



*Alternating courses of cut sarsen and flints. Manor farm at Ogbourne Maizey.*



*Glazed and unglazed patterned brickwork, South View Villas, 1896, Kintbury.*



*Chalk clunch wall with a protective tile capping and stone base to stop rising damp, Blewbury.*

### Acknowledgements

The Oxfordshire Geology Trust (OGT) has produced this publication for the North Wessex Downs AONB (Area of Outstanding Natural Beauty) who funded the Diversity in Stone project.

In addition to publicity material, the OGT have organised a programme of guided walks and talks around the region to promote the unique character of the building materials and styles to be found here. A more detailed article outlining the findings of this project will also be available from end-March 2008 on the North Wessex Downs AONB and the OGT websites (addresses given below).

We wish to kindly acknowledge the guidance and support we have received from the North Wessex Downs AONB and from the Berkshire RIGS and Wiltshire Geology Groups.

### Who are we?

The Oxfordshire Geology Trust was launched in 2000. We are a non-profit making organisation with two main aims - to protect and conserve geological sites and our landscape and to raise awareness of the county's rich and varied Earth Heritage and geology. We are the only dedicated geoconservation organisation in Oxfordshire.

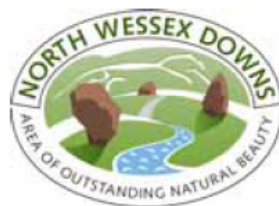
The North Wessex Downs Area of Outstanding Natural Beauty covers 1,730 sq km and is the largest AONB in southern England. It was created in 1972 to give a protective coherence to one of the largest tracts of chalk downland in southern England which is least affected by development. The AONB aim to recognise and celebrate the rich diversity of archaeology, ecology, landscape and culture in the North Wessex Downs and conserve and enhance its special qualities for everyone to enjoy.

### Where to find us:

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## Diversity in Stone in the North Wessex Downs

Explore the link between  
building materials and styles  
and the local geology









## Chalk block

Harder bands of chalk such as the Melbourn Rock (occurring at the boundary between the Lower and Middle Chalk) have been quarried in the past and cut into regular creamy-white blocks for use as a building stone in the north of the region.

*Ashdown House, Upper Lambourn. Large chalk blocks with limestone dressings. During a restoration programme in 2005, the chalk quarry at nearby Compton Beauchamp was reopened to provide new chalk blocks quarried from the original Melbourn Rock.*



*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.*

## Ground chalk or cob

Ground chalk is mixed into a slurry with chalky clay, chopped straw, horsehair and other binders. This material known as cob is compacted to form broad boundary walls with rounded outlines. Cob is an ingredient of wattle and daub.



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

## Flint

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 rubblely appearance, or they can be shaped or "knapped" to give a glassy surface which is then arranged to face outwards.



*Knapped flint wall with brick framing, Ashmansworth. In skilful hands flints can be knapped into rectangular blocks which can be laid in courses like bricks.*

Flint is used in combination with either brick or stone. Such combinations of materials represent the most cost-effective option, especially historically, when transporting materials was more difficult and expensive. Hence, local flints are used for the bulk of the wall facing with more expensive brick or stone being used for cornerstones and framing where extra strength or decorative shaping is needed.



*Flint and brick house, St Mary Bourne. Brick has been used for framing and strengthening the building with flint restricted to the wall facing.*

## Sarsen stone

Sarsen stone has been used for building in the west of the region, close to areas where surviving scatters of sarsen stones can be found in the landscape such as at Lockeridge Dene, west of Marlborough.

Sarsen stone is locally hardened sandstone of Palaeogene age which occurs naturally as large blocks up to several metres across. Sarsen stone being very hard has resisted weathering for thousands of years. It has been used as a building stone 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.

Sarsen stones are difficult to cut and shape. They are commonly used in their original state as roughly broken blocks of sarsen fitted together in a jigsaw pattern. Rough sarsen is used in combination with other building materials such as brick, flint, chalk and limestone. However, by the mid-nineteenth century, a sarsen cutting industry was flourishing in this area and sarsen stone was being cut into regular blocks suitable for walls, corner stones, lintels and paving.



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



*Cut sarsens laid in courses with shaped sarsens blocks around the window, Avebury Manor Stable.*



## Brick

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 clay. However, in areas where chalk, sarsen and flint building materials are available, brick has been used for framing and strengthening these materials.

Local brick making began around the 15th century with kilns fired using wood or charcoal. By the 16th and 17th centuries, brick, although still expensive, was being used in timber-framed buildings to replace earlier wattle-and-daub infills and for plinths, chimney stacks, fireplaces, corners, window and door frames.



*Timber-framed house with elaborate chevron-patterned brick infill and tile hung gable, Chilton House, Chilton.*

Modifications and extensions to existing flint or chalk built houses were often in brick



*The Old School House, Hurstbourne Tarrant with thatched roof, rough flint walls and brick framing. The use of all brick in the the Old Bakery next door may indicate that this is a later extension, built at a time when brick had become less expensive.*

By the 18th century, cottages were being built entirely of brick, often using combinations of unglazed red brick and glazed greyish-blue brick in chequered style, or with window and door surrounds in a contrasting colour to the walls. Red clay tile-hanging on gable ends became popular. From the early 19th century, coal brought by canal or railway was used to fuel the kilns and the now-cheaper brick became the dominant building material. This was the hey-day of the local brickworks.



*Combined red and grey patterned brickwork, Great Bedwyn.*



*Tile-hung facing, Butts Cottage, Kintbury.*

Victorian builders used elaborate and colourful brick designs on public and prominent buildings. Machine-made bricks appeared in the late 19th century and brick making became more centralised, leading to a gradual decline in the local hand-made brick industry.



*Almshouses in Lambourn showing diamond patterns in red and grey brick dated 1852. The initials are those of the benefactor, Henry Hippisley.*

## Limestone

Limestone used for building in the North Wessex Downs AONB is sourced from outside of the area. The Jurassic oolitic limestones quarried in the Cotswolds of Wiltshire and Oxfordshire are the most commonly used in this region. However, the need to import limestone makes it an expensive material to use. Hence, traditionally it was only used for prestigious buildings such as churches and wealthy merchant or manor houses and then only for parts of the buildings 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. The limestone is used primarily for dressings such as the basal plinths, cornerstones, window and door frames and buttresses which require larger-sized blocks, strong enough to support loads without cracking, resistant to weathering and with freestone properties which allow the carving of ornamentation.



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



*St James' Church, Avebury. Knapped flint and cut sarsen chequerwork with limestone window frame.*