

Chalk Links in the North Wessex Downs

“Chalk Links” Fact Sheets:

Geology groups across the region have produced a series of fact sheets explaining how the underlying chalk affects other characteristic features of this unique area including landscape, soils, land use, industry, hydrology & archaeology.

Other fact sheets in this series can be downloaded from: www.northwessexdowns.org.uk

FACT SHEET: CHALK AND BUILDING MATERIALS



Chalk block cottage with brick and sarsen foundations and wooden lintels, Ashbury. Such chalk block cottages have resisted the weather for centuries by having “good shoes and a hat,” that is a plinth of stone or brick to stop rising damp and overhanging eaves of thatch to resist the weather.



Lime-washed cob walls at Blewbury, protected from the weather by a thatch capping and rising damp by a stone base.



Fognam Quarry, Berkshire. Chalk from this quarry was used locally for walls.

The link between building stones & geology across the North Wessex Downs

In most areas across the region there is a direct link between the building materials used and the local, underlying geology. There is a wide variety of building stones available including chalk, flint, sarsen and clay for brick and tile making.

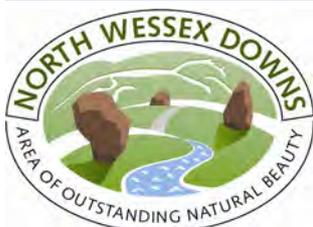
What is the link between building stones and chalk?

Chalk underlies most of the region. Generally, the chalk is too soft, porous and friable to be used as a building stone. However, chalk is used in the north of the region where, historically, **chalk block** was quarried from locally occurring harder bands of chalk such as the Melbourn Rock (occurring at the boundary between the Lower and Middle Chalk).

Chalk Clunch is a more friable, flakey variety of chalk used locally as a walling stone around Blewbury and Wallingford. Ground chalk can also be mixed into a slurry with chalky clay, chopped straw, horsehair and other binders to make a material known as **chalk cob**. This material is compacted to form broad boundary walls and rounded outlines. Cob is also an ancient ingredient of wattle and daub.

How is flint from the Chalk used as a building stone?

Thin bands of flint and flint nodules weathered out of the soft chalk are found scattered in fields across the Downs. Flint is a very hard glassy material, resistant to weathering and is used in walls as a protective facing stone. Rough, field flints are used in their original nodular form to give a rubbly appearance, or they can be shaped or “knapped” to give a glassy surface that is then arranged to face outwards. Flint is used in combination with either brick or stone.



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Rough sarsen stone with courses of chalk block and brick framing, College Farm, Ashbury.



Combined red and grey patterned brickwork, Great Bedwyn.



St Mary's Church, Great Bedwyn is built of rough field flints with limestone dressings for windows, buttresses and basal plinth.

What other building stones are used across the region?

Sarsen stone has been used in the west of the region. It is a locally hardened sandstone of Palaeogene age, younger than the Chalk. Being very resistant to weathering, it has been used for building since Neolithic times – the best known example in the region being that of the megalithic monuments at Avebury. However, sarsen stones have also been used over the centuries for domestic buildings and walling. Rough sarsen blocks are used in combination with other building materials such as brick, flint, chalk and limestone. By the mid 19th century, sarsen stone could be cut into regular blocks suitable for walls, corner stones, lintels and paving.

Brick is the dominant building material used across the region. Houses built solely of brick with clay roof tiles dominate the areas underlain by Palaeogene clays where there were numerous brick works. However, in areas where chalk, sarsen and flint building materials are available, brick has been used for framing and strengthening these materials.

Jurassic Limestone used for building in this region is sourced from outside of the area. Historically it was only used for prestigious buildings such as churches and wealthy merchant or manor houses, and then only for parts of the building which could not be constructed of other local materials. The use of flint with limestone characterises the majority of church buildings across the North Wessex Downs.

How do combinations of building stones influence architectural styles across the North Wessex Downs?

These locally sourced building stones (chalk, flint and sarsens) have their individual limitations, so are often used in combination with each other, or with brick or Jurassic limestone. Indeed, it is these combinations of building materials used in different areas that have produced such unique and contrasting building styles so easily seen when exploring the region.

For more information on building stones across the region, please order or download a "Diversity in Stone in the North Wessex Downs" leaflet from www.oxfordshiregt.org
For more general information on the region, please visit www.northwessexdowns.org.uk