

Purpose and Scope

Geodiversity is an integral and vital part of our natural, cultural and built heritage. The Trust has a role in safeguarding and promoting geodiversity for existing and future generations.

This policy sets out the opportunities and threats around geodiversity, as well as the Trust's policy ambitions.

1. Introduction

Geodiversity refers to the range of geological elements found in Scotland (such as rocks, fossils, landscapes, soil and hydrological features) and the natural forces that have shaped our landscapes (which are known as geomorphological processes).

Scotland's geodiversity is an integral part of our natural, cultural and built heritage. Scotland's seas, landscapes and natural physical attributes are the result of millennia of geomorphological processes. These contribute to our sense of identity and physical and mental wellbeing, as well as being a huge tourism draw and supporting rural economies.

Scotland's built places are greatly influenced by our geodiversity, as the character of our traditional buildings and location of our settlements have borne out of what materials have been available and where people could most productively live. Geodiversity has also created the conditions for our gardens and designed landscapes.

As well as being influenced by geodiversity, Scotland has many geological sites and objects of cultural and natural heritage value (e.g. landscapes and fossils). These sites and objects comprise Scotland's geoheritage. Geoconservation is the protection and care of geoheritage and geodiversity¹.

2. Significance of Geodiversity on Trust Properties

Geodiversity and geoheritage play an important role in attracting visitors to Trust properties and we own many sites notable for their geodiversity. A total of 23 SSSIs, notified for geological features are found on Trust land, together with 32 Geological Conservation Review sites (Appendix 1).

¹ <http://press-files.anu.edu.au/downloads/press/p312491/pdf/CHAPTER18.pdf>

Places of significant geological interest include Staffa and Corrieshalloch National Nature Reserves which were established mainly for their geological features; Glencoe, the remains of an ancient super volcano; Threave gardens, which have an abundance of species that can grow due to the geology of the site; St Kilda, the geology of which supports one of the most important bird colonies in Europe; and Ben Lawers, where the combination of nutrient-rich soils and harsh montane climate have created unique assemblage of species and plant communities.

Trust properties, such as Hugh Miller’s Birthplace, Cottage and Museum and Torricon, are also associated with some of the great pioneers of geological science.

3. Policy context

The Trust is a signatory of [Scotland’s Geodiversity Charter](#). The Charter commits the Trust to maintaining, promoting and enhancing geodiversity as an integral part of Scotland’s natural heritage, as well as recognising the role it plays in combatting climate change and supporting biodiversity, public health and quality of life. The **Scottish Geology Trust** is responsible for Scotland’s Geology Charter.

The Trust is a founding member of the [Scottish Landscape Alliance](#), which promotes the importance of Scotland’s landscapes in relation to climate resilience, biodiversity enhancement, Scotland’s economy, and public health and wellbeing.

[Global Geoparks](#) are a UNESCO designation celebrating internationally significant geological heritage. Scotland has four geoparks.

Sites of Special Scientific Interest, National Scenic Areas, National Parks and Marine Protected Areas are a range of sites in Scotland, many of which have been designated in part because of their geology, geomorphology, geoheritage and/or geodiversity.

The Trust has a close relationship with the Friends of Hugh Miller. The chair of the Scottish Geology Trust sits on the Scottish Landscape Alliance.

4. Opportunities and challenges

Geoconservation

Our geological features are under threat from development activities, climate change and land-use change which may damage or obscure them. While some features are large and visible in a number of different places, others are small and known in only one location.

The Trust has a responsibility to conserve lands of historic or national interest or natural beauty and, “as regards lands for the preservation (so far as practicable) of their natural aspect and features”. Geological features underpin much of the natural beauty of Scotland and many of them are of national importance.

Education

Since 2015, geology has not been offered on the school curriculum at Higher or Advanced Higher levels, although some schools offer Geology A Level. Studying geology at Higher and Advanced Higher levels contributes to our understanding of the value and conservation of geodiversity and provides a direct route to studying geology at degree level (although Higher or Advanced Higher certificates are not a prerequisite to study geology at BA level).

Visitors, interpretation and access

Scotland has been at the forefront of the development of geological science and its geology is therefore of historic and academic interest. Through our properties, the Trust offers direct access to experience Scotland's geodiversity.

Landscape

Geomorphological processes have shaped the landforms in Scotland as well as the natural materials that occur in different places which in turn dictate the habitats, flora and fauna and wildlife that occur. Scotland's diverse landscapes provide us with a sense of place, community identity, and opportunity to enhance health and wellbeing. They provide the setting for many tourism activities such as walking, biking, sailing and skiing, and for much of our cultural and built heritage too. Landscape change must be positively guided to protect these benefits in order to preserve and promote cultural enjoyment, health and wellbeing and our tourism industry.

Climate change and ecosystem services

Geodiversity underpins ecosystem services such as the supply of fresh water, soil formation and the supply of clean air. Climate change is causing impacts such as increased soil erosion and major changes to both the hydrological and soil systems. These present a direct threat to Scotland's geodiversity. The Trust advocates for climate change resilience and mitigation across its sites and across Scotland.

Planning

Geodiversity does not have statutory protection in the planning system. There are nearly 900 Geological Conservation Review sites in Scotland and most have statutory protection through designation as geological features in Sites of Special Scientific Interest (SSSIs). However around 200 Geological Conservation Review sites sit outwith SSSIs.²

Local Geodiversity Sites are the most important places for geology, geomorphology and soils outside statutorily protected nature reserves and SSSIs. Many Local Authorities take Local Geodiversity Sites into account in their Local Development Plans but this is not mandatory.

² <https://www.nature.scot/professional-advice/protected-areas-and-species/protected-areas/local-designations/geological-conservation-review-sites>

Nature Conservation Marine Protected Areas are a designation which can protect geological features in the marine environment, however many MPAs allow extractive activities which damage the geodiversity of the seabed.

5. Policy Statement

Scotland's geodiversity underpins our cultural, natural and built heritage. Our geological elements and geomorphological processes have shaped our settlements, social history, landscapes, seas and identity.

Geodiversity plays a pivotal role in supporting Scotland to adapt to and mitigate the effects of climate change. It is crucial for biodiversity, quality of life and fundamentally supports ecosystem services. However, it faces many challenges such as changes in land use, intensive agricultural production, climate change and unsustainable development.

Loss or degradation of geodiversity and geoheritage threatens the wellbeing of our heritage and our climate change and biodiversity ambitions. It can also result in significant economic and social costs.

To protect our unique geodiversity and geoheritage, the Trust will practice geoconservation techniques at its properties. We will continue to engage people through our interpretation programme so everyone in Scotland can experience and value our geodiversity and geoheritage.

The Trust will also campaign for increased conservation and protection of Scotland's geodiversity, including through advocating for strong landscape protection and recognition by raising awareness in public policy of the value of geodiversity in relation to climate change mitigation, biodiversity, landscape, tourism, economy, cultural identity and health and wellbeing.

6. Policy Implementation and guidance

The Trust will:

Public policy

- Protect our landscapes from degradation through influencing public policy as part of the Scottish Landscape Alliance
- Promote the importance of geodiversity through our work with the Scottish Landscape Alliance
- Raise awareness in public policy of the value of geodiversity in relation to climate change mitigation, biodiversity enhancement, landscape, tourism, Scotland's economy and the cultural identity and health of people.
- Campaign for increased conservation and protection of Scotland's geodiversity through the incorporation of protection in planning policy.

Geoconservation

- Manage the geodiversity in our care in line with our core principles of Conservation, Access, Enjoyment and Education
- Uphold the Scottish Geodiversity Charter.
- Adhere to and promote the Scottish Fossil Code, Scottish Outdoor Access Code, the Ethical Rock Collection Policy and the Scottish Core Code.
- As far as possible, adopt management practices that allow natural processes to occur and only intervene to prevent these when features of greater conservation value are under threat or where they are significantly outweighed by social or economic reasons.

Visitors and access

- Engage people to experience and value our geodiversity and geoheritage through including information on the geological interest of our properties on information boards, interpretation and property leaflets.
- Continue to engage with schools and schoolchildren to encourage them to learn about, experience and value geodiversity.
- Continue to support the Hugh Miller Writing Competition.

Research

- Good decision making necessitates having good information on the features affected by the decisions. The Trust will therefore compile the best information available on earth science features of its properties and, where this is deficient, will seek to ensure that better information is collected.
- The Trust will seek to promote geological research and will encourage others to undertake research on its properties provided this does not damage features of interest.
- Where geodiversity features are discovered through erosion or development work, the Trust will bring them to the attention of appropriate specialists to ensure that they are documented and evaluated.
- Where geological features are in danger of being lost through natural or other causes, the Trust will encourage their recording through scientific study.

7. Further information

Scotland's Geodiversity Charter

<https://scottishgeodiversityforum.files.wordpress.com/2019/06/scotlands-geodiversity-charter2018-2023.pdf>

Scottish Fossil Code <https://www.nature.scot/sites/default/files/2020-05/Scottish%20Fossil%20Code%20leaflet.pdf>

Scottish Core Code <https://www.nature.scot/landforms-and-geology/protecting-our-geodiversity/codes-researchers-and-collectors/scottish-core-code->

Ethical Rock Collection Policy <https://scotlandsgediversitycharter.org/charter/ethical-rock-collection/>

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Appendix 1 – notable geological features on Trust properties

Property	SSSI	GCR	Geology	Geomorphology
Balmacara	1	1	Moine Thrust, mylonites	
Ben Lawers	1	1	Dalradian sequence, Calc schists, Tay nappe	
Burg	1	2	Fossil tree/Tertiary lavas; Jurassic marine fossils, Planorbis	Cliffs, raised beach, caves
Canna	1	1	Tertiary igneous agglomerates/ conglomerates Compass Hill/Basalt	Raised beach, cliffs
Coireshalloch	1	1		Box canyon. Glacial meltwater channel displaying excellent series of stepped waterfalls & pools
Culzean	1	1	Andesite sills in Devonian sediments	Cliffs
Dollar Glen			Intrusions/Ochil fault relations	Gorge
Fair Isle	1	1	Devonian plant fossils - Svalbardia	Cliffs, high energy erosion
Falls of Glomach				Falls (Highest in Scotland)
Glencoe	2	8	Crater/Cauldron subsidence, Caledonian igneous	Fluvial landforms (Eas na Broige), Glacial features. Landslips, waterfalls, gorge
Glenfinnan			Metamorphic sequence	Emerged fjordic landscape
Goatfell			Granite batholith, HBF, etc. Links with Hutton	Landslip
Grey Mare's Tail	1	2	Dobb's Linn Stratotype locality - one of Britain's most important stratigraphic localities	Well developed landforms of glacial erosion & deposition; Hanging valley & river profile; Waterfall
Hugh Miller's Cottage			Cultural	
Iona			Lewisian, Marble quarry, Moine Thrust	Dunes
Killiecrankie				Gorge
Kintail		1	Lewisian sequence	Huge landslip, Fjordic coastline

Linn of Tummel		1	Quartzite, amphibolite junction	Falls
Mar Lodge	3	3		Periglacial features; river geomorphology; Britain's highest altitude plateau
Murray's Is	1		Caledonian Structures, Wenlock	
Rockcliffe			Granites, porphyritic dykes	
St Abb's	1	2	Andesitic lavas & tuffs (Devonian)	Coastal landforms
St Kilda	1	3	Tertiary volcanic crater, Palynological sequence	Cliffs, high energy erosion; Periglacial features, Submerged landforms
Staffa	1		Tertiary columnar basalt	Cliffs, Fingal's Cave
Torridon	3	3	Torridonian Sandstone, Lewisian/Laxfordian shear zones, Cambrian Stratigraphy	Glacial landforms - hummocky moraine; Landslips; Spectacular montane erosion
Unst	3	1	Ultra-basic, mineral development, ophiolites	Cliffs
Total	23	32		