Exploring the landscape of The National Forest

A walkers' guide to the landscape and natural environment of The National Forest

by Keith Ambrose, Annette McGrath, Gill Weightman, Poul Strange, Sam Lattaway, Graham Lott, David Barrett, Stephen Dean and Peter Liddle

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.

Your use of any information provided by the British Geological Survey (BGS) is at your own risk. Neither BGS nor the Natural Environment Research Council gives any warranty, condition or representation as to the quality, accuracy or completeness of the information or its suitability for any use or purpose. All implied conditions relating to the quality or suitability of the information, and all liabilities arising from the supply of the information (including any liability arising in negligence) are excluded to the fullest extent permitted by law.

The National Grid and other Ordnance Survey data © Crown Copyright and database rights 2012. Ordnance Survey Licence No. 100021290

© NERC 2012. All rights reserved. British Geological Survey, Keyworth, Nicker Hill, Nottingham NG12 5GG Telephone 0115 936 3100

Bibliographic reference: Ambrose, K, Mcgrath, A, Weightman, G, Strange, P, Lattaway, S, Lott, G, Barrett, D, Dean, S, and Liddle, P. 2012. Exploring the landscape of The National Forest. A walkers' guide to the landscape and natural environment of The National Forest. Keyworth, Nottingham: British Geological Survey.

Cover photograph: Grand old oak tree at Calke Abbey, Derbyshire [SK 367 226]. Photo: Lesley Hextall, courtesy of the National Forest Company. Walking photograph © National Forest Company Underground gypsum mine photograph © BPB UK Ltd Staunton Harrold church photograph © Lesley Hextall, National Forest Company.

Contents

W	/elcome	to The	National	Forest
---	---------	--------	----------	--------

Geology

Minerals

Water resources

Coalfields

Iron ore

Aggregate industry

Leicestershire slate industry

Archaeology Historic buildings Brewery industry Biodiversity and landscape Walks Walk 1: A walk from The National Forest Waterside Centre to Acresford Walk 2: Black gold at the heart of The National Forest Walk 3: Breedon to Melbourne and Staunton Harold Walk 4: Broombriggs and Woodhouse Eaves Walk 5: Hanbury to Fauld crater Walk 6: Foremark Reservoir and Carver's Rocks Walk 7: The former coal mines of Swannington and Snibston Walk 8: A walk to examine the building stones of Burton upon Trent walk Walk 9: Thornton to Bagworth circular Walk 10: Ticknall to Staunton Harold Hall and back **The National Forest**

Welcome to the National Forest

Geological glossary

Pottery and clay

Brick and fireclay

Building stones

Lime

The National Forest offers a variety of landscape types, from extensive gently undulating clay lowlands dominated by mixed farming, to the hilly sandstone region in the central part. The coalfields, in Leicestershire and South Derbyshire, most notably demonstrate the great impact of man's influence on the landscape. In the east Charnwood Forest, with its rolling hills and craggy knolls, presents us with a unique landscape that has been moulded over 600 million years. The rocks here date back to the Precambrian and contain some of the oldest known fossils. This book and map will help you to explore the region: its geology, landscape, biodiversity, archaeology and industrial and cultural heritage through a series of walks. You will have a fascinating glimpse of past variations in climate that show how England has moved around on the surface of the Earth by plate tectonics. There is evidence of a turbulent geological history that has included volcanoes, mountains, major earthquakes, rainforests, rivers, lakes, seas, deserts and glaciers.

The book will also demonstrate how the geology of The National Forest has had a profound influence on the economy of the area, dating back over the centuries, with many industries largely dependent on the natural resources. Some are now no longer viable, such as coal mining, iron ore and lime, but others such as aggregate extraction, gypsum and brick clays, are still very prosperous. The effect of these industries has been to significantly change the landscape in many areas, most notably in the coalfields, but also the extensive aggregate extraction in Charnwood Forest.

Walking in The National Forest

We have selected walks from rights of way, mainly over easy terrain and use recognised footpaths or designated recreation areas. They will help you to see the geology and its relation to the biodiversity, archaeology, and cultural and industrial heritage of the Forest. Apart from in Charnwood Forest, there are few rock exposures.

When out walking, always take a map (Ordnance Survey 1:50 000 scale Landranger Sheets 128, 129, and 140, and 1:25 000 scale Explorer sheets, ADD 245, 246, 232 and 233); a compass or GPS might be useful. Wear sturdy outdoor footwear (some of the paths are very muddy in wet weather), and carry clothing to suit the time of year and the likelihood of changes in the weather. Remember that some of the walks can cross over, or follow, busy country roads. Always respect the Country Code and, if you have a dog, make sure it is on a lead. Finally, always remember:

'leave only footprints; take only photographs'

Useful information

How to get to The National Forest

The National Forest lies in western Leicestershire, south Derbyshire and eastern Staffordshire. The main north—south routes crossing the area are the M1 crossing the eastern part (exit at junctions 22 or 23), the A42 the central part (exit Junction 11 at the end of the M42, Measham or Ashby-de-la-Zouch) and the A38 in the western part (several exits between Burton upon Trent and Alrewas), making access by car very easy. The A6 also runs north—south just east of the Forest. The main east—west routes are the A50 just to the north of the Forest, and the A511 within the Forest.

There is a very good network of roads within The National Forest and good bus services. Railway stations at Burton upon Trent, Loughborough and Leicester also provide easy access to the Forest The main visitor centre for The National Forest is Conkers at Moira; other visitor centres include Rosliston Forestry Centre and Snibston Discovery Park at Coalville.

Tourist Information

Burton uponTrent Market Place, High Street, Burton upon Trent, DE14 1AH Tel: +44 (0)1283 508 000

Coalville Snibston Discovery Park, Ashby Road, Coalville, LE67 3LN Tel: +44 (0)1530 813 608

Ashby-de-la-Zouch North Street, Ashby-de-la-Zouch, LE65 1HU Tel: +44 (0)1530 411 767

Leicester 7/9 Every Street, Town Hall Square, Leicester, LE1 6AG Tel: +44 (0)116 299 8888

Loughborough Loughborough Town Hall, Market Place, Loughborough, LE11 3EB Tel: +44 (0)1509 218 113

Derby Assembly Rooms, Market Place, Derby, DE1 3AH Tel: +44 (0)1332 255802

Tamworth 29 Market Street, Tamworth, B79 7LR Tel: +44 (0)1827 709581/709618

Lichfield Lichfield Garrick, Castle Dyke, Lichfield, WS13 6HR Tel: +44 (0)1543 412112

In addition, information can be obtained from a number of websites including:

https://www.nationalforest.org/

www.landshapes.org

https://www.goleicestershire.com/

https://www.visitderbyshire.co.uk/

www.thisisstaffordshire.co.uk

www.visitheartofengland.com

www.information-britain.co.uk

www.aboutbritain.com/tourist-information-centres/leicestershire-tourist-informationcentres.

www.heritagebritain.com/county/ Leicestershire.html

https://www.bgs.ac.uk/

Further reading

For more detailed accounts of the geology of the area:

Geology of The Coalville District (2010). Compiled by Poul Strange, John Carney and Keith Ambrose. *Sheet Explanation of the British Geological Survey, Sheet 155.* ISBN 978-085272634-1.

Geology of The Loughborough District (2002). Compiled by John Carney, Keith Ambrose and Allan Brandon. *Sheet Explanation of the British Geological Survey, Sheet 141*. ISBN 0 85272 411 X.

Geology of the country between Loughborough, Burton and Derby (2001). Compiled by John Carney, Keith Ambrose and Allan Brandon. *Sheet Description of the British Geological Survey*, Sheet 141. ISBN 0 85272 388.

Geology of the Country around Coalville (1988). By Bernard Worssam and Robin Old. *Memoir of the British Geological Survey*, Sheet 155. ISBN 0 11 884398.

Geology of the country between Burton Upon Trent, Rugeley And Uttoxeter (1955). By Ian Stevenson and George Mitchel. *Memoir of the Geological Survey of Great Britain*, Sheet 140.

British Regional Geology: Central England. By Brian Haynes and Albert Horton. London HMSO for Institute of Geological Sciences. ISBN 011 8800884.

The Geology Of The East Midlands (1968). By Peter Sylvester-Bradley and Trevor Ford. (Leicester: Leicester University Press.) ISBN 7185 1072 0.

Coal mining

The Leicestershire And South Derbyshire Coalfield, 1200–1900 (1984). By Colin Owen, Moorland Publishing Co. Ltd. ISBN: 0 86190124 X.

Round and round a lot more coal still underground. The Collieries of the eastern basin of the Leicestershire/ Derbyshire Coalfield (2009). By Keith Gilliver, Gullavain Publishing.

There's still more coal in th'ole the collieries of the western basin of the Leicestershire Derbyshire Coalfield (2007). By Keith Gilliver, Gullavain Publishing.

Getting the coal. impressions of a twentieth century mining community (1992). By Jeanne Carswell and Tracey Roberts. The Alden Press, Oxford. ISBN: 0 9515040 1 0.

Walking

Exploring the landscape of Charnwood Forest And Mountsorrel (2007). By Keith Ambrose. Published by the British Geological Survey.

Walking in Charnwood (1997). By Heather MacDermid. Published by Cordee. ISBN 1 871890 18 17.

A geological walk around Bradgate Park (2004). By Annette McGrath. Published by the British Geological Survey.

A geological walk around Cliffe Hill Quarry (2004). By Annette McGrath. Published by the British Geological Survey.

General

Heritage in the making. the national forest (2006). By James Parry. This book spans 10 000 years of the history of the landscape that became The National Forest, and also looks at the people who helped to create that landscape. Published by the National Forest Company.

Further information

The British Geological Survey, at Keyworth near Nottingham has a shop selling many geological publications, jewellery, rocks, minerals and fossils and various items manufactured in stone. The British Geological Survey have produced a map, booklet and DVD/video on the Geology of Charnwood Forest. This has been aimed at A Level students and can be obtained from the online shop at the BGS website, www. bgs.ac.uk.

There are two local geological societies that can provide information: the East Midlands Geological Society www.emgs.org.uk and the Leicester Literary and Philosophical Society www.le.ac.uk/litandphil. In addition, The Russell Society (www.russellsoc.org) organises visits to study and collect minerals, particularly those found in the quarries of Charnwood Forest. Information on The National Forest can be obtained from www.nationalforest.org.

Acknowledgements

This book and map have been produced by the British Geological Survey, funded by the Defra Aggregates Levy Sustainability Fund through the Minerals Industry Research Organisation (MIRO). The map was compiled and the book written by Keith Ambrose, Poul Strange and Graham Lott of the British Geological Survey, Annette McGrath and Sam Lattaway of The National Forest Company and by Gill Weightman (Weightman Associates), The archaeology was written by Peter Liddle (Leicestershire), Dave Barrett (Derbyshire) and Stephen Dean (Staffordshire). Caron Simpson, Bob Cooper and Tony Clifton are thanked for their cartographic input. Thanks also to Gill Weightman who tested the walks in addition to the authors. The book was edited by Joanna Thomas and John Carney of the British Geological Survey and designed by Amanda Hill.

Tom Hose kindly read through the final draft text and made numerous helpful comments.

The photographs are derived from a number of sources, mainly the British Geological Survey and The National Forest Company. Unless stated otherwise photographs are BGS © NERC. The National Railway museum is thanked for supplying a photograph; Noel Worley (British Gypsum) is thanked for supplying photographs and plan of the works of the Fauld mine; Tony Waltham is thanked for supplying a photograph of the Fauld crater. The Whitwick Historical Group is thanked for supplying a photograph of an old postcard from Whitwick Quarry; Aggregate Industries are thanked for supplying historical photographs of Bardon Hill Quarry from their archive at the quarry; Midland Quarry Products are thanked for supplying historical photographs from Old Cliffe Hill Quarry; UK Coal are thanked for supplying a historical photograph of Hick's Lodge opencast coal site; The National Brewery Centre in Burton upon Trent is thanked for supplying historical photographs from its archive.

Keith Ambrose, Poul Strange and Graham Lott published with permission of the Executive Director, British Geological Survey (NERC).

When you walk in The National Forest you will encounter a wide variety of landscapes. In the east are the uplands of Charnwood Forest with its craggy outcrops of ancient rocks, whereas farther west, younger rocks underlie a more gently undulating topography, dissected by valleys that include the River Trent and its tributaries.

This map and booklet shows you how the landscapes and natural resources of The National Forest have influenced human development from very early archaeological times through to the Industrial Revolution and the present day. Large areas were modified by activities such as mining that relied on the rich geological reserves, including coal, gypsum and hard-rock aggregate.

For everyone from the casual Sunday stroller to the keen hiker, the landscape of The National Forest is rich with stories to tell and explore. From the early signs of life on Earth through to the creation of a new forest in the 21st century, this book will unlock stories millions of years in the making. We hope you enjoy them.

ISBN 978-085272687-7

Figures

(Front cover). Cover photographs: Grand old oak tree at Calke Abbey, Derbyshire [SK 367 226]. Photo: Lesley Hextall, courtesy of the National Forest Company. Walking photograph © National Forest Company Underground gypsum mine photograph © BPB UK Ltd Staunton Harrold church photograph © Lesley Hextall, National Forest Company.

(Rear cover).

(Figure 1) Calke autumn colours. Photograph © Lesley Hextall, courtesy of NFC.



(Figure 1) Calke autumn colours. Photograph © Lesley Hextall, courtesy of NFC.