Geodiversity of the Cairngorms National Park

H F Barron, M R Gillespie and J W Merritt

British Geological Survey Geology And Landscape Scotland Programme Open Report OR/10/019

Keywords: Cairngorms National Park, Landscape Character, Geology, Geomorphology

Front cover: Carn an t-Sabhail (1291 m) from the top of Coire Brochain, Braigh Riabhach, Cairngorm National Park. P689667.

Bibliographical reference

Barron, H F, Gillespie, M R & Merritt, J W 2011. Geodiversity of the Cairngorms National Park. British Geological Survey Open Report, OR/10/019. 43pp.

Copyright in materials derived from the British Geological Survey's work is owned by the Natural Environment Research Council (NERC) and/or the authority that commissioned the work. You may not copy or adapt this publication without first obtaining permission. Contact the BGS Intellectual Property Rights Section, British Geological Survey, Keyworth,

e-mail ipr@bgs.ac.uk. You may quote extracts of a reasonable length without prior permission, provided a full acknowledgement is given of the source of the extract.

Maps and diagrams in this book use topography based on Ordnance Survey mapping.

© NERC 2011. All rights reserved. Edinburgh, Scotland British Geological Survey 2011

The National Grid and other Ordnance Survey data are used with the permission of the Controller of Her Majesty's Stationery Office.

Foreword

This is the final report derived from a desk study by the British Geological Survey (BGS) working in collaboration with the Cairngorms National Park Authority (CNPA). The project was jointly funded by BGS and the CNPA.

Acknowledgements

The authors would like to thank Matthew Hawkins (CNPA) and David Stephenson (BGS) for their helpful comments and advice during this project.

Contents

Foreword

Acknowledgements

Summary

- 1 Introduction
- 1.1 The Cairngorms National Park
- 1.2 Cairngorms National Park Plan

2 Why geodiversity matters

3 Methodology

- 3.1 Literature and data review
- 3.2 Site database and GIS compilation
- 3.3 Selection of potential Local Geodiversity Sites for the CNP

4 Bedrock geodiversity of the Cairngorms National Park

- 4.1 Background
- 4.2 Recommended Bedrock geodiverstiy sites

5 Quaternary landforms and deposits of the Cairngorm National Park

- 5.1 Background
- 5.2 The landforms and deposits
- 5.3 Recommended Quaternary geodiversity sites

6 References

Tables

- Table 1 Geodiversity Site selection criteria Geoscientific Merit
- Table 2 Recommended Bedrock geodiversity sites
- Table 3 Recommended Quaternary geodiversity sites

Figures

- (Figure 1) Major stratigraphical and intrusive divisions in the bedrock geology of the CNP, and geological and chronological affiliations of proposed bedrock geodiversity sites.
- (Figure 2) Simplified bedrock geology of the Cairngorms National Park.
- (Figure 3) Bedrock geodiversity sites.
- (Figure 4) Simplified superficial deposits of the Cairngorms National Park.
- (Figure 5) Quaternary geodiversity sites.

(Front cover) Carn an t-Sabhail (1291 m) from the top of Coire Brochain, Braigh Riabhach, Cairngorm National Park. P689667.

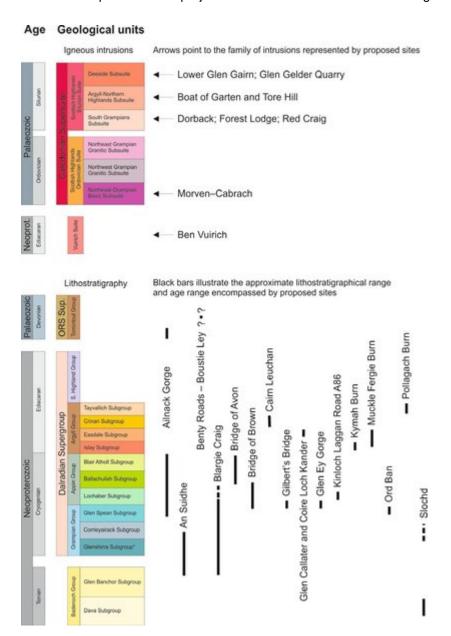
Summary

This report describes the results of a desk-based geodiversity audit of the Cairngorms National Park commissioned by the Cairngorms National Park Authority (CNPA) and jointly funded by the British Geological Survey (BGS). It represents a first pass at selecting the most important localities for Local Geodiversity Sites in the Cairngorms National Park, based on

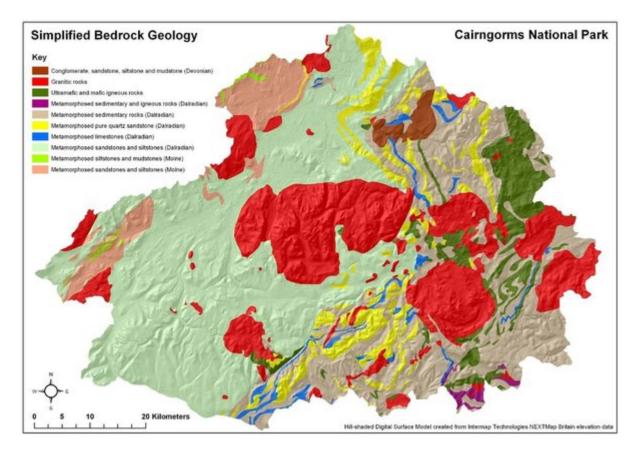
available information and local knowledge of BGS geologists.

Thirty-five bedrock geodiversity sites (including 23 Geological Conservation Review Sites) and fifty-four Quaternary sites (including 38 Geological Conservation Review Sites) are proposed as Park geodiversity sites. These sites should not be regarded as the final definitive list, but as a framework to which additional sites can be added as more information becomes available.

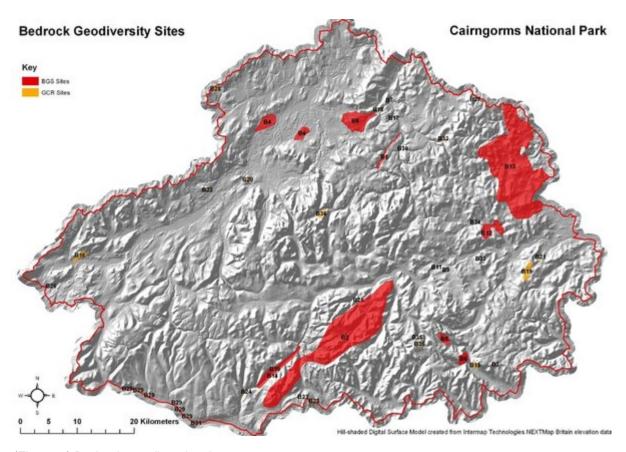
The main outputs from the project are GIS and database files of the geodiversity sites.



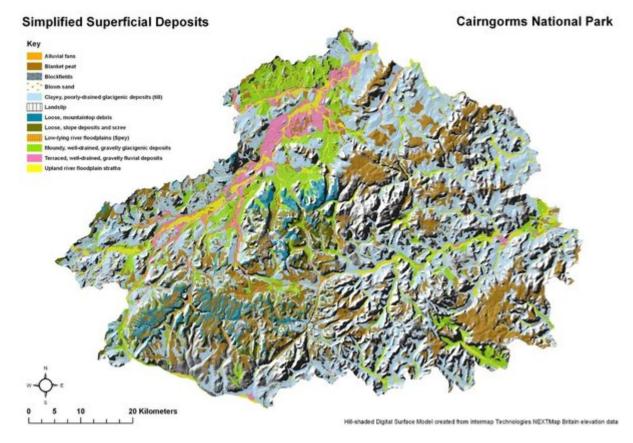
(Figure 1) Major stratigraphical and intrusive divisions in the bedrock geology of the CNP, and geological and chronological affiliations of proposed bedrock geodiversity sites.



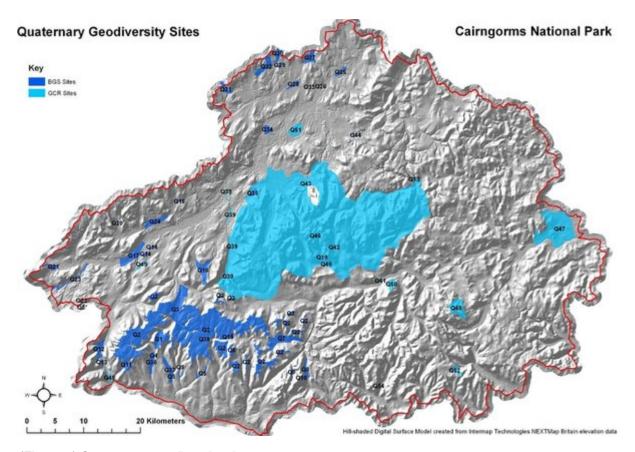
(Figure 2) Simplified bedrock geology of the Cairngorms National Park.



(Figure 3) Bedrock geodiversity sites.



(Figure 4) Simplified superficial deposits of the Cairngorms National Park.



(Figure 5) Quaternary geodiversity sites.



Geodiversity of the Cairngorms National Park

Geology and Landscape Scotland Programme Open Report OR/10/019



(Front cover) Carn an t-Sabhail (1291 m) from the top of Coire Brochain, Braigh Riabhach, Cairngorm National Park. P689667.