Introduction

Solihull was established during the 12th century as a market settlement in the sparsely populated Arden region of Warwickshire, and remained a rural and relatively secluded village until the late 19th century. We can explore some of the changes seen by Solihull as witnessed by the style and materials of its buildings.

Around The Square and the nearby High Street are some of the oldest surviving buildings – 15th and 16th century timber-frame houses and the 16th century George Hotel (re-named the Ramada Jarvis Hotel). From early times, timber, bricks and tiles were the materials of choice for all but the most prestigious buildings. This arose from the scarcity, locally, of good building stone. The underlying rock is Mercia Mudstone, laid down during the Triassic period, over 200 million years ago. The Mudstone is weak and unsuitable for building but provides the base for a nutrient rich clay soil, ideal for growing great oaks and for manufacturing bricks and tiles. The fine exception to the rule of brick and timber is the Church of St. Alphege. Begun in the 13th century, with later extensions, it presents an assemblage of sandstones brought to Solihull from around the county and beyond.

The building of the railway station in 1852, on the Oxford & Birmingham line, brought Solihull within commuting distance of Birmingham and led to a rapid growth of the town. The rail network allowed for the first time the transport of high quality building materials from further afield at acceptable costs. York paving, Portland Stone, granite and gritstone all made their appearances in Solihull from the mid-19th century, along with harder wearing Midland sandstones. Nonetheless, brick construction dominated the expansion of Solihull as new technology made possible the mass production of uniform, high quality bricks.

The latest phases of change occurred in the redevelopment of the town centre. The developments at Mell Square in 1960s and Touchwood in 2001 introduced steel-framed retail buildings, infilled with brick and concrete. Variety and decoration is added by the use of natural stone for cladding and paving, hardly any of which reflects the local geology.

The Warwickshire Geological Conservation Group was established in 1990 by a few enthusiasts who wanted to raise awareness of and conserve the many rock exposures dotted around the county. The membership has since grown and includes many enthusiastic amateurs, students and teachers as well as professional geologists. The group retains its two main aims: to raise awareness of geology and landscape through education, and to conserve and protect geological sites in the Warwickshire area.

For further information, including an outline of programmes and events, visit the WGCG websites **http://www.wgcg.co.uk** or contact

Warwickshire Geological Conservation Group
c/o Warwickshire Museum, Market Place,
Warwick CV34 4SA

E-mail: warwickshiregcg@gmail.com

www.facebook.com/
WarwickshireGeologicalConservationGroup

https://twitter.com/wgcg_uk

Published by Warwickshire Geological Conservation Group, 74B Warwick Road, Kenilworth. CV8 1HL (c/o Coventry Roofing)
Warwickshire Geological Conservation Group is a Registered Charity Number 1144717

ISSN 1759 – 085X

A previous trail was produced by students as an assignment on the Earth Sciences Certificate course, Open Studies Department, University of Warwick and the use of their work in this new version is acknowledged. This guide was written by Peter Band and edited for WGCG by Brian Ellis. Photographs were provided by David Gosling (WGCG)
Additional information for this guide was provided by Martyn Bradley, Brian Ellis, Colin Frodsham and Hugh Jones all of Warwickshire Geology Conservation Group (WGCG), Eric R. Kuhne Associates, Touchwood Architects, and Andrew Cole, General Manager, Touchwood.
A version of the trail is available on the WGCG website

WGCG Hidden wonders in the landscape of Warwickshire

Natural England

Warwickshire County Council

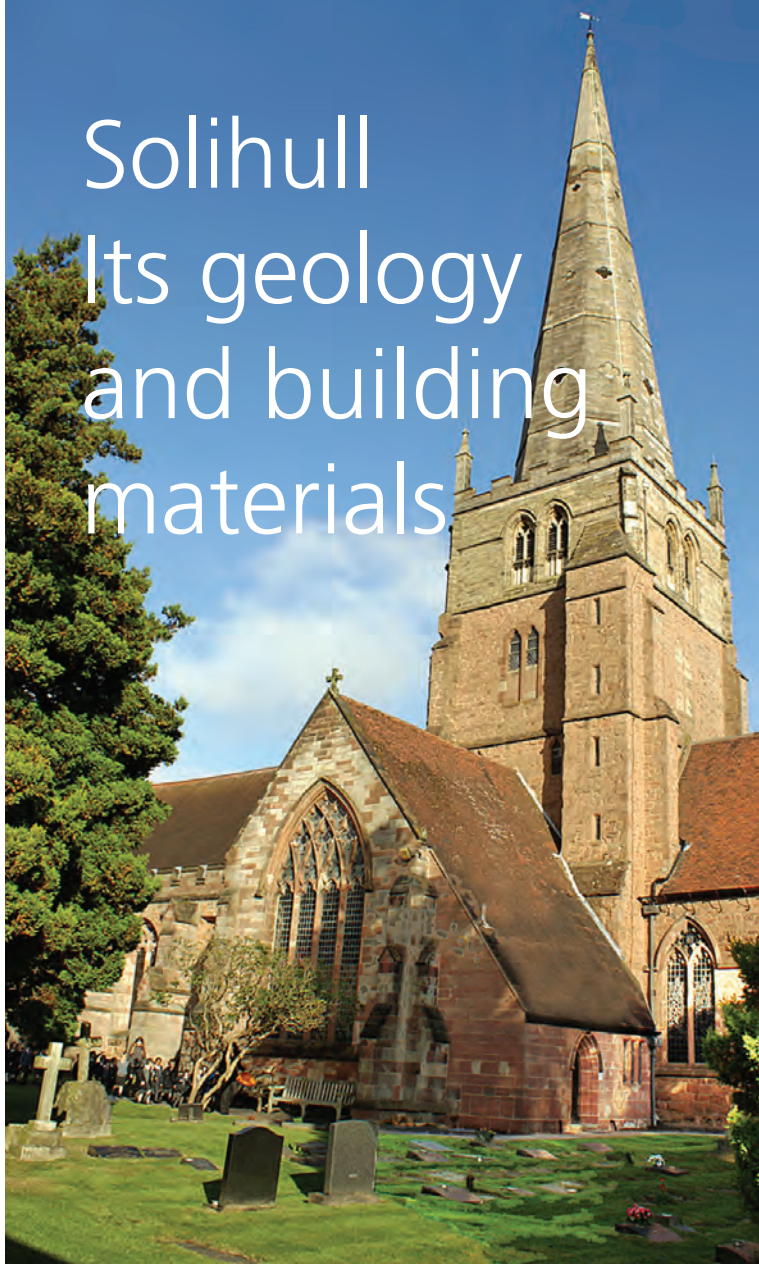
The Wildlife Trusts Warwickshire

The Geology Trusts

Conserving Warwickshire's Geological Heritage

WGCG Hidden wonders in the landscape of Warwickshire

Solihull
Its geology and building materials



Design from The Drawing Room, www.drawingroom.uk.com

Medieval Market Town

Much of the evidence from this period in Solihull's history has now been replaced by later developments but fortunately there are some striking examples of both timber-framed and stone buildings to see.

1 St. Alphege Church

The nave, chancel, transepts and lower tower of the church (photo on front cover) are built from 300 million year old red Carboniferous sandstone. Sandstones are sedimentary rocks laid down over a long period by an accumulation of sand grains carried by wind or water and cemented together under the pressure of the accumulating mass. Oxides of iron in the naturally occurring cement impart colour to the stone. In contrast to the red sandstones of the nave, the 15th century upper tower was built from buff coloured Warwick Sandstone – rock from the deserts of the Triassic Period. The steeple was re-built in the 18th century using pale Arden sandstone, a Triassic rock found in parts of the Arden landscape. Inside the church notice how the south-side row of nave pillars leans outwards, the result of pressure from a heavy roof upon inadequate Mudstone foundations. Iron tie bars and external buttressing on the south wall saved the day. The grey sandstone of the 1940s external buttresses is probably from Grinshill in Shropshire.

The rubble stone walls of the early chancel contrast with the dressed stonework of the later nave. Rubble stone is easily obtained from the top metre or so of a quarry whereas deeper levels provide better quality 'freestone', suitable for squaring and dressing, and called ashlar.

Inside the church, above the rubble stone tower arches, we can see the outline of an former lower nave roof.

2 George Hotel

Opposite the church is the 16th century, half-timbered George Hotel. It is built on a foundation of sandstone , that exhibits the layering of sediments showing they were laid down in rivers

3 Manor House

A row of timber framed 15th and 16th century buildings that lines the south side of the High Street is all that remains of Solihull's domestic Medieval buildings. The Manor House shows two interesting features – an upper story jettied out from the lower wall to counteract sagging of the upper level floor joists; and close studding of the vertical timbers as a decorative and expensive status symbol.

The original infill between the timbers was probably thin wattle sticks with mud and straw daub, replaced later by locally produced bricks, hand-made from the Mercia Mudstone and containing debris from glacial deposits dug from Solihull's fields. The variable colour is due to primitive control of temperature in the brick kilns.

The Growing Town

By the 17th century both industrial technology and changing building costs began to favour brick structures rather than timber frames for domestic buildings. The effect of the arrival of railway transport in the 19th century enabled building materials to be sourced from much further afield.

4 The Old Council House

Though much of Solihull's history in brick has disappeared a good example of Victorian civic brickwork can be seen in the old Council House (now a wine bar) in Poplar Road. Compare the more uniform factory produced bricks of the Council House with the irregularity and inclusions of the Manor House bricks.

5 The War Memorial

Bringing stone from further afield is evident at The Square, where The War Memorial is Jurassic Portland Limestone from Dorset. This is a durable and readily carved stone formed between 150 and 200 million years ago in warm shallow seas, where calcite, precipitated from the seawater, built up around sand particles and fragments of shell. The paving is York stone, a hard-wearing Carboniferous sandstone from the Pennines that can be split along its bedding planes as flags. The kerbstones are hard crystalline Markfieldite, quarried from the remains of ancient volcanic activity in the Charnwood Forest area of Leicestershire.

Redevelopment since 1960

Redevelopment of the town centre at Mell Square and Drury Lane in the 1960s meant the destruction of properties from Medieval to Edwardian age and their replacement with steel-framed retail buildings, infilled with brick and concrete and decoratively clad with polished natural stone, often imported. The construction in 2001 of the shopping arcades in the Touchwood Centre doubled the size of the town's retail potential. Their eye-catching interiors combine decorative brickwork with timber and stainless steel features. Contrasting and decorative imported natural polished stones have been used for the paving.

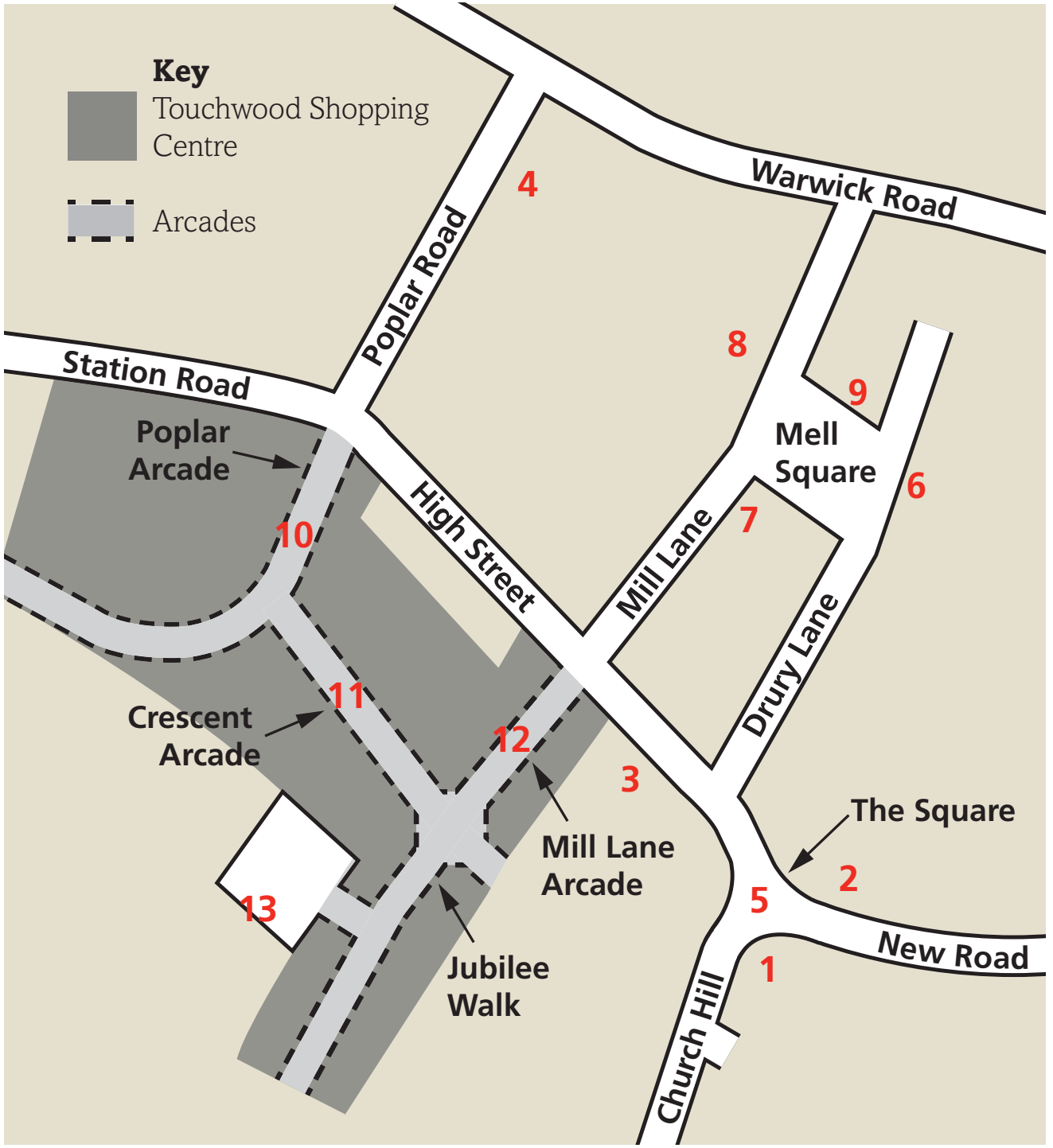
Mell Square

6 The Post Office

The Post Office is one of several examples in Mell Square of stone from the around Britain. The cladding is a Jurassic iron-rich limestone, sometimes referred to as **Hornton Stone**, quarried near Edge Hill. It has a rusty brown colour and contains veins rich in iron. Look for pockets of pale coloured brachiopod fossils, commonly called lamp shells for their similarity to the shape of Roman oil lamps. Opposite the Post Office, the statue of 'The Family' stands on a plinth of dolerite, a hard dark igneous rock, possibly from Rowley Regis in the Black Country and is surrounded by a paving of granite setts.

7 Boots

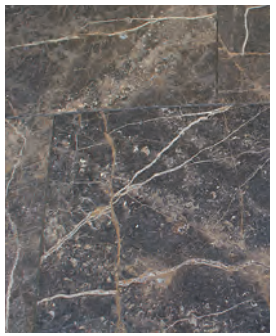
The cladding above the Boots store is **Westmorland Slate**, a stone created when fine grained marine shales were placed under great subterranean pressure during the creation of the Lake District mountains over 400 million years ago.



8 Marks & Spencer
The Marks & Spencer store is faced with a polished granite similar to stone quarried from Dartmoor.

Granite is formed by the slow cooling and solidification of magma below the Earth's surface. Because it cools slowly it grows large crystals and, in this example, we can identify the glassy crystals of quartz, pink feldspar and black hornblende, plus a sparkle from particles of mica. The entrance to the passageway adjacent to Marks & Spencer is clad with **dolomite** a crystalline limestone transformed under pressure with some of the rock's calcium being replaced by magnesium. The coloured veins result from traces of iron.

9 Co-operative Travel Shop
Much of the decorative polished stone facing in British high streets is imported stone. In Drury Lane, the Travel shop is clad in veined greenish crystalline stone, known as **serpentinite**, that resulted from a transformation of ancient ocean crust thrust upwards under intense pressure by tectonic plate movements. It is found in the mountains of Italy and Greece, and in the Lizard peninsular of Cornwall. It is named for its snake-like patterns and colouring.



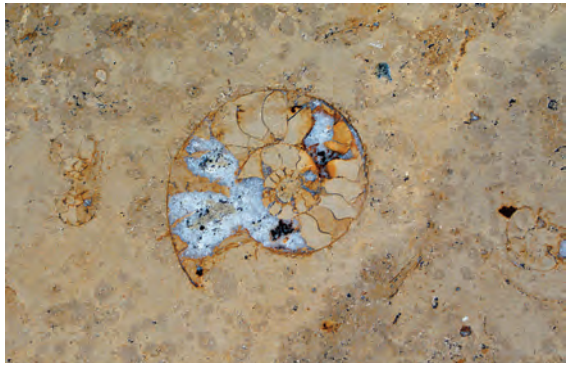
Touchwood Centre

10 Poplar Arcade
The arcades in the Touchwood Centre contain some fine examples of imported decorative paving stones. In Poplar Arcade the predominant paving is a **German dolomite**, ranging in hue from grey to brown.

Fractures in this rock are filled with veins of white calcite crystallised out from mineral-rich hot water rising up from deeper in the earth's crust.

11 Crescent Arcade
The paving is dominated by a pale cream Italian travertine. **Travertine** is a form of limestone precipitated from hot mineral springs. Darker colours in the stone result from impurities such as iron and copper. The stone takes its name from Tivoli near Rome and was used extensively by the Romans for temples and other public buildings.

12 Mill Lane Arcade
This is paved with hard wearing **Jurassic Limestone** from the Cote d'Or in France. These warm cream to beige coloured stones contain fossils, including ammonites and belemnites, which lived in tropical shallow seas. Today, these limestones provide the terroir for the great chardonnay wines of Burgundy.



13 Library
Step out into the Library courtyard from the Jubilee Walk arcade and note the cream and tan tufa cladding of the Library building. **Tufa** is a stone similar to travertine but more porous. Its natural unweathered colour, full of streaks of iron compounds, can be seen to best advantage on the stairwell inside the Library. Finally, as you leave the courtyard note the dense black commemorative plinth marking the official opening of Touchwood by the Queen in 2002. This is **basalt** – a crystalline volcanic rock, probably from Africa.