

Heritage Saturday, 10 September 2011  
Some building stones at **St Peter's Church**, Ipswich

## Inside the Church

North Aisle display:

**The coffin** is of limestone (mainly calcium carbonate) containing fossil oysters and other shell fragments. This rock is a piece of Jurassic sea-bed about 170 million years old. Such limestones come from Lincolnshire, Northamptonshire and the Cotswolds.

Nave, east end:

**The ledger slab** in the floor, for "Samuell Smith, mariner" is of a black limestone containing fossil corals, turreted fossil sea-snails, and white calcite (calcium carbonate) veins. This rock is of Carboniferous age, about 345 million years ago, formed when Britain was in the Tropics - our journey on Earth's tectonic plates has moved us a long way since then! Such limestones have come from northern England.

Nave, west end:

The square bowl of **the font** is of black Carboniferous Limestone from Belgium. This 'marbre noir' is often known as 'Tournai Marble'. Rocks which take a surface polish are often commercially known (by the stone-trade) as 'marble'. Geologically marble is a limestone metamorphosed by heat or pressure so that the constituent calcite is recrystallised.

**The Arcade piers** (pillars) are of a fine-grained limestone. Some may be of Jurassic-age Caen Stone from Calvados Province, France. They have been repaired in places with replacement blocks.

## Outside the Church

South Porch (side door):

**The 'lions'** at the entrance show the oolitic limestone to advantage. The oolites are calcium carbonate spheres about the size of a pin head, precipitated in warm clear Jurassic seas - similar to today's Bahamas. The rock is cemented with calcite, its crystal faces glinting in the sunlight.

Churchyard between west and south doors:

**The gravestones** "Mary Westrop 1851" and "Timothy and Ann Crow 1814" are of sandstone, with quartz sand grains, iron oxide colouring and natural layers (bedding). Rocks are susceptible to weathering - rain water with contaminants (salt, acid) and to freeze-thaw effects. With the long axis of a gravestone nearly parallel to the original bedding, severe flaking and disintegration has occurred. Dates on gravestones allow calculation of the rates of weathering of different rock types.

The Tower:

Flint has been 'dressed' by splitting and squaring to give 'knapped' **black flintwork**. Some flints show 'cones of percussion' where striking them did not lead to splitting; examples may be found in the lower part of the flintwork on the north side of the south buttress. Flint originated in 80-90 million years old Chalk, as a reaction between silica (as in fossil sponges) and decomposing organic matter. There are also flint pebbles and 'field flints' of this local stone in some of the walls.

Northern side of church - beyond buttress with arch:

A variety of rocks, including blocks of fine-grained brown-coloured rock from local London Clay, about 52 million years old. The high lime content of these 'mudstones' made them useful for making cement in earlier centuries. They are often cracked, with the cracks (septa) sometimes infilled with white calcite. They are sometimes called cementstone or, more often, **septaria**.

South wall of the churchyard, College Street - busy road with much traffic:

The **pillars of the south gate** show decorative flint and limestone flushwork ('P'). Knapped flint is set flush into 'hollowed out' limestone panels.

The **descriptive tablet** on the wall at Cardinal Wolsey's Gateway is of Portland Limestone (about 150 million years old) from Dorset. Placed there in 1954 it has considerably weathered in just over 55 years!