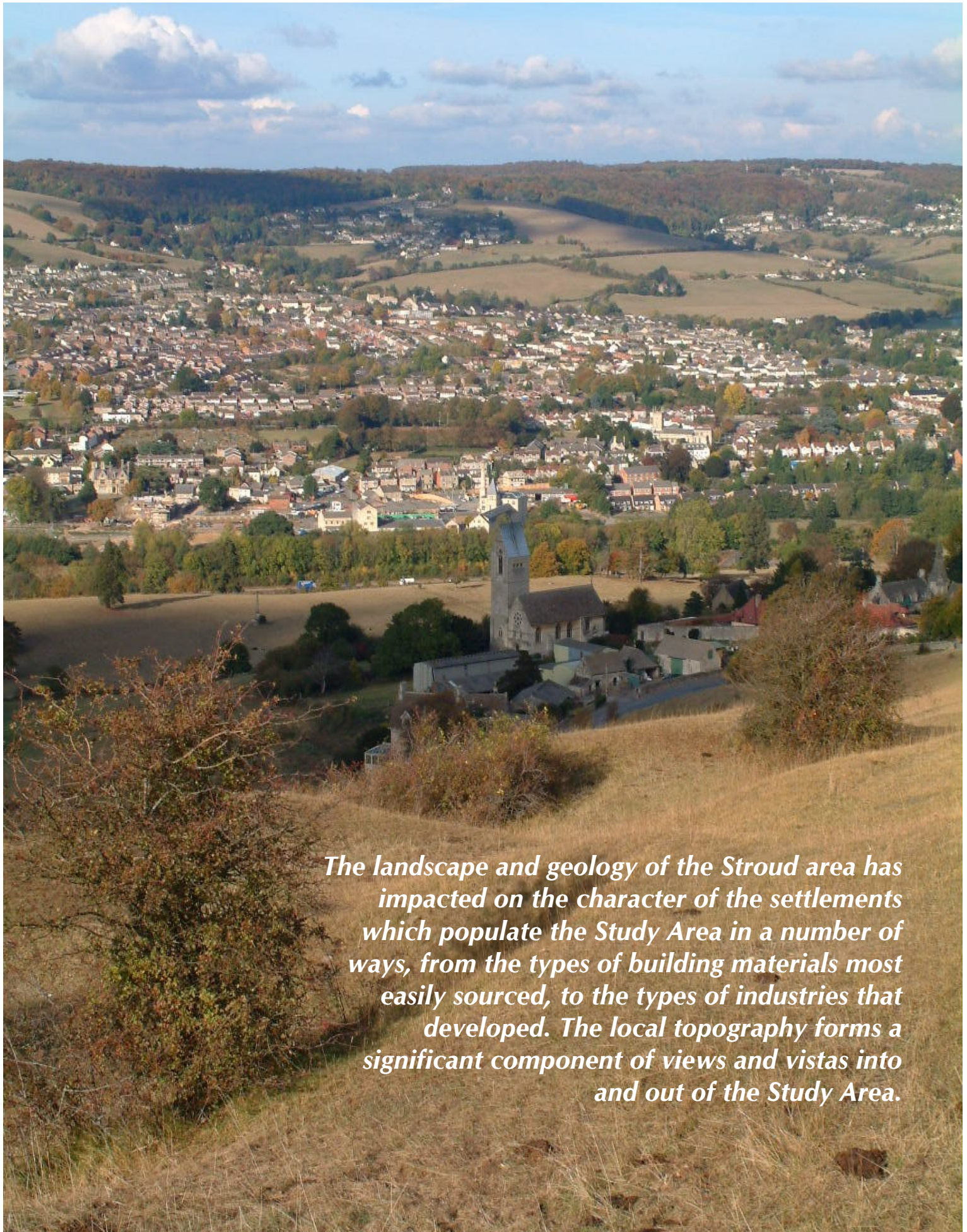


- THE STUDY AREA IN ITS SETTING -



The landscape and geology of the Stroud area has impacted on the character of the settlements which populate the Study Area in a number of ways, from the types of building materials most easily sourced, to the types of industries that developed. The local topography forms a significant component of views and vistas into and out of the Study Area.

THE STUDY AREA IN ITS SETTING

- 5.1 The landscape and geology of the Stroud area has impacted on the character of the settlements which populate the Study Area in a number of ways, from the types of building materials most easily sourced, to the types of industries that developed. The surrounding landscape greatly influences the first impressions gained on approach to Stroud and many of the IHCA's other settlements. The local topography forms a significant component of views and vistas into and out of the Study Area.
- 5.2 An abundance of natural watercourses made the Stroud Valleys ideal as the base for manufacturing and industry, as the flowing water provided power for the mills. A good clean water supply was also necessary for washing the wool used in cloth production.
- 5.3 Industrial development naturally occurred along the valley bottoms, notably the Frome Valley, where mills could also be close to progressively improving transport links.
- 5.4 Today, Stroud is at the centre of an extensive network of road and rail links and waterways. Many of the earliest roads that served the settlement ran along the tops of the hills, and their extreme steepness and muddiness was a deterrent to much traffic. This certainly inhibited transport and trade links and rather isolated the early settlement. However, the 18th and particularly the 19th centuries saw transport improvements, including the construction of two major canals, crucially linking the Severn estuary with the navigable river Thames, plus a number of major new turnpike roads which ran along the valley bottoms, many of which replaced existing hilltop routes.
- 5.5 Many of the improvements to transport infrastructure led to the intensification of development along the valley bottoms. Often this was in quite distinct phases, as for example with the masses of new 19th century housing which began lining the brand new main roads. The arrival of the canal and, later, the railways, introduced easy access to a wider range of building materials, meaning that the products of the local geology became subtly less evident in the buildings which sprang up.



Left:
An outcrop of oolitic limestone in the Avening Valley. The rubblestone and freestone layers can be clearly seen.

GEOLOGY

- 5.6 Between about 185 and 140 million years ago, during the Jurassic period, a vast limestone belt was created, stretching between Lincolnshire and the Dorset coast. The Cotswolds, a region of ambiguous boundaries, is usually held to constitute the highest part of this belt, a plateau which rises from the east in Oxfordshire and descends in a dramatic escarpment to the west, within sight of Stroud.
- 5.7 During the Jurassic period, a shallow sea covered the area, in which a sequence of sediments settled into alternating layers or 'strata' of clay, sand and limestone. Although the beds of sediment were each laid down on a virtually horizontal level, subsequent processes have resulted in shifts in the terrain, so that, in places, strata of quite diverse ages and substance have ended up next to each other. The whole Cotswold plateau has been tilted, so that the west has risen up, while the east has sunk. Erosion and climatic changes have also played their part in shaping the landscape.
- 5.8 In the past, the whole Cotswold formation was known as The Oolite, due to the prevalence of this form of limestone throughout the region. Limestone, and in particular oolitic limestone, is extremely permeable, and where it meets beds of impervious clay, water is driven out in the form of springs. Hence the Cotswolds are riddled with streams and brooks as well as rivers. These have been highly active in the formation of the topography, carving deep and complex valleys into the 'Oolite' plateau, a process which continues and means that the landscape is ever changing.
- 5.9 Due to its porous nature, oolitic limestone is 'soft' when it is newly extracted and may be easily worked. The mass of oolite is in two basic layers, separated by a narrow bed of Fullers Earth: the older, deeper layers being known as the 'Inferior Oolite' and the upper layers as 'Great Oolite'.
- 5.10 The tilt of the Cotswolds means that the lower layers, the 'Inferior Oolite', are exposed along the western escarpment, where they are more easily accessible than in the eastern Cotswolds. The hills encircling Stroud were particularly rich in good quality Lower Inferior Oolite stones, known by masons as 'Freestones', due to the ease with which they can be cut and dressed. Among these is Lower Freestone, of which the fine Painswick Stone is a variety, and Lower Limestone, the eldest of the strata, of which there is a large outcrop at Frocester Hill. Upper Freestone is of poorer quality, mostly used for burning, to create lime mortars and plasters. At Stroud, though, it was sufficiently good to be used for many of the town's 'rock-faced' rusticated buildings.
- 5.11 The Severn Vale has been subject to very different geological processes. Though also formed in the Jurassic period, later ages have seen the geology of the Vale strongly influenced by the River Severn and its smaller tributaries, including the river Frome.
- 5.12 The Vale is essentially a large flood plain. Successive floods and changes in the course of the rivers have left the older, Lower Lias, rocks covered with alluvial silts, pebbles and clays, the residue of the materials found on the riverbeds.
- 5.13 Clay is predominant in the Severn Vale below Stroud. Its impermeable intractable nature has meant that the river Frome has not formed deep narrow incisions into the landscape, but has instead created a broad and shallow river valley.
- 5.14 The clay has proved useful in lining the floors of millponds and canals in the area. It is also ideal for brick making, providing a building material in an area lacking an abundant supply of stone.

TOPOGRAPHY AND LANDSCAPE

- 5.15 The Industrial Heritage Study Area falls into **two very distinct topographical areas**. To the west of Stroud, slicing through the Cotswold escarpment, is the river valley of the lower Frome. As the Frome flows towards the Severn, this becomes increasingly **broad and shallow**, the landscape flattening out to the ‘Vale’.
- 5.16 To the north, south and east of the Study Area are the **Stroud valleys**. The IHCA runs along two of the most populated of these: the Chalford valley, through which the upper Frome flows, and the Nailsworth valley, which carries the Nailsworth Stream. These valleys are **steep sided**, gradually descending from the high ground of the Wolds towards the Severn Vale. Both have several smaller valleys branching from them. Two of these branch valleys – Toadsmoor in the Chalford valley and Avening in the Nailsworth valley – are included in the IHCA Study Area.
- 5.17 Most of the hillsides overlooking the length of the study area are capped with **Common land**. The relationships between the landscape, transport links and the built environment can be best appreciated when viewed from the heights of Minchinhampton, Rodborough and Selsley Commons.
- 5.18 Beyond Dudbridge, much of the Lower Frome valley is predominately rural: quiet lanes are surrounded by **water-meadows** containing networks of ditches and drains bordered by pollarded willow and elder trees. The land has a variety of uses from orchards, pasture and arable fields to managed parkland with mature specimen trees.
- 5.19 The **lack of stone** in the Severn Vale has strongly influenced the overall look of the area. Fields are bounded by hedges and many village gardens are enclosed with iron railings or walls constructed from bricks made locally.
- 5.20 The flat nature of the countryside gives prominence to man made features. There is obvious dialogue between the scattered settlements, the church towers sometimes being visible from one village to another. Other features such as the Stroudwater canal, which crosses the countryside on a ‘causeway’ here, electricity pylons and World War II pillboxes also clearly impact on the landscape.
- 5.21 The Vale is cut from north to south by the M5 motorway and the A38, which break the general east-west orientation of the historic river/road/canal transport infrastructure. This is very apparent when viewed from the high ground of the escarpment. The sound of the motorway can be heard from time to time.
- 5.22 **Mills punctuate the length of the conservation area** in the lower Frome valley, most of which are, or have been, linked to the historic transport routes. The sense of isolation of the mills and their original setting is largely preserved. This is particularly evident when they are viewed from the water meadows, where, as at Bond’s, Beard’s and Upper Mills, the mills are within sight of each other.
- 5.23 The width of the valley and **good transport links have allowed the mills to expand**; the two ‘supermills’, Ebley and Stanley, are clearly visible from the hills in Stroud, up to three miles away.
- 5.24 The topography has also allowed communities to grow up on the lower slopes of the shallow valley, many of them directly related to the historic industrial landscape: **canal settlements**, such as Newtown, 19th century roadside development, and mill related buildings, including **rows of workers’ cottages**.



Above:
Fields are often enclosed by hedges and ditches or by iron fences in the Vale, while drystone walls are more common in the valleys. Church towers are major vertical landmarks in this flat landscape



Top left:
A view of the Severn Vale from Selsley Common. Stanley Mill, one of Stroud's 'supermills' is visible bottom right.

Left:
The Cotswold escarpment forms a distinctive backdrop to many views across the flat Vale landscape.

Bottom left and below:
Since the late-19th century, the main roads have been under increasing development pressure, with gaps between settlements being infilled by housing or industry, creating an impression of linear or continuous settlement, which is at odds with the historic isolation of many mills and smaller settlement groups. The rhythmic pattern of settlement along the Frome watercourse is still evident once you get off-road though.



- 5.25 **Much of the road corridor has been infilled** with modern industry and housing, although the access routes to the mills and hillside communities still remain. Leaving the main road at right angles, the lanes are carried over the river and canal by the many red brick accommodation bridges. The land that slopes away below the canal to the south has remained largely undeveloped.
- 5.26 Whilst **views of the bare grassland of the escarpment** provide a constant conspicuous backdrop to the south of the Study Area, Doverow Hill in Stonehouse heralds the start of the more wooded hillside to the north. The impact of this hillside, with its scattered weaving settlements such as Randwick and Ruscombe, becomes greater as the lower Frome valley approaches Stroud. From this point, the conservation area is defined and channelled between the steep slopes of the upper Frome valleys' sides.
- 5.27 The hillside urban expansion of Stroud town and the Victorian red brick suburb of Rodborough dominate the eastern view at this end of the western leg of the IHCA. The bowl of the valley at the foot of the hill at Wallbridge forms the meeting point of the IHCA transport infrastructure and from here, the Chalford and Nailsworth valleys branch away.
- 5.28 Unlike the lower Frome valley, the Stroud valley legs to the east and south of the Study Area are dominated by their landscape. The hills, which rise sharply on both sides of the valleys, are largely hung with beech woods interspersed with steeply sloping pasture fields.
- 5.29 Mills are found along the length of the Stroud valleys' in the Study Area. These do not have quite the same visual impact on the landscape as those in the lower Frome valley, however their scale and **tall chimneys provide landmarks** in the valley bottoms.
- 5.30 Victorian roadside development, the addition of ancillary buildings to the mills and recent housing developments on former mill sites have, to an extent, blurred the boundaries between valley floor settlements. In particular, growing development has led to the loss of the historic open spaces between mills, diminishing their once distinctive isolation.
- 5.31 It is possible to regain some sense of the mills' former settings by following nearby footpaths. However, the mills in the Chalford Valley can be appreciated best from the train. From this vantage point they can be viewed at close quarters, and the height of the railway line above the valley bottom allows an understanding of the mill complexes as a whole.
- 5.32 With the exception of small enclaves found at key crossing points such as Bowbridge, and 19th century red brick roadside development, **historic domestic settlement in the Stroud Valleys has been predominantly on the sides of the hills, rather than the valley floors.**
- 5.33 The houses cluster along the spring line on the hillsides, usually around the paths and roads that once linked the mills to the main routes out of the valleys. Along the length of the southern and eastern legs of the Study Area, it is possible to see a direct link between the mills in the valley bottoms, the homes of the people who worked in them and the routes connecting the two. Many mill workers' hamlets have expanded into large villages, such as Amberley, Woodchester and Chalford. Others, such as Bagpath, have remained small and relatively isolated.
- 5.34 The settlements, generally built between the 17th and early 19th centuries, are **predominately constructed from stone**, as are the mills they served. Their position on the steep hillsides has entailed the construction of terraces of dry stone retaining walls to support houses and gardens. Road and rail embankments have also been shored up with massive stone walls; the natural landscape has been painstakingly artificially shaped to allow habitation and transport infrastructure.



Top left and top right: St Mary’s Mill, Chalford, and Dunkirk Mill, Nailsworth. The valley bases are predominantly left to industry and agriculture, while settlement historically clustered along the springlines, with weaving hamlets perched above the mills they served. Tall mill chimneys punctuate the rhythmic pattern of mills, dotted along the River Frome, the Nailsworth Stream and the Toadsmoor Brook.

The deciduous wooded valley slopes form a colourful backdrop to many views in the eastern and southern legs of the Study Area.

Far right and below: The lower valley slopes have often been painstakingly shaped, with viaducts and terraces (often dry stone walls) allowing the steep land to be colonised for settlement or to carry ‘layers’ of transport infrastructure.

Bottom right: At the extremities of the Study Area are the “secluded valleys” (Avening Valley, Toadsmoor Valley and the Golden Valley beyond Chalford), where the windowing watercourses carve up the flat watermeadows, and settlement is sparse



- 5.35 The narrow Stroud valley floors have dictated the positioning of the transport links. This is particularly obvious in the Chalford valley where the river, canal, road and railway run parallel with each other and are visually connected for much of the length of the IHCA.
- 5.36 This provides a perfect snapshot of the transport system's evolution in the valleys over hundreds of years. In contrast, the Toadsmoor and Avening valleys give an indication of a less industrialised age, their mills being largely untouched by the influence of the canal and railway.
- 5.37 As the valleys thread away from the stretches of industrial development between Stroud and Brimscombe, and Rodborough and Nailsworth, they become steeper and narrower. The landscape becomes predominately rural and more densely wooded. Settlements are small and scattered and the remnants of mill sites retain their historic isolation.
- 5.38 Towards the heads of the valleys, the transport links begin to diverge: the main roads wind uphill towards the escarpment plateau and, in the Chalford valley, the railway line disappears into the Sapperton tunnel. Only the canal and river remain parallel by the time the IHCA reaches its end point at Sapperton.
- 5.39 The juxtaposition of the narrow winding river with the straight line of the Thames and Severn canal provides a clear insight into the reasoning behind the first improvement of transport communications in the Stroud valleys.