

Do you consider the BDP is **unsound** because it is not:

(1) Justified (see Note 4)	<input type="checkbox"/>
(2) Effective (see Note 5)	<input type="checkbox"/>
(3) Consistent with national policy (see Note 6)	<input type="checkbox"/>
(4) Positively prepared (see Note 7)	<input type="checkbox"/>

6. Please give details of why you consider the BDP is unsound. Please be as precise as possible. If you wish to support the soundness of the BDP, please also use this box to set out your comments. (Continue on a separate sheet /expand box if necessary)

Key Challenge point 12 omits geodiversity as part of the natural environment.
 "Celebrating and conserving the District's individuality as an attractive and safe place with a unique historic built environment and landscape which is biodiversity rich."

7. Please set out what change(s) you consider necessary to make the BDP sound, having regard to the test you have identified at 6 above. You will need to say why this change will make the BDP sound. It will be helpful if you are able to put forward your suggested revised wording of any policy or text. Please be as precise as possible. (Continue on a separate sheet /expand box if necessary) (see Note 8 para 4.3)

Please add in mention of geodiversity – it underpins the landscape and biodiversity and is a fundamental part of the natural environment.

Celebrating and conserving the District's individuality as an attractive and safe place with a unique historic built environment and landscape which is **geologically and** biodiversity rich.

Please note your representation should cover succinctly all the information, evidence and supporting information necessary to support/justify the representation and the suggested change(s), as there will not normally be a subsequent opportunity to make further representations based on the original representation at publication stage.

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Referring to the environment, section 4.12 does not mention the geodiversity of the area "These include the Lickey, Clent and Waseley Hills, canals, ancient woodlands, areas of nature conservation, biodiversity and landscape character, together with Conservation Areas, listed buildings and their settings, all of which will have been carefully protected, conserved and enhanced."

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Please add in mention of geodiversity – it underpins the landscape and biodiversity and is a fundamental part of the natural environment.

These include the Lickey, Clent and Waseley Hills, canals, ancient woodlands, areas of nature conservation, biodiversity, **geodiversity** and landscape character, together with Conservation Areas, listed buildings and their settings, all of which will have been carefully protected, conserved and enhanced.

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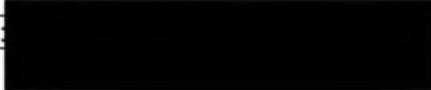
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Signature: 	Date: 11.11.2013
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Part B (see Note 1 and Note 8 para 4.2) (H&WEHT B3)

Please use a separate Part B form for each representation you wish to make

Name or Organisation (see Note 8 para 4.1)

Herefordshire & Worcestershire Earth Heritage Trust

1. To which part of the BDP does this representation relate?

Page: 14	Paragraph: 5.1	Policy: SO8
Policies Map:	Other document:	

If your representation does not relate to a specific part of the document, or it relates to a different document, for example the Sustainability Appraisal, please make this clear in your response.

2. Do you consider the BDP is legally compliant? (see Note 2)

Yes: <input type="checkbox"/>	No: <input type="checkbox"/>
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3. Please give details of why you consider the BDP is not legally compliant. Please be as precise as possible. If you wish to support the legal compliance of the BDP, please also use this box to set out your comments. (Continue on a separate sheet /expand box if necessary)

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4. Please set out what change(s) you consider necessary to make the BDP legally compliant, having regard to the issue(s) you have identified above. You will need to say why this change will make the BDP legally compliant. It will be helpful if you are able to put forward your suggested revised wording of any policy or text. Please be as precise as possible. (Continue on a separate sheet /expand box if necessary) (see Note 8 para 4.3)

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5. Do you consider the BDP is sound? (see Note 3)

Yes: <input type="checkbox"/>	No: <input type="checkbox"/>
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Do you consider the BDP is **unsound** because it is not:

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Strategic objective 8 misses out geodiversity
SO8
"Protect and enhance the unique character, quality and appearance of the historic and natural environment, biodiversity and Green Infrastructure throughout the District"

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Please add in mention of geodiversity – it underpins the landscape and biodiversity and is a fundamental part of the natural environment.

SO8
Protect and enhance the unique character, quality and appearance of the historic and natural environment, biodiversity, **geodiversity sites** and Green Infrastructure throughout the District

Please note your representation should cover succinctly all the information, evidence and supporting information necessary to support/justify the representation and the suggested change(s), as there will not normally be a subsequent opportunity to make further representations based on the original representation at publication stage.

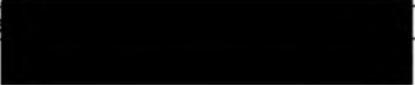
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Signature 	Date: 11.11.2013
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Part B (see Note 1 and Note 8 para 4.2) (H&WEHT B4)

Please use a separate Part B form for each representation you wish to make

Name or Organisation (see Note 8 para 4.1)

Herefordshire & Worcestershire Earth Heritage Trust

1. To which part of the BDP does this representation relate?

Page: 17	Paragraph:	Policy: BDP 1.4d
Policies Map:	Other document:	

If your representation does not relate to a specific part of the document, or it relates to a different document, for example the Sustainability Appraisal, please make this clear in your response.

2. Do you consider the BDP is legally compliant? (see Note 2)

Yes: <input type="checkbox"/>	No: <input type="checkbox"/>
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5. Do you consider the BDP is sound? (see Note 3)

Yes: <input type="checkbox"/>	No: no <input type="checkbox"/>
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Do you consider the BDP is **unsound** because it is not:

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BDP1.4 d misses out geodiversity
d)
The quality of the natural environment including any potential impact on biodiversity, landscape and the provision of/and links to green infrastructure (GI) networks

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Please add in mention of geodiversity – it underpins the landscape and biodiversity and is a fundamental part of the natural environment.

d)
The quality of the natural environment including any potential impact on biodiversity, **geodiversity**, landscape and the provision of/and links to green infrastructure (GI) networks

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No, I do not wish to participate at the oral examination	<input type="checkbox"/> no
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Signature: 	Date: 11.11.2013
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Part B (see Note 1 and Note 8 para 4.2) (H&WEHT B5)

Please use a separate Part B form for each representation you wish to make

Name or Organisation (see Note 8 para 4.1)

Herefordshire & Worcestershire Earth Heritage Trust

1. To which part of the BDP does this representation relate?

Page: 101	Paragraph: 8.277	Policy:
Policies Map:	Other document:	

If your representation does not relate to a specific part of the document, or it relates to a different document, for example the Sustainability Appraisal, please make this clear in your response.

2. Do you consider the BDP is legally compliant? (see Note 2)

Yes: <input type="checkbox"/>	No: <input type="checkbox"/>
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3. Please give details of why you consider the BDP is not legally compliant. Please be as precise as possible. If you wish to support the legal compliance of the BDP, please also use this box to set out your comments. (Continue on a separate sheet /expand box if necessary)

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5. Do you consider the BDP is sound? (see Note 3)

Yes: <input type="checkbox"/>	No: no <input type="checkbox"/>
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Do you consider the BDP is **unsound** because it is not:

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BDP21 in referring to the natural environment should be using the 2011 White Paper on the environment as part of the guidance and evidence base – it does not appear to be mentioned.

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Add the 2011 White Paper on the environment (The Natural Choice) – copy attached, as part of the evidence base as this is where the notion of Local Nature Partnerships and NIAs comes from.
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Part B (see Note 1 and Note 8 para 4.2) (H&WEHT B6)

Please use a separate Part B form for each representation you wish to make

Name or Organisation (see Note 8 para 4.1)

Herefordshire & Worcestershire Earth Heritage Trust

1. To which part of the BDP does this representation relate?

Page: 101	Paragraph: 8.279	Policy:
Policies Map:	Other document:	

If your representation does not relate to a specific part of the document, or it relates to a different document, for example the Sustainability Appraisal, please make this clear in your response.

2. Do you consider the BDP is legally compliant? (see Note 2)

Yes: <input type="checkbox"/> yes <input type="checkbox"/>	No: <input type="checkbox"/>
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BDP21 section 8.270 refers to the Worcestershire Geodiversity Action Plan. The copy of this document in the evidence is out of date – the new version has been attached. The Worcestershire GAP feeds into the UK GAP.
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Update the document referred to (latest version attached and mention that there is a UK Geodiversity Action Plan – see www.ukgap.org.uk)

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Signature		Date: 11.11.2013
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Nicky Morgan MP
House of Commons
London
SW1A 0AA

10 MAY 2012

Bob Neill MP
Parliamentary Under Secretary of State

*Department for Communities and Local
Government*
Eland House
Bressenden Place
London SW1E 5DU

Tel: 0303 444 3430
Fax: 0303 444 3986
E-Mail: bob.neill@communities.gsi.gov.uk

www.communities.gov.uk

Our Ref: GC/BN/013345/12

09 MAY 2012



Thank you for your letter of 24 April to the Rt Hon Greg Clark MP on behalf of a constituent asking about the National Planning Policy Framework and sites of geological importance. I have been asked to reply.

In slimming down national planning policy from over 1,000 pages into a clear Framework of 50 pages we have stripped out explanatory text and focussed on what is expected from the planning system. In doing so, we have been clear that the contribution we expect from planning to enhancing the natural environment includes protecting geological conservation interests. The Framework expects local planning authorities to set criteria for assessing development proposals affecting geodiversity sites and their planning policies to aim to prevent harm to geological conservation interests.



GEODIVERSITY ACTION PLAN --- Worcestershire

Making a contribution to Worcestershire's environment and quality of life through education, conservation, enhancement, management and promotion of the county's geodiversity



working to record and protect
geology & landscape

Geodiversity is the natural range (diversity) of geological (rocks, minerals, fossils), geomorphological (landforms and processes) and soil features. It also includes their relationships to people, places and nature.

Geodiversity and People

Geodiversity influences everyone's lives; from where we live, to what we grow, quarry and mine. Settlements develop where the underlying geological conditions have created a favourable environment; for example close to water sources, or at the bridging point of a river. Vineyards and fruit farms flourish in warm valleys where fertile soils create excellent growing conditions. Mines and quarries are located where the geological conditions of the past have created sites from which suitable materials can be extracted, for example roadstone.

Geodiversity and Places

Geodiversity directly influences landscape. Resistant rocks such as granite and limestone underlie the spectacular Malvern and West Worcestershire Hills. Relatively hard sandstones form the higher ground around Kidderminster and the Wyre Forest. In contrast the softer mudstones in the central parts of the county have been more easily eroded, creating the Severn Vale and the valley of the River Avon.

The local character of different areas is often influenced by the underlying rocks. For example Malvern Stone, used in walls and buildings in the area, was quarried from the Malvern Hills. The honey coloured stone buildings of the Broadway and Bredon areas are built of Jurassic Limestone, dug from the nearby hills.

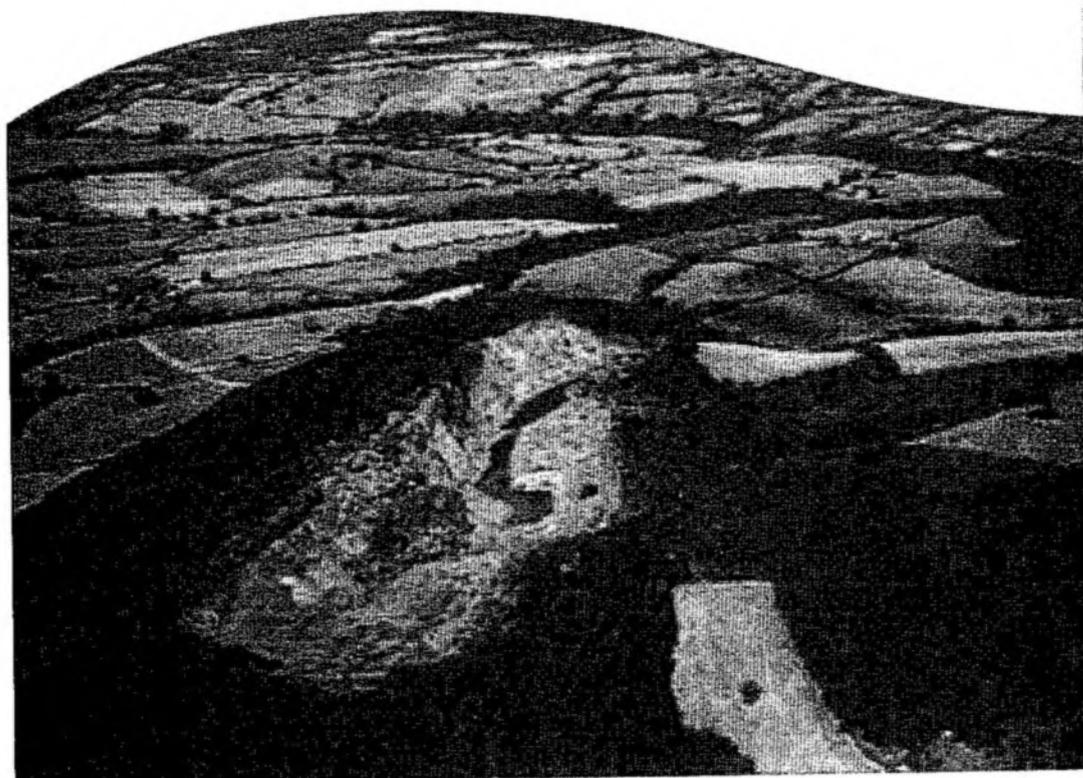
Geodiversity and Nature

Geodiversity includes soils, which directly influence the type and location of habitats and the species which thrive in these habitats. For example, red sandstones break down to give sandy, acidic, well-drained soils. These soils can give rise to areas of scrub or heathland, for example around Kidderminster. Lime-rich soils, with areas of calcareous grassland, have developed on the limestones underlying Bredon Hill and the top of the Broadway escarpment.

Geodiversity and Climate Change

Understanding how geodiversity influences landscape, habitats and species, is essential to understanding how biodiversity and landscape may alter as a result of present and future climate change. In order to do this, we need an up to date and accurate picture of geodiversity in the county - an audit of geology, soils, rivers and unconsolidated materials will help to achieve this.

Understanding past and present natural processes and features can also help identify what has happened to the environment of Worcestershire in the past, and what may happen to the environment in the future. This is crucial in assisting wildlife and people to adapt to the effects of climate change.



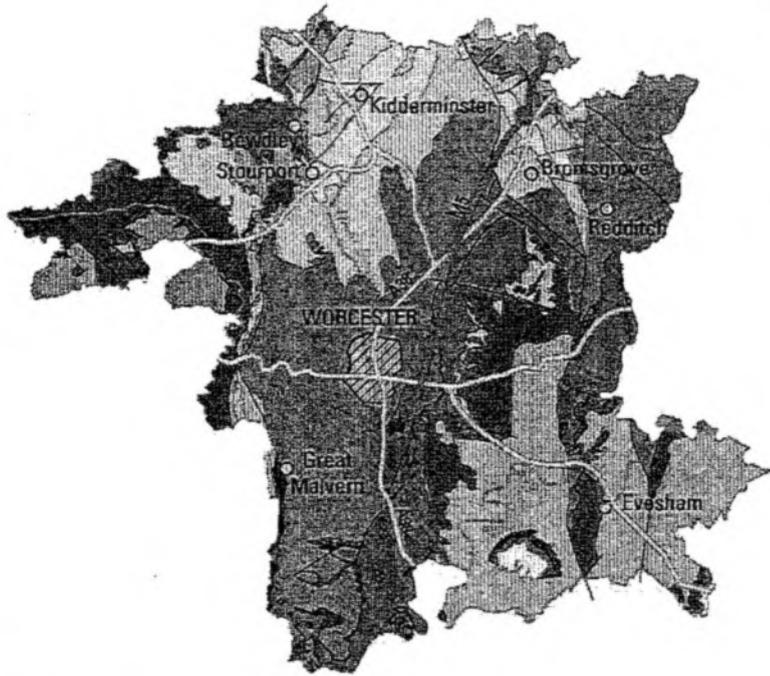
Top picture: Blackstone Rock, Bewdley. A former hermitage carved into the large Permian red sandstone cliff.

Above: Shelsley Beauchamp Church. The Nave is built out of Devonian (Old) Red Sandstone. The tower is built of more brightly coloured and younger Triassic (New) Red Sandstone.

Left: Shavers End Quarry, Abberley Hills. A former aggregates quarry exposing steeply dipping Silurian limestones and shales, with red mudstones giving rise to red soils in the distance.

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GEOLOGY MAP OF WORCESTERSHIRE



For further information contact:

The Worcestershire Geodiversity Partnership, H&W EHT, Geological Records Centre, University of Worcester, Worcester, WR2 6AJ.

Tel: 01905 855184 Fax: 01905 855132 e-mail eht@worc.ac.uk

More details and updates will be found on the website: www.EarthHeritageTrust.org

JURASSIC (200-145ma)

- Inferior Oolite Group
- Whidby Mudstone Formation
- Dyrham Formation and Marlstone Rock Formation
- Charmouth Mudstone Formation
- Blue Lias Formation

TRIASSIC (251-200ma)

- Penarth Group
- Branscombe Mudstone Formation and Blue Anchor Formation
- Arden Sandstone Formation
- Sidmouth Mudstone Formation
- Bromsgrove Sandstone Formation
- Wildmoor Sandstone Formation
- Kidderminster Formation

PERMIAN (299-251ma)

- Bridgnorth Sandstone Formation
- Clent Formation and Hatfield Braccia Formation

CARBONIFEROUS (353-298ma)

- Salop Formation
- Halesowen Formation
- Etruria Formation
- Pennine Lower Coal Measures Formation

DEVONIAN (418-359ma)

- St Maughans Formation

SILURIAN (444-416ma)

- Raglan Mudstone Formation
- Ludlow
- Wenlock
- May Hill Sandstone Group

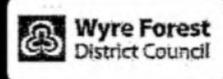
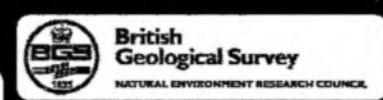
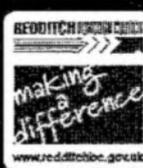
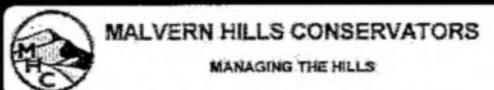
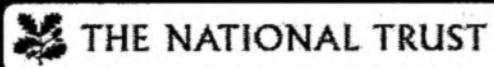
ORDOVICIAN (488-444ma)

- Lickey Quartzite Formation
- Barnet Green Volcanic Formation

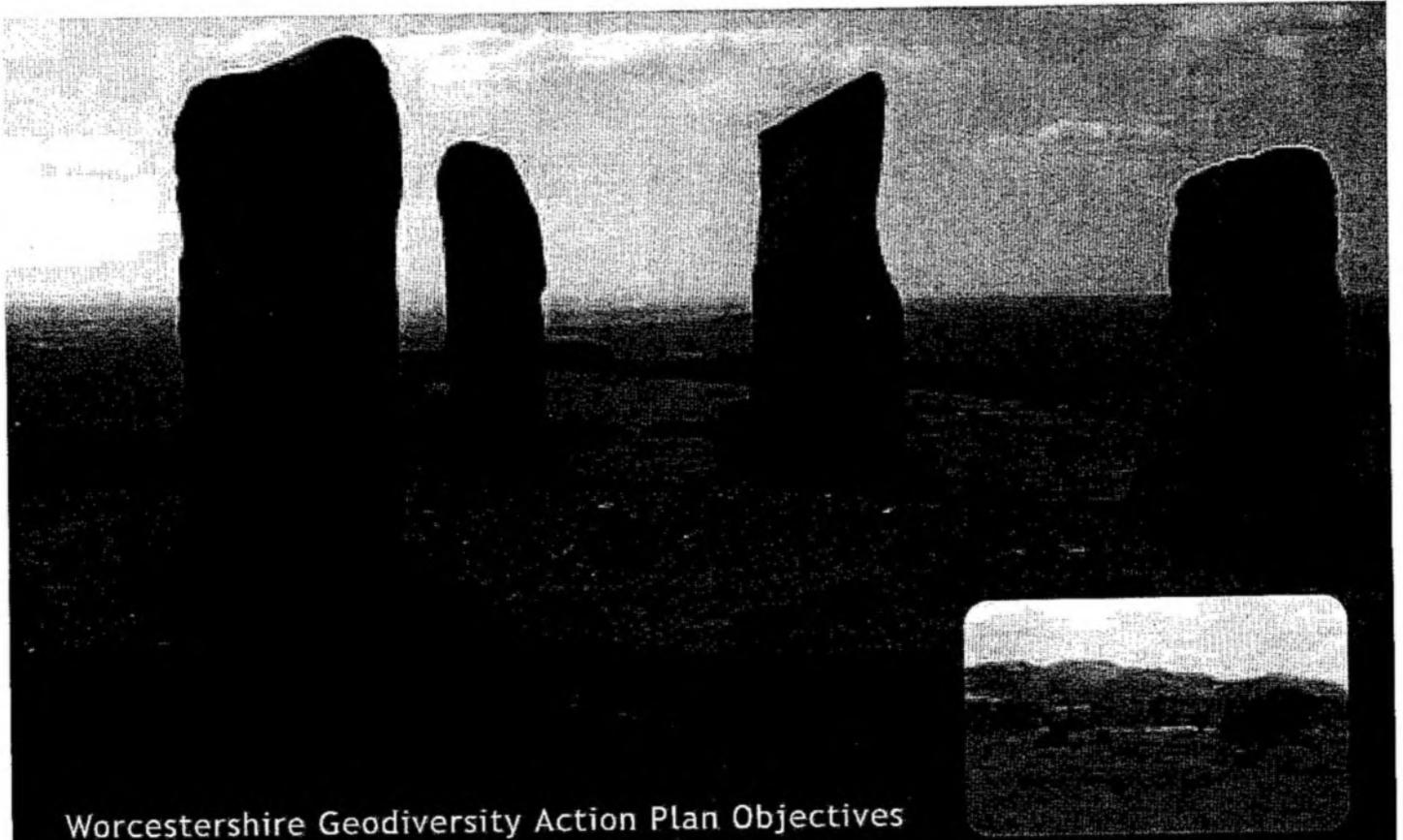
PRECAMBRIAN (before 542ma)

- Warren House Formation
- Malverns Complex

(Where ma is millions of years before the present)



Supported through Defra's Aggregates Levy Sustainability Fund



Worcestershire Geodiversity Action Plan Objectives

- Objective 1: Audit and record all geodiversity resources.
- Objective 2: Increase awareness, understanding and appreciation of the county's geodiversity.
- Objective 3: Ensure that geodiversity is identified and included in regional and local strategies, plans and policies.
- Objective 4: Provide guidance and support to those dealing with geodiversity, e.g. local authorities, landowners, organisations and individuals.
- Objective 5: Protect, conserve and enhance geodiversity resources.
- Objective 6: Further the opportunities for business involvement in geotourism and geodiversity.
- Objective 7: Improve and sustain the links between geodiversity, biodiversity, archaeology and landscape.
- Objective 8: Secure the continuity, sustainability and effectiveness of the GAP process and geoconservation in Worcestershire.



Main picture: Four Stones, Clent Hills. Erected in the 18th century by Lord Lyttleton, supposedly to irritate a nearby landowner, the Earl of Dudley. They are not built of the rock that makes up the Hills (the Clent Formation). Instead, they are made of a rock found at the base of the Hills; the Kidderminster Formation.

Above: Castlemorton Common. The poor soil here is underlain by gravels washed down off the Malvern Hills during the last ice age. The spectacular ridges of the Malvern Hills are made of resistant rock, formed deep in the Earth's crust around 700 million years ago.

Below: Broadway Quarry. An aggregates and building stone quarry, revealing distortion of Jurassic limestone.



A Geodiversity Action Plan (GAP) for Worcestershire



Martley. Brightly coloured orange-red sandstones of Triassic age.

This Plan identifies some of the objectives and actions to provide long term and sustainable support for the conservation of geodiversity within Worcestershire. It is not meant to be an exclusive list and it is hoped the Plan will evolve and grow. It aspires to be an incentive for interested groups and individuals to get involved and take action to

better understand and conserve the wonderful environment of Worcestershire.

The Aim of the Plan is to make a contribution to Worcestershire's environment and quality of life through education, conservation, enhancement, management and promotion of the county's geodiversity.

Objective 1: Audit and record all geodiversity resources

ACTION STATUS

Priority work/ongoing 

Action underway 

Action to be undertaken 

ACTION

ACTION STATUS

Support the work of the Geological Records Centre and ensure data is maintained and updated.



Carry out an audit of knowledge, information, materials and skills relating to geodiversity within the county.



Carry out an audit of the geological, fluvial, glacial, soil and natural landscape features.



Identify and record all sources of locally important building stone, and seek to safeguard them within the planning system.



Assemble a rock, mineral and fossil reference collection of the county.



Publish the audit of geodiversity within five years.



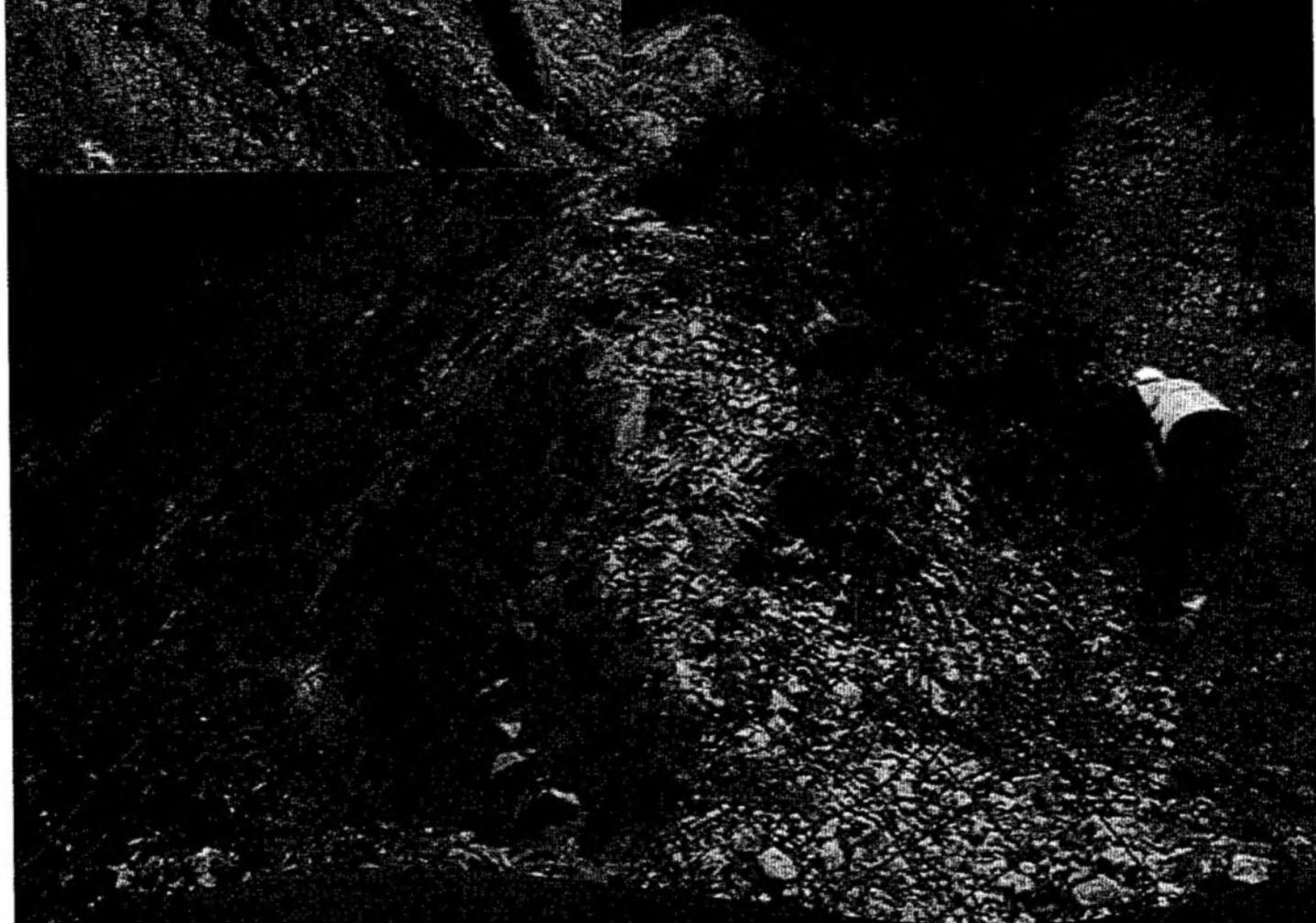
More details about the actions and the annual targets set to achieve them can be found at:
www.EarthHeritageTrust.org and www.ukbap-reporting.org.uk

Objective 1: Audit and record all geodiversity resources

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Left: Studying exposures at Waresley Quarry, Hartlebury. Waresley Quarry is one of a number of quarries around Hartlebury that exposes the Triassic age (251-199 million years old) Mercia Mudstone Group. This rock is extracted from the quarries for brickmaking. Waresley Quarry has the best exposure anywhere in the county of veins of the mineral gypsum.



Below: Examining dipping rock, Lickey Hills. The Lickey Hills are composed of quartzite, a hard, resistant rock made almost entirely out of the mineral quartz. The rock layers, although laid down horizontally in a shallow sea, have been tilted due to ancient earth movements, so that they now dip at a steep angle. The geologist is measuring the angle of this dip.

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Objective 2: Increase awareness, understanding and appreciation of the county's geodiversity

ACTION STATUS

Priority work/ongoing 

Action underway 

Action to be undertaken 

ACTION

ACTION STATUS

Carry out a programme of geodiversity lectures, walks, talks and fieldtrips for all. Undertake at least four events per year.

Improve online geodiversity information on the Earth Heritage Trust, West Midlands Geodiversity Partnership and Abberley and Malvern Hills Geopark websites.

Raise awareness of the Earth Heritage Trust activities through participation in at least five festivals, shows and events per year.

Identify local community groups and encourage their participation in geodiversity programmes, such as site conservation work.

Run and enhance Rock and Fossil Roadshows (e.g. as part of the Annual Seed Festival in the Wyre Forest for 2009-10).

Working with the owners, encourage the use of Worcestershire sites and specimens for educational purposes, such as the 'Champions' Project sites and museum collections.

Work with universities to develop suitable geodiversity research projects within the county.

Produce, maintain and publicise a list of all formal and informal geodiversity courses in the county.

Promote educational opportunities by providing geodiversity information to schools and colleges, identifying safe and accessible sites for fieldtrips and producing education packs.

Support the development of a permanent natural history display of the county.

More details about the actions and the annual targets set to achieve them can be found at:
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Objective 2: Increase awareness, understanding and appreciation of the county's geodiversity

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Left: **Rock and Fossil Roadshow, Bewdley.** Rock and Fossil Roadshows are organised for schools, family groups or festivals. Children (and adults alike!) enjoy a variety of activities, which explain geology and past environments. These include making a fossil cast, recreating an ancient underwater landscape and finding out about different types of rocks, fossils and minerals.



Below: **Green Festival, Clent Hills.** The Earth Heritage Trust is invited to take part in a number of events every year. These are used to promote the work of the organisation and to raise awareness of the wonderful and important geodiversity of the county.

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Objective 3: Ensure that geodiversity is identified and included in regional and local strategies, plans and policies

ACTION STATUS

Priority work/ongoing 

Action underway 

Action to be undertaken 

ACTION

ACTION STATUS

Create a mechanism for all Local Authorities to regularly update data on LGS/RIGS.

Ensure that geodiversity is considered in planning decisions, by making sure that consultation mechanisms are in place.

Ensure that geodiversity is included in all relevant regional and local strategies.

Respond to Local Authorities and other bodies in order to influence consultations in favour of geodiversity conservation policies.

Support and engage with other geodiversity and geoconservation organisations e.g. the British Geological Survey, the Geology Trusts, the West Midlands Geodiversity Partnership and UKRIGS.

Provide input, where appropriate, to management plans of organisations such as AONBs, the Countryside Service, the Forestry Commission, Geoparks, the Malvern Hills Conservators and the National Trust.

Ensure that geodiversity is included in and remains a conservation priority within new and future revisions of Supplementary Planning Documents.

Key:

AONB Area of Outstanding Natural Beauty

LGS Local Geological Site (formerly known as RIGS)

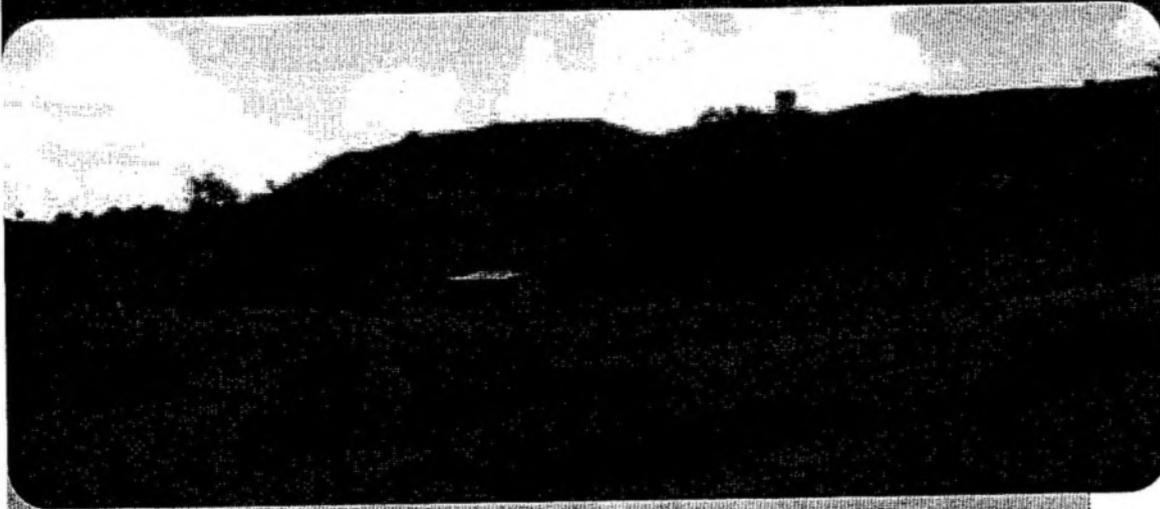
RIGS Regionally Important Geological/Geomorphological Site

UKRIGS The Association of UK RIGS Groups

More details about the actions and the annual targets set to achieve them can be found at:
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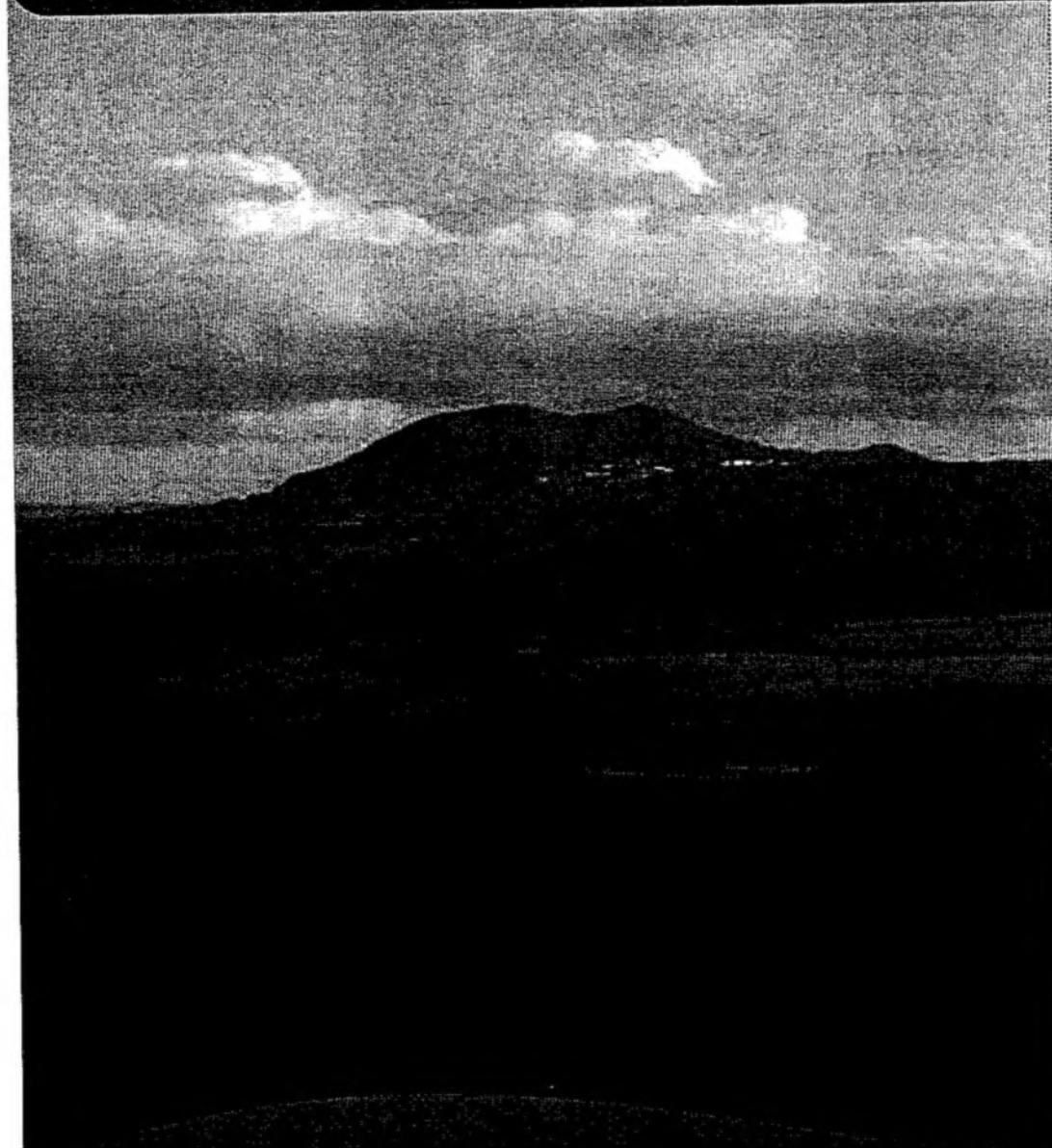
Objective 3: Ensure that geodiversity is identified and included in regional and local strategies, plans and policies

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Left: Looking towards Parsons' Folly, Bredon Hill. Bredon Hill marks the edge of the Cotswold

Hills Area of Outstanding Natural Beauty (AONB). An AONB is an area designated as 'a precious landscape whose distinctive character and natural beauty are so outstanding that it is in the nation's interest to safeguard them'. This natural beauty includes all geodiversity, biodiversity and human influences on the landscape.



Left: View of West Malvern and the Malvern Hills. The Malvern Hills are the dominant feature in the west of the county. They fall within the Malvern Hills AONB, which, despite being one of the smallest in the country, has a wide variety of landscapes. Each landscape has been shaped on the surface by biological and human influences, which in turn have been strongly influenced by the considerable diversity of rocks and soils occurring within the AONB.

More details about the actions and the annual targets set to achieve them can be found at:
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Objective 4: Provide guidance and support to those dealing with geodiversity, e.g. local authorities, landowners, organisations and individuals

ACTION STATUS

Priority work/ongoing 

Action underway 

Action to be undertaken 

ACTION

ACTION STATUS

Contact and inform landowners regarding LGS/RIGS and other important geodiversity features in their area.

Obtain resources to assist in the reporting on National Indicator 197.

Provide advice and engage with planners, landowners, etc. in relation to geodiversity.

Assist the County Council in the production of relevant Technical Research Papers and any future relevant environmental documents.

Produce a Code of Conduct for visiting public and privately owned geodiversity sites.

Discuss the potential for Service Level Agreements between Local Authorities and the Earth Heritage Trust, in order to supply geodiversity information to assist in policy decision making on the natural environment.

Produce a geodiversity alerts map for the county.

Provide workshops on the natural environment (which includes biodiversity and geodiversity) for planners and council elected members.

Key:

AONB Area of Outstanding Natural Beauty

LGS Local Geological Site (formerly known as RIGS)

RIGS Regionally Important Geological/Geomorphological Site

More details about the actions and the annual targets set to achieve them can be found at:
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Objective 4: Provide guidance and support to those dealing with geodiversity, e.g. local authorities, landowners, organisations and individuals

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Right: Southstone Rock, Teme Valley. This impressive cliff face and former hermitage is made out of tufa. The deposit forms when groundwater, saturated with calcium carbonate, comes to the surface as a spring. On contact with the air, the calcium carbonate precipitates out. Various plants and creatures become trapped in this rapidly forming deposit. This has enabled scientists to date the formation of the oldest parts of the cliff to 6700 years ago.

Below: Dowles Brook, Wyre Forest. Dowles Brook flows through a steep-side valley in the middle of the Wyre Forest, cutting down into Carboniferous age (359-299 million years old) rock. An initial study to classify Worcestershire's rivers has identified the brook as one of the most natural watercourses in the county, i.e. there is little human modification along its course.



More details about the actions and the annual targets set to achieve them can be found at:
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Objective 5: Protect, conserve and enhance geodiversity resources

ACTION STATUS

Priority work/ongoing 

Action underway 

Action to be undertaken 

ACTION

ACTION STATUS

Develop a programme for the regular condition monitoring of LGS/RIGS.

Identify, survey and designate potential LGS/RIGS, including those recorded in 2008.

Where possible, work with landowners to develop and implement management strategies for LGS/RIGS.

Seek opportunities to enhance geodiversity sites and resources through project work, e.g. the 'Champions' Project.

Work with quarry operators to include geological and biological conservation in quarry restoration plans.

Assist in the monitoring and management of all geological SSSIs within the county, to help achieve the 95% Public Service Agreement by 2010.

Encourage the creation of new geodiversity resources, e.g. the retention of features during road improvements and site developments.

Key:

- LGS Local Geological Site (formerly known as RIGS)
- RIGS Regionally Important Geological/Geomorphological Site
- SSSI Site of Special Scientific Interest

More details about the actions and the annual targets set to achieve them can be found at:
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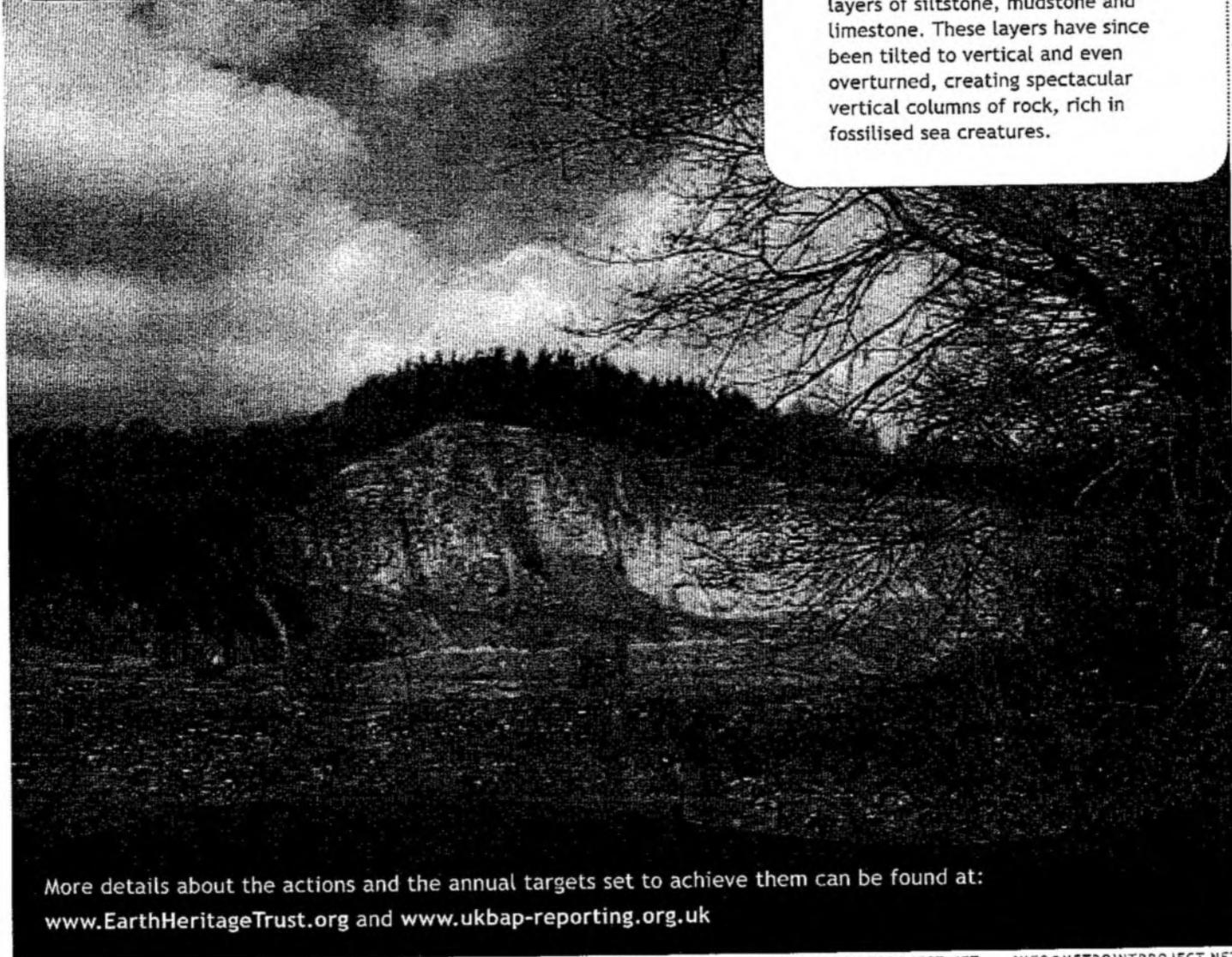
Objective 5: Protect, conserve and enhance geodiversity resources

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Left: **Burcot Lane Cutting SSSI**. The road cutting reveals the unconformable contact between the Triassic age (251-199 million years old) Bromsgrove Sandstone and Wildmoor Sandstone Formations. Work undertaken in 2001-02 removed vegetation which had covered the cutting. This enabled a nationally protected feature to be exposed once more.

Below: **Woodbury Quarry SSSI**. This huge quarry shows a continuous sequence through Ludlow rocks, which form part of the Silurian Period (444-416 million years old). During this time, Worcestershire was under a warm, tropical sea. Fluctuations in sea level allowed for the deposition of layers of siltstone, mudstone and limestone. These layers have since been tilted to vertical and even overturned, creating spectacular vertical columns of rock, rich in fossilised sea creatures.



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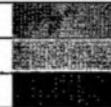
Objective 6: Further the opportunities for business involvement in geotourism and geodiversity

ACTION STATUS

Priority work/ongoing

Action underway

Action to be undertaken



ACTION

ACTION STATUS

Support the work of the Abberley and Malvern Hills Geopark in order to promote geodiversity.



Continue to promote geology and landscape trail guides and other geodiversity literature to visitors through magazine articles and online information.



Ensure that geodiversity information is more widely available at visitor attractions such as the Arrow Valley Countryside Centre, museums, National Trust properties and the West Midlands Safari Park.



Identify businesses (such as quarry operators) with an interest in geodiversity, in order to involve them in the GAP.



Promote the Geopark Way (through such events as the Malvern Walking Festival 2009) and develop an annual Geopark Day event, in order to increase sustainable geotourism.



Carry out a feasibility study for the use of Broadway Quarry as an outdoor classroom/visitor facility.



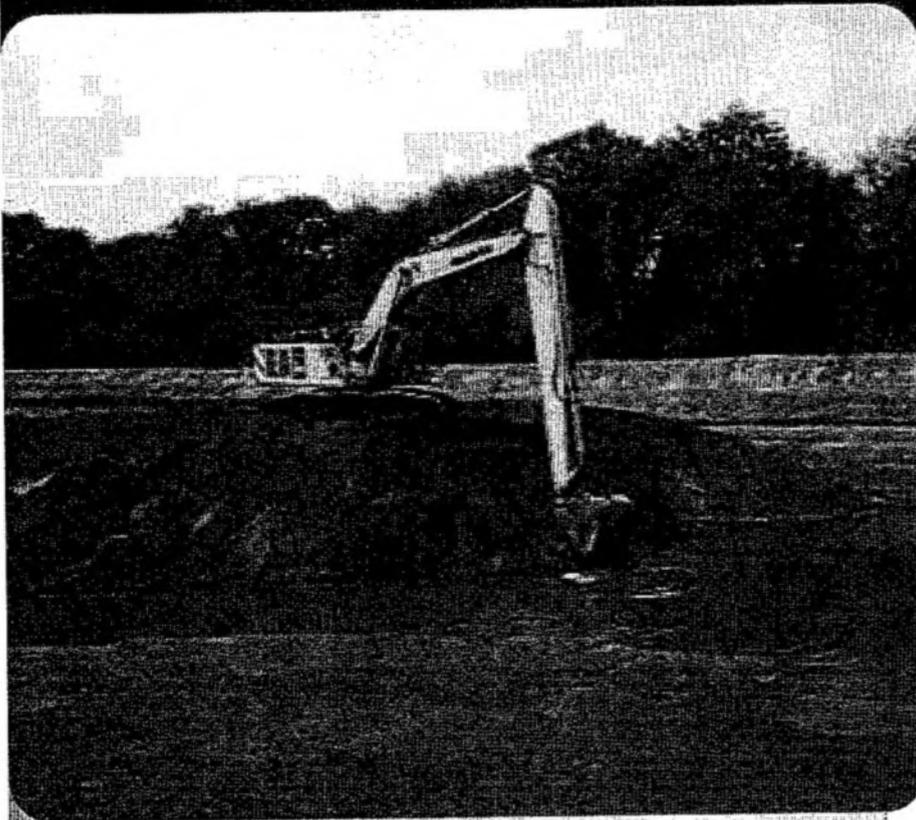
Key:

GAP Geodiversity Action Plan

More details about the actions and the annual targets set to achieve them can be found at:
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Objective 6: Further the opportunities for business involvement in geotourism and geodiversity

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Left: Ball Mill workings, Grimley. Sands and gravels, deposited by the River Severn 45,000-30,000 years ago, are being dug from this area. Studies of older workings at Grimley and elsewhere have led to a better understanding of the evolution of the River Severn over the last 100,000 years. Indeed, research suggests that a very similar biodiversity and landscape to that of the present day existed some 40,000 years ago. However, temperatures were colder than today.

Below: Broadway Quarry, Broadway Hill. Jurassic age (199-145 million years old) limestone is being extracted for aggregate and building stone at this site. The workings have revealed a number of interesting features, including the best and most complete exposure of a particular rock unit (the Harford Member) anywhere on the Cotswolds. Consequently, an exposure of this rock unit will be retained as part of the restoration of the quarry.



More details about the actions and the annual targets set to achieve them can be found at:
www.EarthHeritageTrust.org and www.ukbap-reporting.org.uk

Objective 7: Improve and sustain the links between geodiversity, biodiversity, archaeology and landscape

ACTION STATUS

Priority work/ongoing

Action underway

Action to be undertaken

ACTION

ACTION STATUS

Develop partnership working with the biodiversity and historic environment sectors (e.g. Wildlife Trust, Biodiversity Partnership, Historic Environment and Archaeology Service). To include joint conservation work, walks, talks and other collaborative projects.

As appropriate, give guidance and advice on the geodiversity of local nature reserves and archaeological sites.

Ensure that the GAP is entered onto BARS, in order to record progress and encourage the integration of the BAP and GAP.

Audit the county's Special Wildlife Sites for their geodiversity interest.

Contribute to the Landscape Character Roadshow.

Encourage the use of local stone in new constructions and in the repair of existing structures, by informing and influencing current and future planning policy.

Hold a conference on making the links between Geodiversity and the Historic Environment.

Improve the way in which the geological, biological and historic environment record centres share information, through creating a memorandum of understanding.

Provide geodiversity input to the County Landscapes for Living Map.

Key:

- BAP Biodiversity Action Plan
- BARS Biodiversity Action Reporting System
- GAP Geodiversity Action Plan

More details about the actions and the annual targets set to achieve them can be found at:
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Objective 7: Improve and sustain the links between geodiversity, biodiversity, archaeology and landscape

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Above: Worcester Cathedral. The cathedral was originally built of stone dug from Carboniferous age (359-299 million years old) rocks in the north of the county. It has been repaired with a variety of stone throughout the years. Both local stone and stone from other parts of the country have been used in the various phases of restoration. This has created an interesting mosaic of colours on both the exterior and interior of the building. Identification of building stones and their sources is an important consideration in the conservation and restoration of historic buildings.

Left: Foxglove growing on bare rock. The distribution of habitats and species is strongly dependant on the underlying geology and soil. For example sandstones give rise to sandy soil. With careful management, areas of heathland can be created and maintained on this type of soil. Limestone rock gives rise to areas of lime-loving flora. Understanding the distribution of certain rocks and soils will enable rare and endangered habitats to be created or successfully restored.

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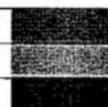
Objective 8: Secure the continuity, sustainability and effectiveness of the GAP process and geoconservation in Worcestershire

ACTION STATUS

Priority work/ongoing

Action underway

Action to be undertaken



ACTION

ACTION STATUS

Identify sources of funding for all the GAP actions.

Obtain funding for the Geological Records Centre.

Create a regular reporting procedure for the GAP.

Encourage ownership of the GAP by all stakeholders.

Identify new stakeholders in the GAP.

Organise a yearly event for key stakeholders.

Review the GAP after five years.

With assistance from key stakeholders, identify priority actions within the first year of the GAP.



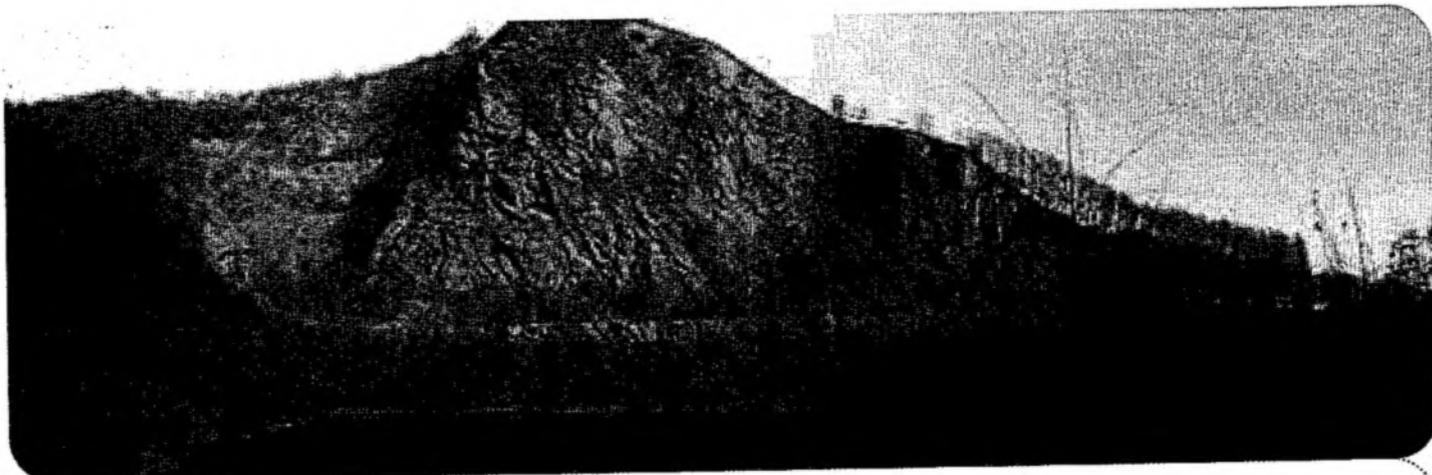
Key:

GAP Geodiversity Action Plan

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Objective 8: Secure the continuity, sustainability and effectiveness of the GAP process and geoconservation in Worcestershire

**GEODIVERSITY
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Above: Gullet Quarry, Malvern Hills. The quarry exposes 700 million year old rocks, formed deep inside the Earth. Due to their hard nature, these granitic rocks have been extensively quarried along the entire length of the Hills, both for roadstone and as a local building stone.

Below: View across to Abberley Clock Tower. In the distance stands the Bromyard Plateau, which is underlain by sandstones of Devonian age (416-359 million years old). In the foreground, the village of Abberley sits on sandstone rocks of Carboniferous age (359-299 million years old) whilst the Abberley Hills are made up of Silurian age (444-416 million years old) siltstones and limestones.



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