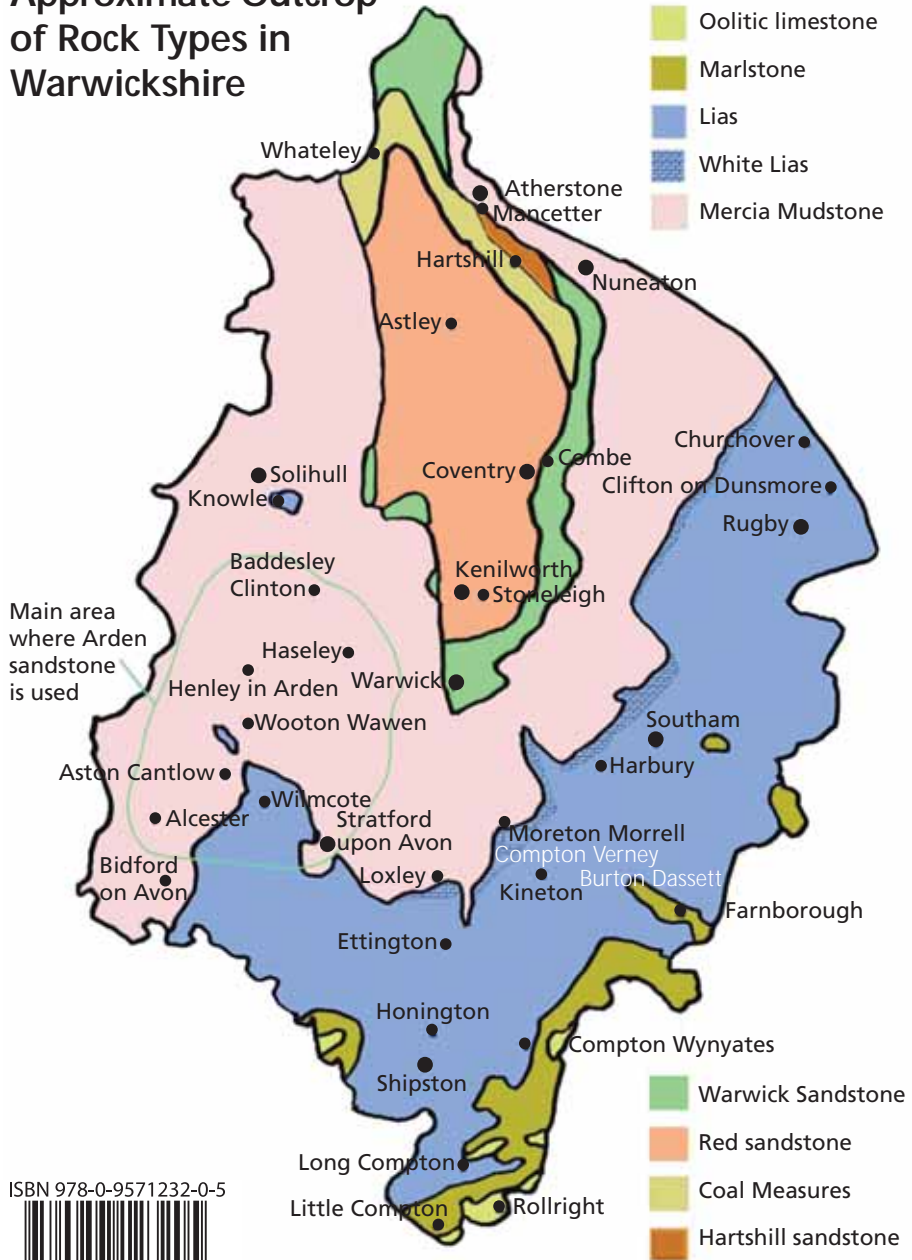


## Approximate Outcrop of Rock Types in Warwickshire



ISBN 978-0-9571232-0-5



9 780957 123205

A RAMBLER'S GUIDE TO BUILDING STONES IN WARWICKSHIRE

HUGH JONES

WGCG

Conserving Warwickshire's Geological Heritage



# A Ramblers' Guide to Building Stones in Warwickshire



Hugh Jones

Published by  
**Warwickshire Geological Conservation Group**  
 4 Priory Road  
 Kenilworth  
 CV8 1LL

*First published 2006*  
*Reprinted 2009*  
*Revised and republished by Warwickshire Geological Conservation Group 2011*

All rights reserved

Photograph of St John's church, Kenilworth (p.14) © Ian Fenwick  
 Photograph of Astley Castle (p.32) © Brian Ellis  
 Photograph of Compton Verney (p.34) © Nigel Harris  
 All other diagrams and photographs are © Hugh Jones

Text copyright © Hugh Jones

Designed by The Drawing Room, Warwick  
[www.drawingroom.uk.com](http://www.drawingroom.uk.com)

Printed by Panda Press  
[www.pandapress.net](http://www.pandapress.net)

ISBN 978-0-9571232-0-5

### Acknowledgements

I am grateful to Dr. Jon Radley of the County Museum in Warwick for commenting on a draft of this work. This publication has also benefitted greatly from the work which the author contributed to the English Heritage Strategic Stones Study.

The results of that study can be seen at  
[www.bgs.ac.uk/mineralsuk/mines/stones/EH\\_project.html](http://www.bgs.ac.uk/mineralsuk/mines/stones/EH_project.html)

Warwickshire Geological Conservation Group is a Registered Charity Number 1144717

## Contents

A Note on Terminology	4
Geology and Landscape	5-7
Early Materials	8-12
In the Beginning was Cob . . .	8-9
. . . and then Brick	10
Quarrying for Building Stone	11-12
Cambrian Sandstone	13-14
Carboniferous and Permian Sandstones	15-20
Carboniferous Sandstone at Mancetter	15-16
Permian Sandstone in Kenilworth	17-20
Triassic Sandstones	21-32
Warwick or Bromsgrove Sandstone	21-23
Arden Sandstone	24-25
Building stones in Stratford upon Avon	26-27
Building stones in other common Warwickshire sandstones	28-32
Lias Building Stones	33-45
The White Lias	33-34
The Blue Lias	35-37
Buildings on the Lias	38-45
Middle Jurassic Building Stones	46-54
Marlstone Rock or Hornton Stone	46-49
Oolitic Limestone	50-52
Building Stones from the Ice Age	53-54
The Demise of Local Quarries	55
Glossary	56
Index of place names	57
Further reading	58

## A note on Terminology

In my text I use local names as far as possible for rocks in the county. Below is a table or 'stratigraphic column' which puts these rocks into their appropriate places in the wider geological time scale.

### Building Stones Found in Warwickshire

Date shown is in millions of years to the start of the period before the present time.

Period	Name	Local Name	Date (millions of years)
<b>Pleistocene</b>	Ice Age	'drift'	2.6
	Neogene		23
	Palaeogene		65
	Cretaceous	Chalk	145
<b>Jurassic</b>	Oolite	Cotswold stone	
	Marlstone Rock.Bed	Hornton Stone	
	Lias	Rugby Limestone	
		Wilmcote Limestone	200
<b>Triassic</b>	Langport Member	White Lias	
	Mercia Mudstone	brick clay and Arden Sandstone	
	Bromsgrove Sandstone	Warwick Sandstone	251
<b>Carboniferous and Permian</b>		Kenilworth and other red and grey sandstones	
	Coal Measures	Halesowen and Polesworth sandstones	345
	Devonian		416
	Silurian		444
<b>Ordovician</b>		'sill rock'	488
<b>Cambrian</b>		Hartshill Sandstone	542
Precambrian			

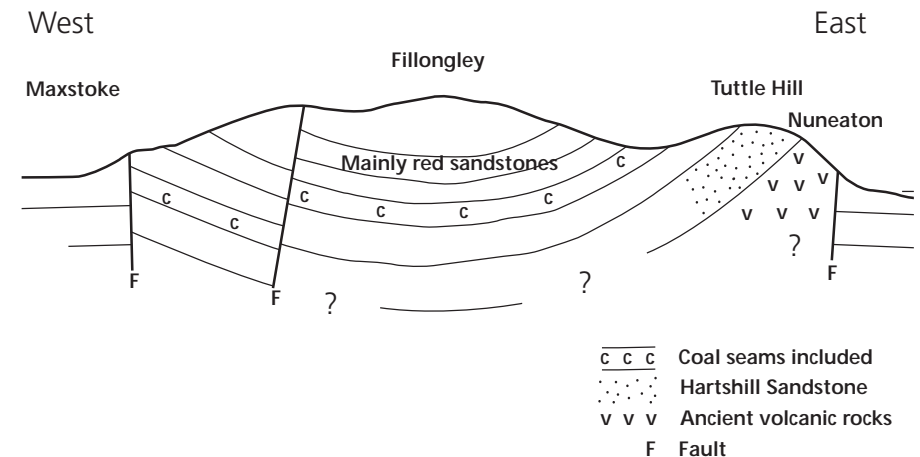
Periods shown in bold e.g. **Cambrian**, yield building stones in the County

## Geology and Landscape

The landscape in the south of Warwickshire is clearly dictated by the underlying geology which has also had a powerful influence on the choice of building stones available for our ancestors. On the back cover you will find a map of Warwickshire's geology.

North of Coventry the dominant geological feature is the coalfield. In general the red, brown and grey sandstones of this block are harder than the surrounding mudstones of the Triassic so they stand up as a lozenge of high ground from Kenilworth to Atherstone and Meriden to Nuneaton.

### Section across the Coventry Coalfield



This hilly area tapers away to the north and west of Atherstone, around Merevale, in a patch of delightful wooded countryside before giving place in a few more miles to the sprawling suburbs of Birmingham. Eastwards the high ground ends abruptly as the Nuneaton Ridge, formed by very hard Hartshill Sandstone, drops sharply on to a flat plain of Mercia Mudstone stretching away towards Leicester and Charnwood Forest. Mancetter, a location near Watling Street, is held by some to be the site of Boudicca's last stand against the Romans in AD61. The extreme north of the county, around Newton Regis, is another area of gently rolling hills, sometimes capped with Triassic sandstone and pitted with a few overgrown quarries.

There are very few old stone buildings in the 'north' apart from the churches. These are almost invariably built of one or more local sandstones put together in interesting patterns which must somehow reflect their complicated histories. I'm thinking of 'St. John the Baptist' church in Brinklow (right) as an especially fine example.



*St John the Baptist' church in Brinklow*

The south and east of the county is dominated by a series of escarpments and vales, the escarpments frequently being of limestone with the vales being formed in mudstones or shales. Moving from Leamington towards the eastern border with Northants we encounter first the White Lias limestone, which rises to c.120m around Harbury, and then the major feature of the Blue Lias with its large quarries, as at Long Itchington, exploiting the muddy limestone for cement manufacture. Moving to the south-east, there follow the major features of Edgehill and the Dassett Hills formed by the resistant Marlstone Rock Bed. Close to the Oxfordshire border, an outcrop of oolitic limestone brings a taste of the Cotswolds to Warwickshire.



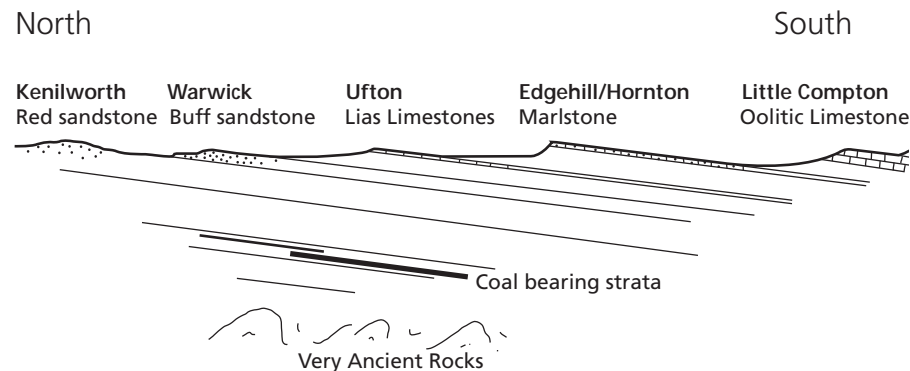
*Marlstone and Rugby Limestone in Little Kineton*



*The view south from the Welcombe Hills near Stratford towards Loxley and Edgehill*

There is a good view across this sequence to be had from Welcombe Country Park to the north of Stratford. In the foreground is Tiddington occupying flat ground near the River Avon where the soil is chiefly sand and gravel which filled the river valley at the end of the Ice Age. Beyond that is a darkly shaded ridge or escarpment formed by the outcrop of much more solid White Lias; Loxley may be just visible on the far left. Still further away another dark line stretching across the horizon is Edgehill and the northern limit of the Marlstone outcrop.

## Hard Rocks of South Warwickshire



## Early Materials

### In the beginning was Cob . . .

When the Romans left Britain in about 410 A.D. those Britons who were left behind seem to have lost the art of building in stone. Houses then were made largely of wood and turf or local mud, the latter known as cob. This practice continued for the homes of the poor right up into the 15th century. I don't suppose we have any such ancient examples in Warwickshire but there are plenty of garden walls which have stood for a long time, especially along the valley of the Stour between Shipston, Tredington and Halford. As long as they are kept reasonably dry from above and below they last very well, but once they finally collapse they leave little trace.



*A garden wall in Honington*



*Wattle and daub revealed in a ruined wall.*

Cob was suitable for small houses but when more room was needed it became necessary to build a wooden frame and use wattle fencing daubed with mud as the infilling or 'nogging' to make the walls. In nearly all surviving examples the wooden frame was built on a low wall of whatever stone was available locally. In many cases this is the best indication we can find of what kind of stone that is. Adding the stone wall served to protect the rest from rising damp; where this was not done the frame will have rotted away at the base. The infilling material has often have been replaced later with more durable brickwork. Sometimes, as fashion or necessity dictated, the original timber framed walls were encased in stone or brick cladding, especially at the front of the building where it was presumably a feature to be proud of.