

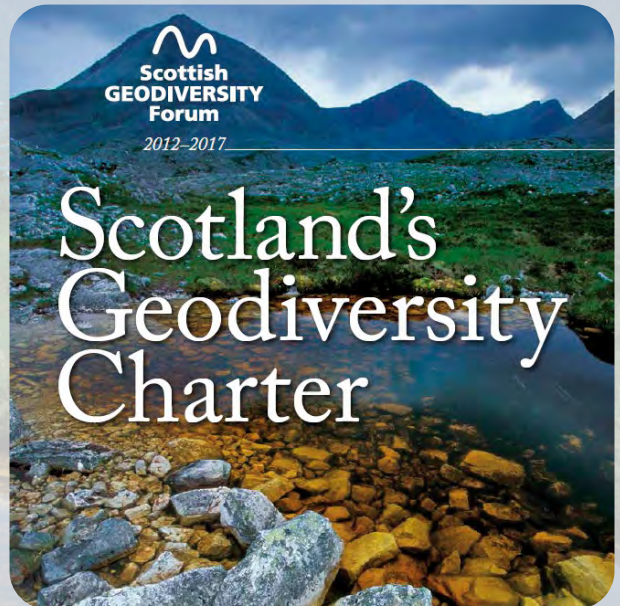
# Scotland's Geodiversity Charter

## Update Autumn 2013

Scotland's Geodiversity Charter, launched in June 2012 by the Scottish Geodiversity Forum, sets out a vision that Scotland's geodiversity is recognised as an integral and vital part of our environment, economy, heritage and future sustainable development, to be safeguarded and managed appropriately for this and future generations. The 48 signatory organisations of the Charter have committed to maintain and enhance Scotland's geodiversity and recognise the contribution it makes to many aspects of society.

This update reports on some of the initiatives taken forward in the first year of the Charter and looks at ways in which signatories can work together to implement the Charter. Certainly the Charter has attracted attention internationally: we were delighted to learn that the Forum and our Charter are the UK nomination for the UNESCO Sultan Qaboos Prize for Environmental Preservation 2013, and look forward with interest to the announcement of the prize winner during the World Science Forum in Rio de Janeiro, Brazil in November. Another measure of the importance of the Charter is that recently an English Geodiversity Forum has been established, and England's Geodiversity Charter is in preparation.

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### **Scotland's Geodiversity Charter – realising opportunities for communities, the economy, conservation and tourism** **Tuesday 17 December 2013**

This is the big Scottish geodiversity event of the year, a conference organised by the Forum and Scottish Natural Heritage to explore the benefits and opportunities created by the Charter. There will be a keynote address by TV presenter Iain Stewart, and discussion on a range of case studies from across Scotland that showcase what can be done to promote geodiversity. The afternoon sessions will offer a range of hands-on workshops exploring different aspects of site management and promotion, including management of active processes along the coast, interpretation that links with local industry and communities, and how sites can offer mutual benefits for biodiversity and geodiversity.

The conference costs only £35, with a 50% discount for students, volunteers and senior citizens. Find out more and book at [www.snh.gov.uk/news-and-events/events/event-details/?id=2254](http://www.snh.gov.uk/news-and-events/events/event-details/?id=2254)

### Scottish Natural Heritage **Sharing Good Practice** Sharing knowledge, skills and experience



### **Case study: Flood control and river restoration, Braid Burn, Edinburgh - City of Edinburgh Council / SEPA**

Prior to this restoration, carried out by AECOM and Carillion, on behalf of City of Edinburgh Council in 2008-2009, the burn was constrained in a narrow, brick-lined channel with little character, offering a very poor habitat and possessing low diversity in species. The aim of the restoration was to reintroduce diversity in the width, depth, flow rates and appearance of the burn, to allow natural morphological and ecological processes to take place following the initial construction. The restoration project involved recreating sinuous meanders, runs, riffles, shoals and gently sloping banks. A new wetland habitat was also created, along with a flood storage area, surrounded by clay embankments and sheet pile and concrete walls clad in stone recovered from the park's boundary wall. The overall aim was to reduce the risk of flooding to a 1 in 200 year event. During a 2010 flood event the project proved to successfully limit floodwaters to designated flood areas.



Wetland area at high flows, March 2010. ©AECOM

Further information:

[http://riverwiki.restorerivers.eu/wiki/index.php?title=Case\\_study%3ABraid\\_Burn\\_at\\_Inch\\_Park](http://riverwiki.restorerivers.eu/wiki/index.php?title=Case_study%3ABraid_Burn_at_Inch_Park)  
[www.therrc.co.uk/pdata/pdfs/p1530.pdf](http://www.therrc.co.uk/pdata/pdfs/p1530.pdf)

## Case study: A Geodiversity Audit of the City of Glasgow

A geodiversity audit of sites was commissioned by Glasgow City Council and carried out by the British Geological Survey in early 2013. A total of 26 sites were visited, and of these 20 were identified as potential Local Geodiversity Sites. Each site was assessed for its geoscientific merit, accessibility, cultural/heritage/economic importance, site fragility, and potential for enhancement. Many of the sites could be enhanced to encourage visitors and students to learn more about how the geology influences the form of the landscape, the economic and cultural history of the Glasgow area, and the ecological habitats of the urban woodlands, Local Nature Reserves and SSSIs.

The bedrock within the city of Glasgow is mainly of Carboniferous age (300-350 million years ago); the oldest being the Clyde Plateau Volcanic Formation lavas followed by a succession of coal bearing strata. There are also a number of features relating to Quaternary deposits and influence of the ice sheets. There are two SSSIs within Glasgow; Waulkmill Glen (Upper Limestone Formation) and the Fossil Grove (In situ petrified trees in the Limestone Coal Formation and doleritic intrusive sill). The majority of sites are along rivers such as the Kelvin and the White Cart, with some road cuttings and Quaternary features within park areas. The geodiversity audit is available from the Glasgow City Council website [www.glasgow.gov.uk/index.aspx?articleid=10826](http://www.glasgow.gov.uk/index.aspx?articleid=10826)



A locally well-known fossil tree stump in Househillwood Park in the south of Glasgow. It is not in situ but is adjacent to the Lovern Water, which has exposures of the Lower Limestone Formation.

## Geodiversity for Local Authorities

The Forum has published advice to encourage Local Authorities to implement the Geodiversity Charter. Six Local Authorities and both National Park Authorities in Scotland are already signatories, and we are keen to encourage better integration of geodiversity into existing activities and its recognition in development planning and policy. The advice details potential actions for different departments across Local Authorities, and includes links to case studies and further information and support.

The advice is available from our website [www.scottishgeodiversityforum.org](http://www.scottishgeodiversityforum.org)

## Case study: the Bedrock Walk – a journey through geological time

This walk from Dalwhinnie to Glen Nevis was part of the Royal Scottish Geographical Society's Stories in the Land project. We followed the route of the 'Thieves Road', used for centuries by cattle thieves, which traverses a geologically diverse landscape, where changes in the bedrock are reflected in the topography, soil, vegetation and land use.

The journey on foot over five days in July 2013 brought together a multi-disciplinary group of 10 participants: a geologist, a geographer, a writer, a poet, several artists, a few educators, and a group facilitator from SpeyGrian Education Trust. This collaborative venture was an opportunity to travel slowly together, engaging with the landscape at all scales, from crystals to mountains, with time to develop our personal reactions to the places we passed through and to share our different perspectives.

We were very lucky to have Simon Cuthbert as our 'resident' geologist on this journey. He brought the rocks and the landscape to life with genuine enthusiasm, and told geological stories in four dimensions to boggle our minds with the concepts of deep time and continental drift. It was challenging to think outwith the human timescale and to think of Scotland's landscape as dynamic and not fixed. This will I'm sure inspire new ways of thinking for all of us.

<http://storiesintheland.blogspot.co.uk>

Contributed by Jean Langhorne



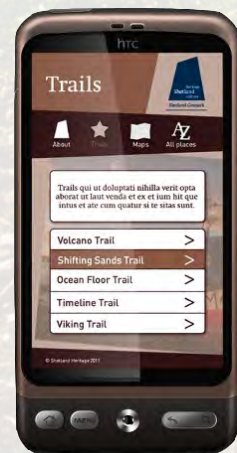
## Geopark Shetland continues to build on Global Geopark status

Geopark Shetland has secured four more years as a member of the Global Geoparks Network supported by UNESCO. Assessors who visited Shetland in August reported "a process of enormous development" over the past four years.

In September the UK National Commission to UNESCO published a report, which estimates the annual financial benefit of Global Geoparks to the UK as £18.84 million, stating that "The benefits of Global Geopark status arise from using the designation to increase tourism... and to attract funding for regional development"

Geopark Shetland has secured over £200,000 in funding since joining the European Geopark Network in 2009, and has seen growing increases in awareness of Geopark status: in 2012, 76% of people surveyed knew that Shetland was a Geopark and 11% of respondents from outside Shetland said the Geopark was "part of their reason for visiting the islands"

The Geopark recently developed Shetland's first tourism app for iPhone / Android, and is collaborating with Geoparks from Norway, Iceland and Canada to promote the North Atlantic Region (<http://northerngeoroutes.com>). It is currently working with Shetland Arts Development Agency ([www.shetlandarts.org](http://www.shetlandarts.org)) and Northern Focus Parkour ([www.northernfocusparkour.co.uk](http://www.northernfocusparkour.co.uk)) to help people enjoy Shetland's world class earth heritage in creative and active ways. Further news on facebook, twitter and [www.geoparkshetland.org.uk](http://www.geoparkshetland.org.uk)



## **Refreshed interpretive facility at Knockan Crag National Nature Reserve (NNR): making a classic area of Scottish geology accessible to the public**

Knockan Crag NNR, located 21 kilometres north of Ullapool, stands within an ancient and dramatic landscape. Within the North West Highlands Geopark and part of a National Scenic Area, the site is renowned internationally as one of the most important sites for understanding how the landscape of Northern Britain was formed.

The interpretive installations along trail routes at Knockan and within the centrepiece of the 'Rock Room', have been redeveloped by Scottish Natural Heritage and re-launched in May 2013. SNH's investment in this interpretive asset is in recognition of the benefits that Geoparks, and areas of classic geodiversity, can bring in terms of awareness raising, education and economic development through tourism.



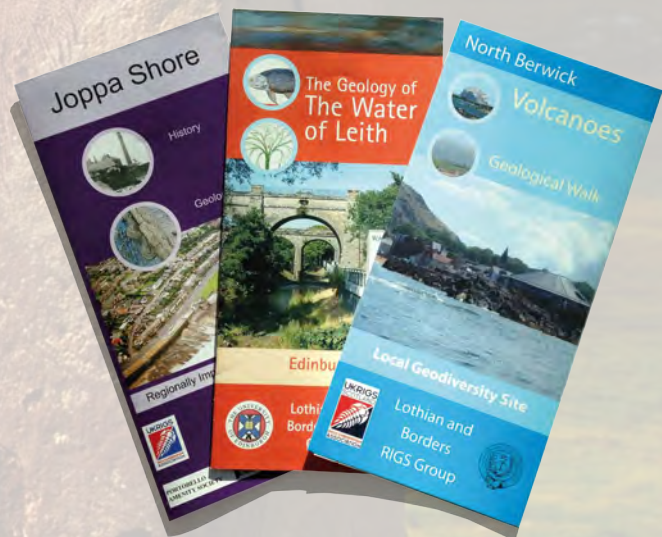
Image © Ewen Weatherspoon/SNH

## **Case study: Partnership working with local communities to develop geological trails**

Final year undergraduate students in the School of GeoSciences, University of Edinburgh have an option to complete an Outreach module. This course encourages development of communication skills and knowledge transfer to local partners including schools and community organisations. Several students have worked with Lothian and Borders GeoConservation, who help supervise the students' work, offering advice and support, and take the projects forward to printing and distribution. Several recent projects have been driven by individual student's own interests and to support this, links have been established with local community organisations such as the Esk Valley Trust. This helps to ensure that the final product is relevant for local people and will be valued and used.

Further information:

[www.drps.ed.ac.uk/12-13/dpt/cxeasc10058.htm](http://www.drps.ed.ac.uk/12-13/dpt/cxeasc10058.htm)  
[www.edinburghgeolsoc.org/r\\_download.html](http://www.edinburghgeolsoc.org/r_download.html)



## **Lochaber Geopark update**

Lochaber Geopark is proud to be a signatory of the Scottish Geodiversity Charter. Our business is the promotion and understanding of the geology, geodiversity and landscape of the whole of Lochaber, for locals and visitors alike, not just for the major tourist attractions like Ben Nevis and Glen Coe.

We recently finished a project to design and install twenty geology and landscape interpretation panels located around Lochaber, from the Ballachulish Slate Quarry to the Parallel Roads of Glen Roy, from Glen Nevis to the Isle of Eigg. We link the panels in a series of "Rock Routes", with a free leaflet showing all twenty panel locations. The comments and feedback from visitors and locals has been excellent.

The photograph shows one of our favourite panel localities, at the Ben Hiant Viewpoint in Ardnamurchan. Not only does it highlight great geology but has great views across to the Isle of Mull, Loch Sunart and the Morvern Peninsula. It is also great place to see eagles, red deer and other wildlife. The "Rock Route" leaflets are available from us, get in touch via

[www.lochabergeopark.org.uk](http://www.lochabergeopark.org.uk)



**Lochaber  
GEOPARK**



## Case study: Higher Geology Student Conference & Parliamentary Reception

Perth High School Higher Geology students were disappointed to hear that the subject was to be phased out by 2015. With the support of the Royal Scottish Geographical Society, GeoBus and the Scottish Geodiversity Forum, they organised a two-day conference in March 2013 for all pupils taking Higher Geology in Scotland to raise awareness of the value of studying earth sciences at school. Scotland Rocks attracted key employers and leading academics, including RSGS President and Forum Patron Prof Iain Stewart. The students played a key role in deciding the content and format of the conference. The programme included a field trip run by Dr Ruth Robinson and her Geobus team from the University of St Andrews, an evening reception at the RSGS headquarters and a full day of practical workshops. The conference finished with an expert panel answering the student's questions about our future energy challenges, including the risk of extracting oil, and the controversy of 'fracking'.



Local MSP Liz Smith invited the pupils to deliver a lunchtime presentation to MSPs in Holyrood, highlighting how they had benefited during their year of studying Higher Geology. Armed with data from the University of St Andrews, which showed a great deal of support particularly from Geography teachers, the students' enthusiastic presentation provoked a fascinating discussion amongst the cross-party audience about the value of Geology (and Earth Sciences) in the Scottish curriculum. This led to a meeting with the Science Minister and an opportunity to suggest the development of a new Higher in Earth Sciences.



## Recent additions boost the total number of Charter signatories to 48

Since the Charter was launched, the following organisations have signed up, agreeing to support the vision of the Charter and work towards relevant actions: Mineral Products Association, The Geological Society of London, Cairngorms National Park Authority, City of Edinburgh Council, The Highland Council, Loch Lomond & the Trossachs National Park, Perth and Kinross Council, University of Dundee, University of Edinburgh, University of Glasgow, West Lothian Council, Glenmore Lodge National Outdoor Training Centre, John Muir Trust, Kindrogan Field Centre (Field Studies Council), Mountain Training Scotland, Quaternary Research Association, Highland Geological Society, Our Dynamic Earth, GeoBus, Lochaber district U3A, Tayside Biodiversity Partnership, Geovertical.



The Geological Society

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THE UNIVERSITY of EDINBURGH

CAIRNGORMS  
NATIONAL PARK AUTHORITY

ÙGH DARRAS PAIRC NAISEANTA A' MHONAIDH RUAIDH

• EDINBURGH •  
THE CITY OF EDINBURGH COUNCIL



University of Glasgow



West Lothian Council



The Scottish Geodiversity Forum aims to promote Scotland's geodiversity, and seeks to widen the profile of geodiversity and influence national and local policies. It is the Scottish national forum for geoconservation groups, geoparks and other related organisations, and interested individuals. The Forum promotes the role and value of geodiversity in education, community involvement and health, the development of tourism and the wider economy.

The Forum is open to all organisations and individuals who are interested in promoting Scotland's geodiversity and the sharing of experience and good practice.

[www.scottishgeodiversityforum.org](http://www.scottishgeodiversityforum.org)