversity Action Plans to parallel the already existing Biodiversity Action Plans. These Plans are required firstly, in order to raise awareness of the need for geoconservation generally, and secondly, to ensure a coherent and integrated approach to geoconservation in the medium to long term.

Drawing on progress made in other parts of the country, and especially the work of English Nature (now Natural England) to co-ordinate and suggest a common framework for such plans, Lancashire RIGS Group (Regionally Important Geological and Geomorphological Sites) has drawn up a draft plan for Lancashire.

2.2 Lancashire Local Geodiversity Action Plan (LGAP)

Although Lancashire have produced a countywide LGAP, a more local scale is often most quantifiable and most relevant. This Rossendale Plan has been drafted because:-

- People have an intrinsic ownership of their local "place" – they can relate more easily to areas close to them,
- Nature conservation has public support at all levels from national to local,
- Geoconservation and bioconservation can best be developed together as they are closely linked.

3.0 Evolution of East Lancashire

3.1 Rossendale

In Lancashire there are contrasting rocks that form the basis of the landscape. However geology isn't the only factor to have shaped the landscape - the intricate interplay of geology, geomorphology, pedology, biogeography and human activity has all significantly influenced the landscape.

3.2 Geology and Topography

The underlying geology of Lancashire is simple and is formed from four major rock types from three geological periods.

- Upper Carboniferous – Millstone Grit & Coal Measures
- Lower Carboniferous – Limestone
- Permian
- Triassic } rocks includes sandstone and mudstones (West Lancashire)

The underlying geology combined with climate and topography has had a profound influence over the industrial developments of Lancashire, Geology is reflected most noticeably in the distribution and variety of building materials used across the county. An example of this is the preponderance of houses, buildings being built from stone in Rossendale.

There are five main different types of landscape in Rossendale, including:

- Peat
- River alluvium and terrace deposits
- Boulder Clay
- Glacial sand and gravel
- Sandstone

3.3 Natural Areas in Lancashire – Key Characteristics

Rossendale is located in the Southern Pennines area. The key habitats include:

- Extensive areas of blanket bog on moorland tops
- Impoverished areas of wet and dry upland heathland
- Large areas of upland acid grassland
- Frequent springs and flushes
- Fast flowing streams, rivers and reservoirs
- Some upland hay meadows in valleys
- Grasslands upland oak and mixed ash woodlands in valleys

4.0 How the Local Geodiversity Action Plan fits in with the Planning System

4.1 PPS1

PPS 1 – Planning Policy Statement 1: Delivering Sustainable Development, requires that plan policy and planning decisions should be based on up to date information about the environment characteristics of an area. These characteristics include biodiversity and geodiversity.

Although biodiversity is now embedded into policy, geodiversity has not previously been regarded so highly despite being extremely important in underpinning biodiversity.

4.2 PPS 9

PPS 9 – Planning Policy Statement 9: Biodiversity and Geological Conservation, published in 2005, sets out the national policies on the protection of biodiversity and geological conservation, introducing the concept of geodiversity into the planning process.

Therefore, despite not being taken seriously in the past, under the Regional Spatial Strategies and Local Development Framework, local authorities and developers must have regard to the national guidance on geodiversity set out in PPS9. The key principles in PPS9 require that planning policies and decisions not only avoid, mitigate or compensate harm, but also seek to enhance and restore biodiversity and geology.

The guidance suggests ways in which the aims can be met. These include identifying the geodiversity value of previously developed sites and the opportunities for incorporating this in developments, as well as recognising areas of geological value, which would benefit from enhancement and management.

4.3 Consideration of geodiversity

Geodiversity must be considered at every stage of the planning and development process, and at all scales, including local, regional and national. We must follow clear guidelines on how it can best be conserved. Possibly the greatest threat to geodiversity is inappropriate development because new developments often destroy or conceal valuable geological exposures and disrupt the natural processes that helped them form.

When reviewing plans for a development, whether large or small, planners should assess its potential impacts on geodiversity, take steps to mitigate any damage that cannot be prevented, and identify opportunities that might benefit geodiversity. For example, some developments might allow the creation of more rock exposures, or offer an opportunity to re-establish natural systems. In others, road improvement works may require the construction of new cuttings and such operations offer opportunities to reveal unexposed geological sections either temporarily (during construction) or permanently. PPS9 confirms that geodiversity conservation has a role to play in contributing to the quality of life and wellbeing of the community.

5.0 Rossendale's Local Geodiversity Action Plan

5.1 The Aim of the LGAP

- is to provide the necessary framework for sustainable management, planning, conservation and interpretation of all aspects of geodiversity in Rossendale.

5.2 Action Plan

The following draft action plan will be implemented during the first year to facilitate the development of the plan. By concentrating on these issues, and involving the community as well as local organisations, we will ensure action is prioritised and planned for in the future that is relevant to Rossendale.

5.2.1 – **Contact and organise local interest in geology**

a) Identify partners including companies, individuals, educational establishments, conservationists and groups who have an interest in geodiversity and geology, and develop a local steering group to take the plan forward.
b) Encourage involvement in conserving and developing geodiversity in the district.
c) Undertake an audit of available skills and experience.

5.2.2 – **Identify condition of sites**

a) Undertake an audit of geodiversity resources.
b) Monitor condition of RIGS and ensure that all have a management plan or statement of intent and progress is made on their management.
c) Monitor the condition of other important sites, maintaining a database of sites for future reference.

5.2.3 – **Ensure protection of sites through local and regional policies/strategies**

a) Ensure policies protecting geodiversity are included in the Local Development Framework
b) Ensure important sites are included on the LDF proposal map and take geodiversity into account in development control decisions

5.2.4 – **Geodiversity of active quarries**

a) Encourage quarry operators to prepare quarry specific geodiversity action plans.
b) Seek opportunities to report, record, conserve and enhance geodiversity in active quarries

5.2.5 – **Develop interpretation and public awareness**

a) Undertake an audit of available information and means of access.
b) Encourage opportunities for promoting geodiversity within Rossendale, looking at groups with related interests, local history and natural history.
c) Ensure comprehensive information is available on Rossendale BC website (www.rossendale.gov.uk) promoting interest and access

5.2.6 – **Promotion of education and training**

a) Encourage education opportunities.
b) Share information with local schools and promote this where possible.

5.2.7 – **Bid for funding**

a) Investigate the possibility for obtaining funds to pursue and progress the above actions.

Appendix 1

LIST OF ROSSENDALE REGIONALLY IMPORTANT GEOMORPHOLOGICAL SITES

ROSSENDALE				
Stacksteads Gorge	R/2/001	SD81 NE	SD806168	Glacial diversion gorge
Hill End	R/2/002	SD82 SW	SD822224	Kame terrace
Mam Hill	R/2/003	SD81 NW	SD812156	Part of extensive meltwater channel suite
Thurns Head Quarry	R/2/004	SD81 NW	SD873187	Massive load structures and industrial archaeology
Fletcher Bank Quarry	R/2/005	SD81 NE	SD806168	Excellent series of X-sections through deltaic channels