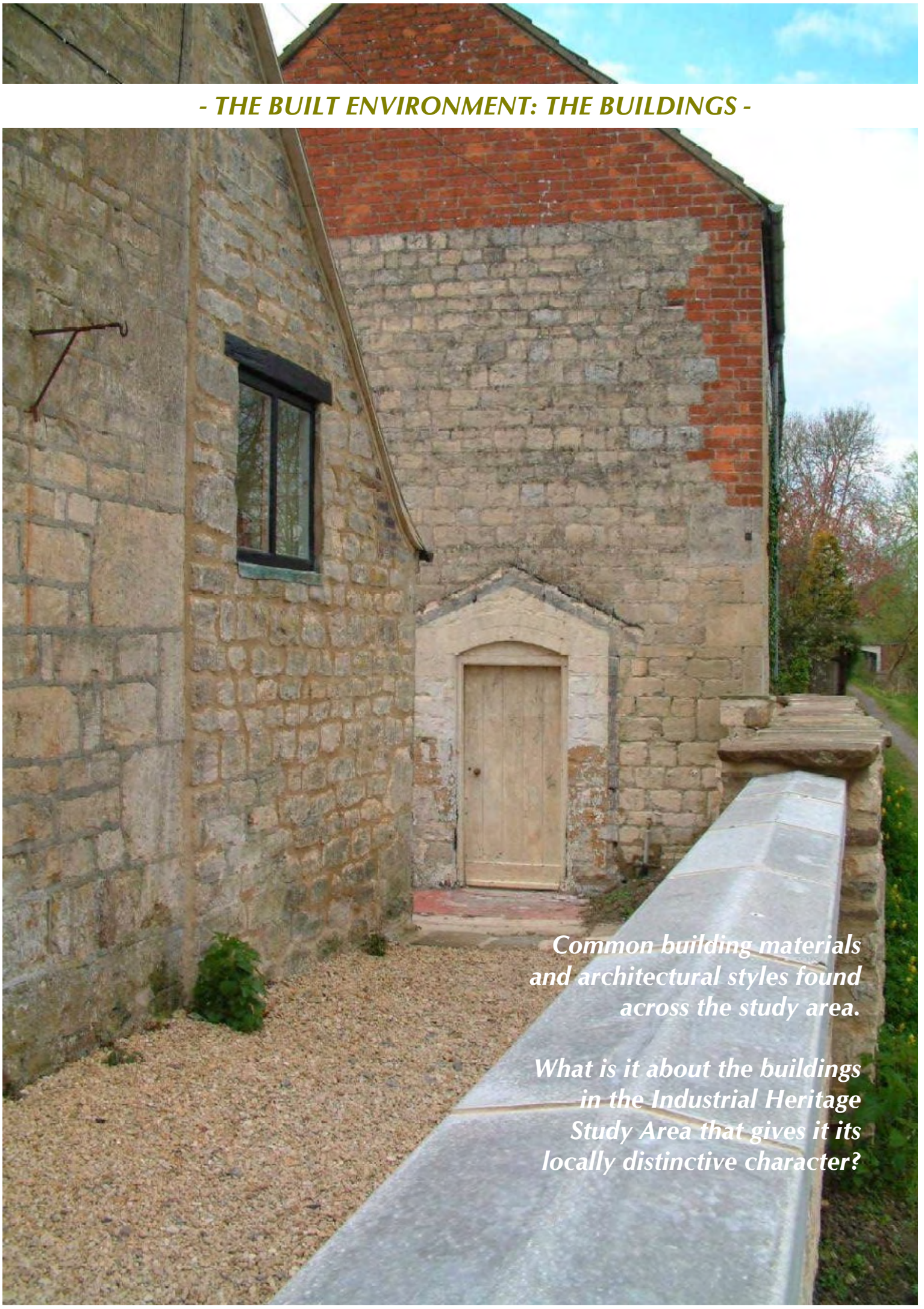
- THE BUILT ENVIRONMENT: THE BUILDINGS -



Common building materials and architectural styles found across the study area.

What is it about the buildings in the Industrial Heritage Study Area that gives it its locally distinctive character?

THE BUILDINGS

COMMON BUILDING MATERIALS AND ARCHITECTURAL STYLES FOUND ACROSS THE STUDY AREA

7.1 A brief history of the prevailing local building styles and materials is useful in understanding how sites and individual buildings have evolved.

7.2 Over centuries, changes and improvements in sourcing, producing and transporting materials has impacted not only on the types of materials most favoured but also the shapes, sizes and ornamentation of buildings. Often, fashion and technical advancement are mutual influences in determining the architectural styles that prevail in an area at any given point in history.

7.3 Not surprisingly, the vast majority of buildings and structures throughout the study area were constructed from locally produced materials until well into the 19th century. However, while 'local' in the 17th century might mean quarried out of the back garden, by the 19th century, 'local' included bricks produced on a massive commercial scale at Stonehouse Brick Works. And materials were increasingly available from sources hundreds of miles away, if desired.

7.4 The appearance of buildings, and the architectural treatment that was chosen for them, would have been dependent on several factors. For example:-

- The **age** of the building or the period during which the area was mostly developed;
- The **type or function** of the building – water-powered mill or road-related factory; remote farm house or row of weaver's cottages…
- The **status** of the building;
- The **siting**: cottages which cling to steeply sloping valley sides are sometimes cut into the hillside, lack windows on the rear or have split levels internally – unnecessary features for cottages built on the flat, open land of the Severn vale;
- The technical capabilities and demands of **available materials**: steep roof pitches are better able to cope with the weight of stone slates; timbers used for roof construction have limited length, hence the roof span is also limited, meaning buildings are often narrow or shallow.

7.5 These are worth thinking about when proposals for new development or alterations to buildings in the conservation area are being considered, as they can help to direct you towards the most appropriate, sensitive style to adopt for new work.

A broad character division in the built environment does exist, and this summary section therefore follows the split between:

- the brick-dominated **Frome corridor on the Vale** (west of Stroud), and;
- the stone-dominated **Stroud valleys** (the upper Frome valley, east of Stroud; and the Nailsworth stream valley, south of Stroud).

However, it must be remembered that there is a great degree of overlap, particularly in the settlements close to the foot of the Cotswold escarpment (Bridgend, Stonehouse, the Stanleys, Ryeford, Ebley, Dudbridge and even Stroud itself).

Vernacular:

7.6 The distinct difference in character between the western leg of the Study Area, which lies on the flatter land of the Severn Vale, and the Eastern and Southern legs (the Stroud valleys) is in part due to their different early **Vernacular** building traditions. Although vernacular buildings no longer dominate in many parts of the Study Area, they often lie at the earliest points of settlement. Being rooted firmly in local craftsmanship and locally available materials, the local vernacular can help us to understand why some buildings and materials look 'right' in certain locations, and why some look alien.

7.7 In this document, the varied local vernacular styles are looked at under the following headings:

1. Early buildings in the West: The Frome corridor on the Severn Vale, Medieval to 18th century

2. Early buildings in the South and East: The upper Frome and Nailsworth valleys, 16th to 18th centuries

3. The Georgian and Victorian vernacular: The Frome corridor on the Severn Vale, mid-18th to mid-19th centuries

4. The Georgian and Victorian vernacular: The Frome and Nailsworth valleys, Late-18th to mid-19th centuries

Polite:

7.8 **'Polite'** architecture is, broadly, the opposite of vernacular – less dependent on local tradition and more influenced by national or international architectural fashions. Polite buildings tend to be consciously designed in 'a style' and from the mid-18th century onwards this became increasingly the norm, right across Britain. That is not to say that polite buildings cannot be locally distinctive and, indeed, this is illustrated by looking at the following building types and the ways that new and old materials were used in the Study Area:

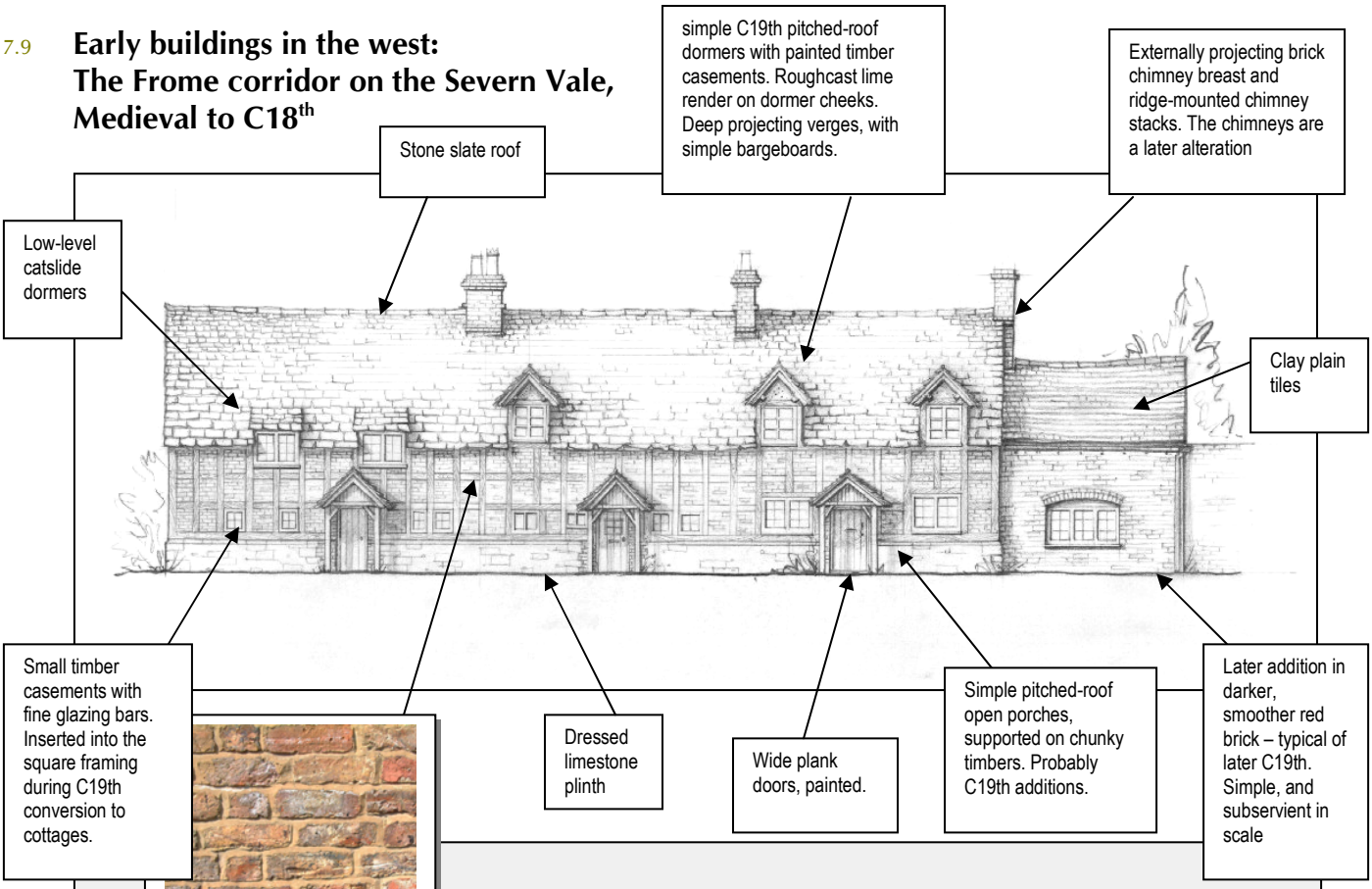
5. New materials, the rise of 'National' styles and Polite architecture: 18th, 19th and 20th century architecture:

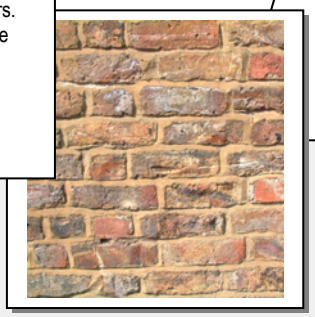
   - Mills and factories
   - Canal-related structures
   - Road- and Rail-related structures
   - Clothiers' mansions, other large houses and polite domestic architecture

   - Stone
   - Brick
   - Slate
   - Glass
   - Iron and Steel
   - Timber

6. Finally, a look at **The Little Details:** the sorts of things that add personality, local distinctiveness and texture to the built environment and, often, a sense of connection with history – these can all too easily be overlooked, replaced, 'improved' or ignored, adding to a subtle sanitisation and erosion of character. These are the sorts of things we do not always notice until they are gone.

7.9 **Early buildings in the west: The Frome corridor on the Severn Vale, Medieval to C18th**





In this part of the conservation area, surviving buildings from this period tend to be sited close to the Frome watercourse. Whilst this building vernacular is most closely associated with the western extreme of the study area, its influence is felt as far west as Dudbridge.

Timber frame was the Severn Vale's early building vocabulary. The use of timber construction extended from Medieval times right through to the C17th, being superseded by brick from about 1700. Typically, buildings of this period on the flat land of the Severn Vale consist of simple rectangular plan forms, with a **wide frontage** and **shallow plan depth**. From cottages, to barns, to mills, buildings are characteristically long and low.

- **Timber frame.** Simple square-framing, originally with "wattle-and-daub" infill panels (woven strips of wood – usually sweet chestnut or oak – clad with a sticky mixture of dung, earth and straw). Superseded by brick infill panels in the later timber frame period.
- **Brick.** Used for infill panels, chimney stacks (mostly later replacements) and often for later minor additions and extensions. Early local brick has distinctive **mottled colour variation**, with spots of deep purple and bright orange being common. Overall, a soft, pink-brown is the dominant shade and bricks have a pleasingly 'crumbly' appearance.
- **Limewash and roughcast lime render** were often used to give visual unity to a disparate range of materials or to conceal later alterations and additions. Lime coatings also provided valuable weather protection, and can be strikingly decorative when tinted with strong pigments, such as the bold ochre at Eastington.
- **Stone.** The Vale's native clay-related stones, including blue lias, are extremely crumbly ("friable") and were almost always roughcast rendered. Cotswold limestone was transported for use on the most prestigious buildings and for decorative details and dressings and hardwearing features (base plinths, chimneys, etc).
- **Steep roof pitches.** To shed water effectively, the original **thatched roofs** required a steep roof pitch, in common with the typical Cotswold vernacular. This form of roof construction was easily adapted to carry **stone slates** and, later, **clay tiles**. Clay plain tiles are most common, but double Roman tiles also occur.
- The earliest **windows** consist of simple wooden mullions, set diagonally within the square-framing of the structural timbers. Before the late 16th century, very few houses had glass in the windows. Iron framed, leaded-light casements and painted wooden casements, also slotted into the square-framing, are a later refinement. All but the most prestigious of buildings have basic **plank doors.**

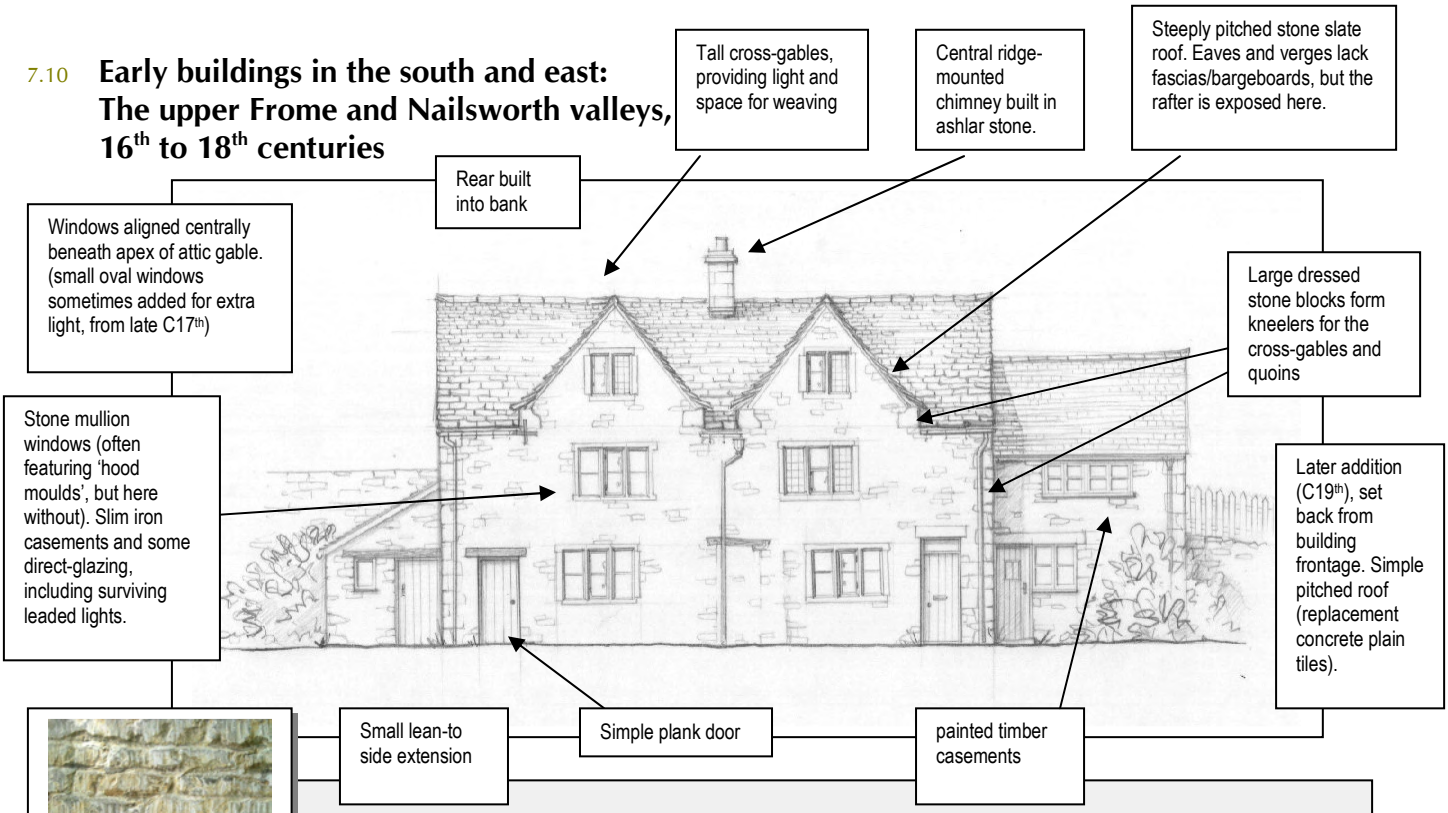
Left and right:
The illustration shows a building at Churchend, Eastington. A 17th century structure, probably originally built as a barn. The distinctive long, narrow building was subsequently converted to form a row of cottages. The dormers, porches and many of the windows date from the 19th century.

Almost all the surviving buildings in this category are used as houses and cottages today. However, this building technology was applied to structures of all sorts: agricultural and industrial, as well as domestic. Several of the buildings now in residential use have been adapted from their earlier functions. Few traces of the original mills still survive, as they were mostly rebuilt during the late 18th and 19th century industrial boom. Most would have been on such a tiny scale that we would barely recognise them as mills today. However, associated structures and dwellings do survive in places, and betray the area's early industrial origins.

Left:
A C15th or C16th timber framed hall house has been adapted over centuries to form a pair of cottages. As was often the case, it appears that materials were re-used from an even earlier structure: it is thought that the building incorporates timbers from an earlier miller's house and mill on the site, which is known to have become ruinous by 1389.

Right and below:
Roughcast lime render and limewash conceal the early origins of many buildings in this part of the study area. Fragments of the timbers survive on the front elevation of this row of cottages at Eastington; the long, low form is typical.

7.10 Early buildings in the south and east: The upper Frome and Nailsworth valleys, 16th to 18th centuries



In the middle ages, the Stroud valleys were very sparsely populated and the timber frame tradition dominated, as it did throughout much of Britain. The emergence of what we think of as the **'Cotswold style'**, recognised for its **limestone construction**, really only began in the 16th century, spurred on by land and wealth redistribution following the dissolution of the monasteries. A series of massive building booms swept away much of what had previously existed and began the process of settling the steep valley sides.

In the Stroud valleys, the growing cloth industry influenced the appearance, form and siting of buildings to a very great extent. A strong building vocabulary emerged, giving the area a visual coherence, despite the rather chaotic nature of cottage building between the 16th and 19th centuries. Although there were advances in technical abilities and architectural pretension, the basic characteristics of this vernacular remained remarkably consistent, meaning that the distinction between a 16th century building and one dating from the mid 18th century can sometimes be hard to spot.

- **Cotswold limestone**: ranging from uncoursed rubble, to coursed, dressed stone and ashlar. **Roughcast lime render** provided weatherproofing, although it was less essential in the Stroud Valleys than in many areas, due to the excellent local stone.
- **Steep roof pitches** (no less than 45° and typically 50-55°) were necessary for a weathertight roof covering, allowing water to be shed effectively and avoiding wind blowing up underneath the **stone slates**. To minimise gaps, stone slates are laid in **'diminishing courses'**, with small tiles towards the top (the ridge) and large tiles towards the bottom (the eaves), allowing stones of all sizes to fit snugly together.
- **Stone mullion windows** (direct glazed with leaded lights or with iron casements inset into the stone surrounds) are particularly identified with the local vernacular, often (but not always) featuring **'hood moulds'** or **'drip moulds'**. These were developed to divert rainwater away from window and door openings, which otherwise streamed down the face of the building from the gutterless roof. From the late C17th tall **'cross windows'** appear, mostly on the more prestigious houses.
- **Tall attic gables** ('cross gables') are a distinctive feature of the local roofscape. These were functional additions to the Stroud valleys' building vernacular. The local economy was dependent to such an extent on the production of cloth that buildings of all sorts were created with attics designed to accommodate the large looms needed for the weaving process. **Small oval windows**, sited high up in the apex of the cross-gable, also added extra light and ventilation (from late C17).
- **Shallow plan depth** (usually only one room deep), with valleyside buildings often dug into the sloping ground behind. The smallest cottages can be little more than one room on each floor. Larger buildings, including grand houses, often display several phases of development, with narrow ranges often added at right angles to the original build.
- **Fenestration** centrally aligned beneath the apex of the gabled roof, with windows diminishing in proportion at each storey. Siting **door and window openings** well in from the corners of the building helped ensure rigidity in the structure and the use of substantial dressed stone window and door surrounds also helped to tie the flexible rubble walling together.

Left and below:
The illustration shows a pair of cottages on the Bath Road at Rooksmoor. Grigshot Cottages date from the mid 18th century and are among the later examples of this building style.

Although most closely associated with the hills and valleys, this vernacular is also present in the western leg of the IHCA study area. Usually reserved for the most prestigious buildings due to the scarcity of good building stone (roughcast render is very common, with only dressings and details left exposed, as on Whitminster House, **below**, and Bridgend House). But from Stonehouse eastwards, the accessibility to good escarpment limestone allowed the vernacular to make its presence felt more strongly.

Southfield House at South Woodchester **(above),** is a stunning example of the grand houses of this period. The house originally belonged to the Paul family, powerful clothiers hailing from the Netherlands. The c.1690 addition (on the right) displays a distinct change in character from the original c.1620 range, revealing both the family's growing status and the architectural refinements that occurred as the 17th century progressed – including the vertical emphasis provided by tall 'cross windows'.

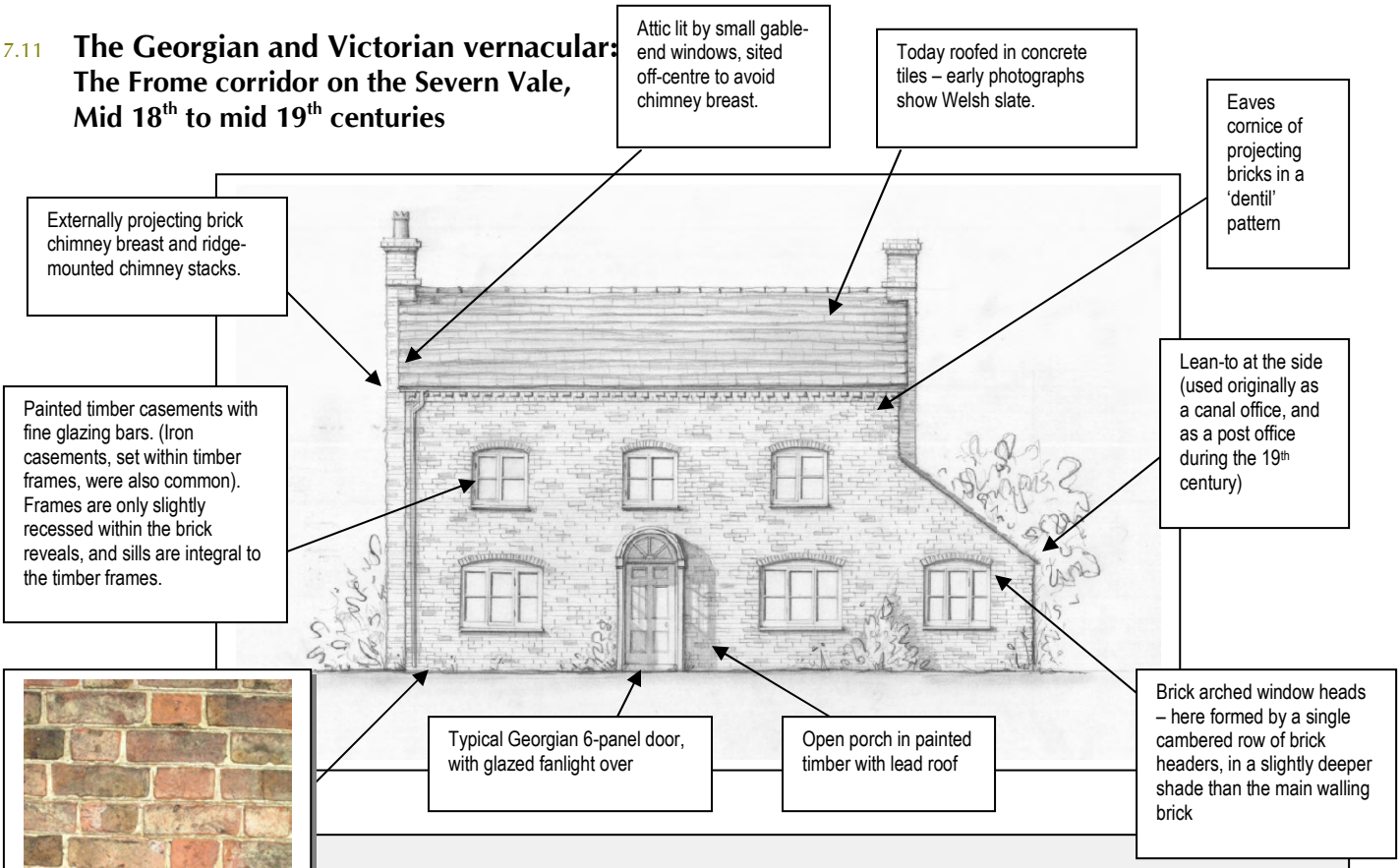
The distinctive tall gables, which so typify the Stroud valleys' vernacular, survived into the mid 18th century. Numerous later buildings (C18th through to early C19th) display vernacular characteristics, including stone slate roofs and mullion windows (although hoodmoulds were dying out), but lack cross gables. This was partly due to the new fashion for square, classical proportion, and partly a bi-product of changes in cloth manufacture: increasingly, processes were centralised into the mills, so space for the enormous broadlooms was no longer essential in the attics of Stroud valleys buildings. Where necessary, attic space was lit by small dormers or gable-end windows.

Many mill sites date from this period, and earlier mills were also rebuilt or remodelled. But the majority of those mills were again rebuilt during the early 19th century and so have been lost to us today. However the early origins of some industrial sites can still be detected: domestic buildings from the period have tended to survive better, often adapted and added to, as at Frogmarsh Mill in Woodchester **(above)**, where an early 17th century house became incorporated into the mill itself, with 19th century alterations.

At Arundell Mill **(right** and **above right)**, the surviving C17th and C18th group includes a long, narrow range with repetitive fenestration – a miniature precursor of the archetypal C19th mill buildings that populate the Stroud valleys. The centralisation of processes led to the creation of specialised buildings (dedicated to teasel drying, fulling or dying, for example), grouped within the mill complex. At Bourne Mills (Thrupp), a custom-built wool-drying house survives.

The 'Cotswold Style', has been "revived" and reinterpreted in various forms during the centuries following its demise as the prevailing local vernacular. Regency, Victorian and Edwardian polite architecture played with the romantic image of this rural style – seen here (**from right**) on a lodge cottage, pair of mill workers' cottages and Stroud railway station.

7.11 The Georgian and Victorian vernacular: The Frome corridor on the Severn Vale, Mid 18th to mid 19th centuries



After the demise of timber frame, the evolution of architecture in the western leg of the conservation area picked up speed, with a succession of new influences and materials being introduced over the course of two centuries. This has produced a complex and rich mixture of historic buildings in the IHCA, which is tricky to summarise.

However, one tradition stands out as particularly distinctive: the **simple brick vernacular**, typified by buildings of the Georgian period. Aspects of this style continued from the 18th century, through to the mid 19th. Influences from 'polite' architecture are visible in this vernacular – for example, the introduction of sash windows. This building tradition dominates the conservation area from Framilode westwards, right into Stroud itself. Many of the Stroudwater Canal structures and canal-related dwellings are typical of the period.

- **Brick** construction had superseded timber frame by the beginning of the 18th century. This one material, more than any other, lends the western stretch of the IHCA and the surrounding area a visual unity and distinctiveness. The striking colour variations and mellow textural qualities of 18th and early 19th century brick has great aesthetic appeal. Brick lends itself to particular forms of construction and ornament – hence, projecting brick decoration (such as **dentil eaves cornices)** feature on many local buildings, and **cambered arches** are used for window- and door-heads. A protective and decorative coating of **lime wash** was not uncommon.

- **Simplicity**: rectangular plan-form, with **wide frontage** and **shallow depth** (usually only one room deep), sometimes with windows on front elevation only. This simple, boxy, 'dolls-house-like' vernacular relies heavily on the quality of materials and on the proportions, spacing and detailing of features such as windows and doors to give it character and distinction.

- **Pitched roof**, typically around 40°, but ranging between 30-45°. Attic spaces lit by **small gable-end windows**: dormers are surprisingly uncommon. **Clay plain-tile** and **double-Roman tile** roofs; bottom two or three courses of double Roman tiles sometimes replaced with slate, to improve weatherproofing at the eaves. **Welsh slate** increasingly common as a roofing material from the mid-18th century, thanks to improving transport infrastructure (particularly the canals). Welsh slate is traditionally laid in diminishing courses, like stone slates; many local roofs have been replaced with Spanish slate in recent years. Though surviving examples are quite rare, the use of **stone slate** continued through the 18th century, producing a striking visual effect in combination with brick.

- **Additions and extensions**: historically, the simple rectangular plan form (particularly houses and cottages) is typically extended with single-storey lean-to additions, to the side or to the rear, often with a **'catslide roof'** over rear additions. Houses were rarely built with **porches** and, where subsequently added, these tend to be simple canopies or open-fronted porches of wrought iron or timber. Modest glazed porches, of painted timber, are also characteristic.

- **Sash windows** ran almost concurrently with the **arched window heads and casements**, and were typically paired with another locally distinctive detail: **the 'stepped voussoir' window head -** a flat arch, built of stone. Often, the central keystone or alternate blocks ("voussoirs") are painted in black and white, making a decorative contrast with the brick walling – particularly characteristic around Framilode, Saul and Wheatenhurst. Other strong colours are also used instead of black.

Left and above:
Lock House at Framilode (1815) overlooks the former lock and basin at the mouth of the Stroudwater Canal. The simple, box-like characteristics of the local Georgian vernacular are clear. The character and charm of the house depends greatly on the balance, proportions, spacing and detailing of the windows and front door and on the low-key simplicity of the open porch. The brick dentil cornice and the side lean-to are locally typical features.

Because traditional building styles and details were partly dictated by locally available materials and contemporary building technology, the basic bones of this vernacular translated to all sorts of buildings, including agricultural and industrial, as well as domestic. Many Stroudwater Canal structures display typical characteristics – from workers' cottages to the original brick bridges.

'Cambered' or 'segmental' arches soon became the preferred way of building window and door heads. The precise detailing does vary – sometimes from village to village, depending on the traditions developed by local builders: sometimes nothing more than a single skinny row of 'headers' (the short end of the brick); sometimes two rows; sometimes brick of a deeper shade than the walling brick is used. Occasionally, a keystone is added at the centre of the arch, which may be painted to match the building's windows and doors.

Windows are usually side-hung casements. Small leaded lights persisted throughout the 18th century. C19th windows benefited from improved glass technology, with larger panes and fewer glazing bars, with both the frame and opening lights made from timber.

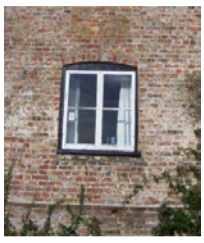
Basic plank doors were used for all sorts of buildings (cottages, farm buildings, industrial buildings, warehouses, outbuildings); Six-panel Georgian doors feature on the principal entrances of larger houses and are usual on buildings with sash windows; from the mid C19th , four-panel Victorian doors are common.

Vernacular survivors are often to be found tucked away behind 19th century industrial expansion, as at Stonehouse Lower Mills **(right)**. Fromebridge Mill includes a charming C18th range, which uses blocks of black slag (blast-furnace waste material, and a by-product of the industrial age) in combination with the locally produced brick. Alongside, a bold new building was attached in the 19th century, which is typical in its long, narrow form, with regular, repetitive fenestration under a simple pitched roof. **(right)**

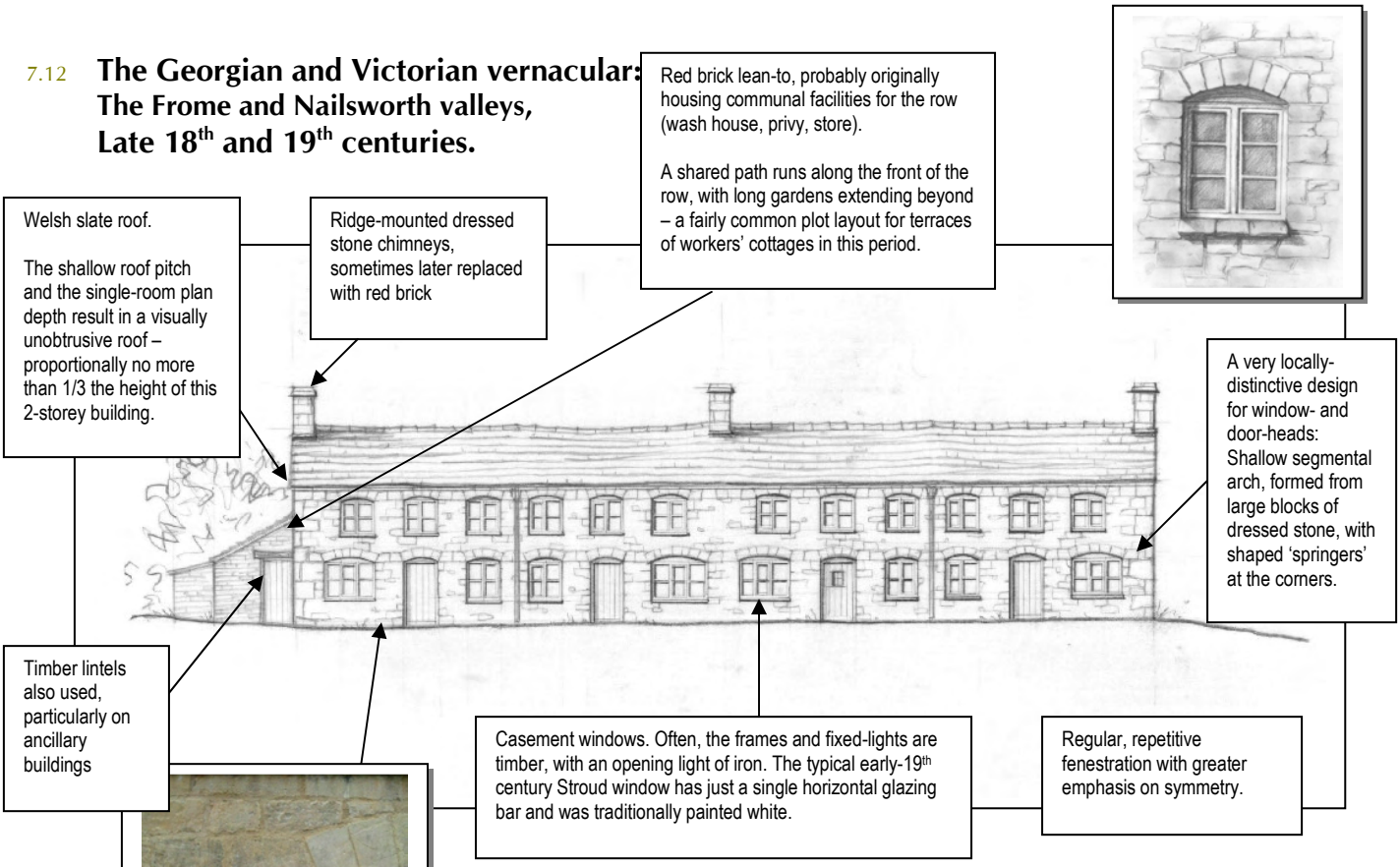
The long, narrow 19th century range of former Ebley Saw Mill is also typical of small-scale mill buildings from the 18th and 19th centuries. The tight grouping of industrial and domestic buildings is characteristic of the IHCA. The limited space in this built-up area has resulted in three storey cottages (still with the traditional shallow plan), giving the row a distinctive tall, skinny character.

Incremental accumulations in timber and corrugated iron add texture and character to the industrial environment, including ship-lap boarded loading bays and lean-to stores, stained dark black by many years of creosote.

Many canal-related cottages were characterised by a dolls-house-like simplicity and modest scale. At Ryeford **(above)**, the 1784 lock keeper's cottage was limewashed at some point.



7.12 The Georgian and Victorian vernacular: The Frome and Nailsworth valleys, Late 18th and 19th centuries.



By the 1780s, most new construction in the locality had abandoned stone mullion windows. Wooden-framed casements under timber lintels do occur, but they are less common in this area than in many parts of the Cotswolds, due to the particular qualities of the freestone found around Stroud, which lends itself to finely dressed details, such as the **arched stone window and door heads** that are so characteristic of Stroud and its surrounding villages.

These segmental arched window heads feature on an enormously diverse range of building types – from one-up-one-down workers' cottages, to farmhouses to massive mill ranges. This is one of the most locally-distinctive details of the period, together with the increasingly 'regular' appearance of the stone walling (hammer-dressed stone was popular and mechanical quarry saws were introduced from the early C19th). The uniform terraces of workers' cottages are signifiers of the growing industrialisation of the locality and the rise of mass-production. Many Thames & Severn canal buildings are characteristic of this vernacular.

- **Hammerdressed or machine sawn limestone**, squared and coursed. Large stone blocks give buildings around Stroud and Stonehouse a distinctive, regular character. Those at the extremities of the eastern or southern legs of the Study Area (Nailsworth and the Avening Valley; Chalford to Sapperton) can sometimes appear more rubbly, with less finely dressed surfaces and often having smaller, more irregular blocks of stone forming the voussoirs of arched door- and window-heads.
- **Simplicity**: rectangular plan-form, with **wide frontage** and **shallow depth** (usually only one room deep), sometimes with windows on front elevation only. Bigger spans and deeper plan depths sometimes achieved by forming a **double pile roof**, or by extending down at the back with a **lean-to or "catslide" roof**, thus maintaining a visually unobtrusive roof when seen from the front. This simple, boxy, 'dolls-house-like' vernacular relies heavily on the quality of materials and on the proportions, spacing and detailing of features such as windows and doors to give it character and distinction. Cottages are often paired, mirroring each other to achieve a degree of visual balance/symmetry.
- **Pitched roof**, typically around 40°, but ranging between 30-45°. Some roofs are steeper where **stone slates** persist as a roof covering, but **Welsh slate** was increasingly common as a roofing material from the mid-18th century, thanks to improving transport infrastructure (particularly the canals). Welsh slate is traditionally laid in diminishing courses, like stone slates; many local roofs have been replaced with Spanish slate in recent years. Attic spaces lit by **small gable-end windows** or small pitched-roof **dormers**, rather than cross-gables – although cottages increasingly had no real attic space to speak of.
- **Casement windows** under stone arched **window and door heads**. A few examples of brick arches also exist, and timber lintels were quite common too – particularly around Nailsworth and Chalford. Simple flat stone lintels were used in the later C19th.

Left and right:
The illustration shows Blue Row, a terrace of cottages at Dudbridge, probably purpose-built in the early 19th century to house workers at one of the nearby mills.

Terraces and pairs of workers' cottages are common all around Stroud and the valleys. Where space was at a premium, three storey cottages were sometimes built **(below)**. Some are scattered along the canal, as at Ryeford (Canal Cottages, **above right**) – a rare example of canal-fronting terraced housing. The lock cottage at Puck Mill (**left** and page 48) was a tiny, isolated detached cottage, more usual among canal-related cottages. The cottage has been extended at the rear, in traditional style, and roofed in clay double-Roman tiles to match the main cottage – an unusual departure from traditional local roofing materials, but a handful of other examples do exist in the Study Area, particularly close to the canal.

Another striking variation is at Stanley Mill **(left)**, where a long, narrow stone building was extended upwards in the 19th century to form a row of cottages. A great illustration of the lively mix of materials which particularly characterises the Stonehouse area.

Although uniform terraces are common, variety also makes for interesting roofscapes and street scenes, particularly within sloping valleyside settlements. (see pictures **below left**): dormers, chimneys, varied roof pitches and coverings, timber lintels, etc. Sash and bay windows are 'polite' developments.

Court Farmhouse **(right)**, in Stonehouse, shows the increasing influence of polite architecture over the local vernacular. There is some attempt at formality, with a wide frontage, panelled door and near-symmetrical fenestration. The windows are in fact very slightly off-centre, giving the building a casual charm. Many houses have no habitable attic space due to the shallow roof pitch, but here small hipped-roofed dormers perch upon the stone slate roof. Just up the road, Tankard House at Ryeford echoes Court Farmhouse but is rather more altered. It forms part of a tight cluster of buildings, of varied styles, materials and scales. At Longfords Mill, the former manager or foreman's house **(above right)** is much less formal and shows the quirky signs of having been altered extensively over its lifetime.

This style was also employed on a vast array of industrial buildings. **Clockwise from left:** Illes Mill, Chalford – a typical long, narrow mill; the towering Dunkirk Mill, with leaded-light casements; the compact, cuboid form of Holcombe Mill, Avening; linear, low-level workshops at Stanley Mill.

New materials, the rise of 'National' styles and Polite architecture: 18th, 19th and 20th century architecture

7.13 Many materials have a long history in the study area, having been used since medieval times or even earlier. But the ways in which these materials were used changed over the centuries, giving buildings of different periods their distinctive characteristics.

7.14 From the 18th century, the constraints of locally made materials, resources and technologies held less and less influence over the appearance, scale and uses of buildings. **Vernacular** traditions – rooted in local craftsmanship and an artisan-based hands-on approach to building – were increasingly discarded in favour of more self-consciously designed **'Polite'** architecture. Nationwide (even worldwide) fashions in architecture and design, coupled with technological advances and a rapidly developing transport infrastructure, acted to bring fresh architectural ideas and materials to all corners of the country. Right across Britain, a gradual homogenisation of architecture was set in motion, which continues to the present day.

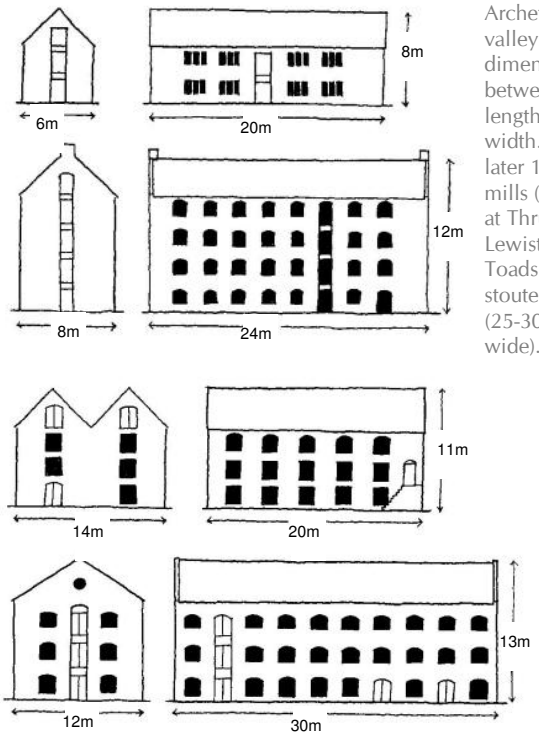
7.15 However, this is not to say that local distinctiveness died out. In fact, local tastes, traditions and materials continued to influence the appearance of buildings to a very significant degree. Factors such as topography, local craftsmanship and materials meant that national styles and fashions were interpreted and adapted in a locally distinctive way.

7.16 The built environment in the Industrial Heritage study area is a lively mixture of materials and architectural styles. Broadly, the early brick/stone divide between the vale and the valleys continued throughout this period. But improvements in transportation (particularly the late 18th century **canals** and the 19th century **railways**) meant that materials could be moved about the district or imported from further afield. In particular, brick and slate have made a big impression in the building stock of the conservation area.

7.17 The canals, railways and turnpike roads all had their own distinctive building vernacular and the growing transport infrastructure also opened up new potential building land. Many of the buildings adjacent to new or improved **roads** display architectural characteristics which are clearly related to distinct phases of development, such as the red brick roadside terraces which sprang up from the mid 19th century.

Major influences:

- 18th century canals (Stroudwater: 1775-9; Thames & Severn: 1783-1789)
- Turnpikes; road improvements and 19th century road-building (including: Cheltenham-Bath Road [A46]: 1780s and 1800; London Road [A419]: 1814; Cainscross Road [A419]: 1825)
- 19th century railways (Great Western: 1845; Midland: Nailsworth-Stonehouse Branch of 1867 and Dudbridge-Stroud Branch of 1883-5)
- Centralisation of cloth manufacturing processes and the demise of cottage industry
- The industrial steam age
- 18th and 19th century architectural pattern books and mass production
- Advances in materials technology: plate glass, cast iron, steel...



Archetypal Stroud valleys mills have dimensions of between 20-40m in length and 6-10m in width. Some of the later 19th century mills (e.g. Dyers Mill at Thrupp and Lewiston Mill at Toadsmoor) have stouter dimensions (25-30m long 10-12m wide).

Plan depths rarely exceed 12m; wider footprints (such as Belvedere Mill at Chalford) are sometimes made up of two ranges, side by side, under a double-pile roof.

Right:
Typical dimensions of mill building in the conservation area

...Mills and factories

7.18 The earliest water-powered mills were tiny establishments and would be almost unrecognisable to us today as 'industrial' buildings. They were often very isolated, within a sparsely populated landscape and, in terms of external appearance, many mill buildings looked rather domestic.

7.19 Mill owners tended to live on site, with houses built close to or even attached to their mill buildings. In later years, these buildings were often adapted to house industrial processes, abandoned, or demoted to mill managers' houses – from the 18th century, clothiers who had accumulated wealth and status tended to build large houses at a little distance from the growing mills.

7.20 By the 17th century, mill buildings had begun to evolve into a slightly more distinct genre, while still based firmly in the local building vernaculars. The **long, narrow plan form, with a simple pitched roof, and windows on the long sides of the building**, is a familiar occurrence in both the Vale and the Stroud valleys. 17th and 18th century mills still relied on waterpower and often spanned the fast-flowing streams or leets, which were contructed to divert riverwater and allowed the power to be regulated and harnessed with millponds, sluice gates and, finally the mill's waterwheel.

7.21 Few early mills survive intact, even beyond the confines of the IHCA study area. Most were rebuilt during the late 18th and early 19th centuries, although the historic core buildings of several mill sites can still be found in amongst some re-developed sites.

7.22 Of these survivors, workshops and mill houses are more prevalent than the actual mill ranges. At St Mary's Mill, though, part of the old water mill does survive, albeit in an altered form. It has obvious vernacular characteristics (see below left), despite its corrugated iron roof.

7.23 At the dawn of the 19th century, **the factory system** was rapidly transforming the face of the local cloth industry. Many mills underwent massive expansion, partly spurred on by improved transport infrastructure and, around 1820, the arrival of steam power locally. Processes that had historically been dealt with off-site were increasingly centralised into the mills, and a vast range of **ancillary structures** were built to house specialist facilities. A selection of the architectural approaches taken for such structures is shown on page 46.

7.24 Most mill sites in the study area comprise a rambling collection of buildings, usually dominated by the long, narrow main mill range.

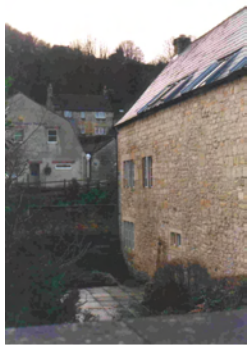
7.25 Most mill buildings dating from this massive rebuilding and expansion phase, up to the first quarter of the 19th century, tend to have the appearance of the classic Stroud valleys mill: **long, tall, narrow; built of stone; repetitive, regular fenestration; pitched roof**. This is true right across the Study Area, with main stone mill ranges occurring as far west at Eastington at Millend Mill (1818) and Meadow Mill (early 19th century, but much altered and reduced in size). **Welsh slate** was increasingly used as a roofing material, although **stone slates** remained common in the east and south, until well into the 19th century.

Left: A late C17th/early C18th mill building at St Mary's, Chalford, still firmly rooted in the local vernacular. The original 2-storey building, of rubble stone with 3-light stone mullion windows, was extended upwards and to the left in the later 18th century.

Right: Adjacent, the c.1820 main mill building dwarfs the older range – at four storeys plus attic, this is among the largest mill buildings in the study area. The greater formality and architectural sophistication is typical of mills which underwent early C19th expansion.

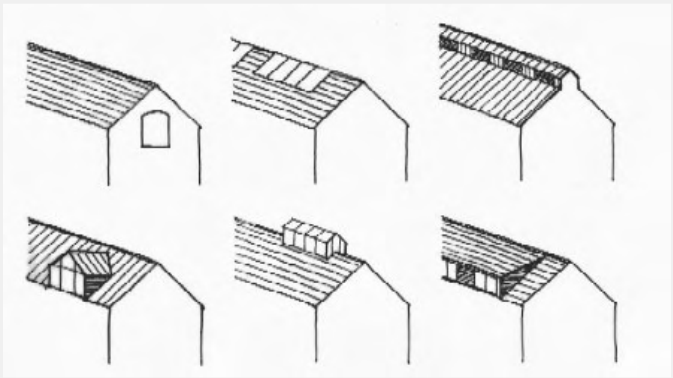
Vernacular characteristics on a former workshop at Arundell Mill **(above)**, attached to the mill house.
Left: the stone mullion window betrays the early origins of this altered building in Nailsworth.

Right: An early 19th century former dye house at Bowbridge. The long, narrow form, with pitched slate roof and repetitive fenestration, is locally typical. The blank expanse of rubble stone on the rear elevation is a distinctive contrast to the front.



Right: A loading door high up in the gable-end ("pine end") is a common characteristic. Raw materials were hoisted up to it.

Traditionally, a variety of architectural devices have been used to light and ventilate the roof spaces of mills and their ancillary buildings. These often represent a very distinctive component of a building's character. Some 'blend in' with the roof, while others are very eye catching and give the roof greater visual dominance. Equally, roofs which have never been lit or occupied can have a discreet, streamlined and visually unobtrusive character of their own, which can be harmed by inappropriate alterations such as the addition of dormers.



Above: Dunkirk Mill is an exceptional group. Unlike sprawling Longfords Mill in the Avening Valley, Dunkirk expanded upwards – reaching a towering five storeys plus attic in places. The Coopers Mill range (on the right) has unusual large dormers.
Below: Stanley Mill is quite unusual in being a large brick-built early 19th century mill. The delicacy of its iron windows and other details relieves the potentially oppressive bulk of this massive brick structure.

Left: Mill buildings dating from the first half of the 19th century (a period of intensive expansion and rebuilding) often share visual characteristics, despite differences of scale.

7.26 In terms of scale, **two and three storeys were common, while four and five storey mills are among the largest structures in the district**. At five storeys plus attic, the 1828 Coopers Mill range at Dunkirk Mill (Inchbrook) is exceptional. Sometimes, as here, the upper storey is accommodated within the roofspace. Coopers Mill features unusually large pitched-roof **dormers**, covered in stone slates. Adjacent, the central block of 1798 bears the visible scars of an 1818 timber-framed extension, which added another two storeys. This included an unusual mansard-style roof, which acts like a '**clerestory'**, with windows along the sides. A true **mansard roof** is seen at Upper Mill in Stonehouse (1875), which has original **iron rooflights**. Together with the tall stair tower, with its clock and steeple-like roof (reminiscent of nearby Ebley Mill), this unusual roofline makes for a distinctive local landmark.

7.27 At the north end of Dunkirk mill, the 1818 Walker's range has **continuous 'catslide' dormers**, clad in slate. These continuous dormers are also seen at Ebley Mill and St Mary's (Chalford), which are of a similar date.

7.28 The main ranges at Ebley Mill and St Mary's Mill (Chalford) date from 1818 and 1820 respectively, both superseding earlier mill buildings. They have much in common architecturally. The **windows** are very distinctive – a sort of elegant re-interpretation of the traditional vernacular stone mullion, with swept heads.

7.29 This window design crops up on several mills in the study area, while others of a similar date, such as Fromehall, Dunkirk and (on a smaller scale) Illes Mill, have **segmental arched windows**, with typical Stroud dressed stone heads. At Lightpill Mill, the early C19th range is fairly unusual in its combination of **brick arched window heads** with rubble walls. The later (mid-19th century) range, attached, shows the **persistence of stone mullion windows**, albeit stripped back to a very basic form, without hoodmoulds or ornamentation.

7.30 As well as standard timber casements, a particularly characteristic **industrial window type** consists of predominantly vertical timber or iron glazing bars, perhaps with just one or two horizontal bars on particularly large windows. This gives a distinctive industrial appearance to many buildings, including small ancillary structures, which may otherwise appear quite domestic. Stone mullion windows are often direct-glazed (glass set directly into the stone) or have iron-framed opening lights. Iron casements are common, including the leaded-light windows at Dunkirk Mill. The development of mass-produced cast iron allowed larger windows to be formed, giving later 19th century buildings a distinctive 'light-and-airy' appearance (compare the tall 1862 block at Ebley Mill with the earlier 1818 range, to which it is attached).

7.31 In the 20th century, steel windows became common. These have an equally distinctive, utilitarian character, which suits the industrial environment.

7.32 Fire was a great risk, particularly since wool fibres acted as effective tinder. **Many sites underwent rebuilding following fires.**

7.33 Stanley Mill at Ryeford is Grade I listed, of national importance. It is exceptional in terms of size and construction. This massive watermill was built in 1813, when the steam age was just around the corner. But it was notably innovative in being a pioneer of fire-proof construction. Unlike the chunky timber beams traditionally used to support the floors of most mills (including Ebley, which is later in date), Stanley Mill is built around a cast iron frame, with columns set out to allow space for machinery.

7.34 Even throughout the 1820s, many new mills were designed for **waterpower** and Stanley Mill **straddles the watercourse**, as was usual. Sometimes leets were constructed to artificially divert the river and form a mill race. Ebley Mill formerly had five waterwheels, the arched recesses for which are still visible on the river side of the mill.

7.35 In 1822, steam power arrived at Stanley Mill and, like many other mills, a detached engine house was built. **Tall chimneys**, towering high above the mills, became a distinctive feature of the local industrial landscape. Many of these have been lost or truncated in the 20th century, but chimneys, whether brick or stone, continue to punctuate the valley bottoms – particularly along London Road.

7.36 East and south of Stroud, most mills are set in the very bottom of the valleys, often below road level. In spite of their **landmark chimneys and water towers**, they are often quite shielded from view. As a general rule, **mill ranges and their ancillary buildings 'turn their backs' on the canals and roads and present blank, hard edges as their public faces.** Tall perimeter walls are common, particularly along main-road or canal frontages, often with vehicular or pedestrian access marked by distinctive brick, stone or timber gatepiers and timber or iron gates.

7.37 As a large mill, built early in the 19th century, Stanley Mill is quite unusual in being brick-built. Some early brick mills do exist (Fromebridge Mill, for example), but **brick was principally a material of the later half of the 19th century** – although it was used for many minor additions and ancillary structures, as well as boundary walls.

7.38 At Upper and Lower Mills in Stonehouse, two brick buildings by architect William Clissold, are characteristic of later 19th century redbrick industrial buildings. Upper Mill, 1875 (pictured right) is a purpose-built steam-powered mill (also a post-fire rebuild, on the site of an earlier mill).

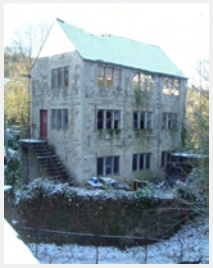
7.39 The large three storey warehouse building at Lower Mill dominates the site today, but is a mere fragment of what once stood there: at its height, five large ranges and a mill house existed here. The surviving 1889 Clissold building is robust looking, with strong vertical projecting piers separating the windows and loading doors.

7.40 These brick piers seem to be a characteristic of late 19th century industrial buildings, particularly around **Stonehouse and Dudbridge**. The single-storey loomsheds lining the dual carriageway at Dudbridge, which provide powerful visual and physical enclosure, also make use of this robust detailing on an elevation which otherwise has very little relief. The main mill range itself is quite splendid. Sitting hard on the water's edge, with repetitive bays of arched windows and a tall clock tower, capped with a water tank, this building seems to make romantic reference to Renaissance Italy!

7.41 The use of **brick** does extend further into the eastern and southern legs of the Study Area – notably at Griffin Mill in Thrupp and Lewiston Mill at Brimscombe, which have a great deal in common architecturally (pictured right).

7.42 At Cheapside, the landmark Hill Paul building was purpose-built as a ready-made clothing factory in the late 1890s – an example of the **diversification** that many cloth-making companies were forced into. The building retained the large, open internal spaces of many 19th century mills (although now subdivided into flats), propped on iron columns. Where this building was truly innovative was in its philanthropic provision of toilet facilities for the workers: a combined toilet and stair tower projects at the back. This was real progress! Hill Paul ushered in a new era in the working practices and industrial diversification of Stroud and the nation.

7.43 Changes in the availability of materials, progress in building technology, changing industrial practices, and social and economic conditions have all influenced the form of industrial buildings, as well as the detail. The way that buildings in the industrial environment were used, and what was required of them, evolved – and continues to do so, up to the present day. Characteristic built forms of the later 19th and early 20th centuries show the influence of changing technology: **the desire for large, tall, narrow mills declined as the 20th century approached**. Mill complexes increasingly featured large, low ancillary buildings, their form dictated by the desire for large, flexible, open-plan floorspaces, preferably all on one level. Hence, the characteristic 'zig-zag' or 'saw-tooth' roof profile, which allowed large ground areas to be spanned. The irregular roof pitches also enabled light to flood in through the glazed steep slope, which typically faces north – these buildings are termed **north-light buildings**.

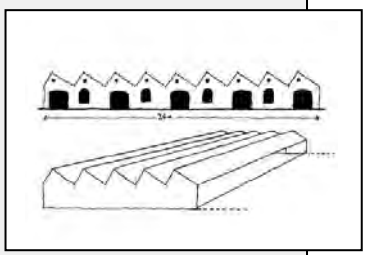




Ancillary buildings: Specialist structures such as teasel stores, dye houses, gig mills and wool drying stoves were dotted about the industrial landscape, including the distinctive 'roundhouse' at Woodchester (an 18th century wool stove, later a teasel store). But during the late 18th and early 19th centuries, the cloth industry became increasingly centralised and mill groups expanded rapidly to include these facilities on site. A vast range of architectural treatments was adopted for such ancillary structures. Bourne Mill at Brimscombe is a good example of a late 18th/early 19th century group, including a probable separate gig mill and square-plan wool stove, which each have a distinctive upright appearance, with external stone steps. A late example of a teasel store exists at Stanley Mill in Ryeford (dated 1885). It is built of brick and stone, like many buildings in and around the mill.

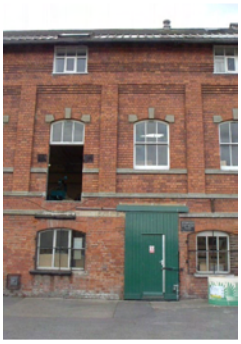
Ancillary buildings range from the most basic, functional boxes to little architectural masterpieces in their own right. Several mills, such as Stanley Mill, Ryeford (below right) and Lewiston Mill, Brimscombe (below left) have minor buildings which complement the main mill ranges by picking up their architectural motifs and details and by using a similar palette of materials. Office buildings and caretakers' or managers' cottages often tended to be sited close to the site entrance and frequently make an attractive group, together with walls and gatepiers. These are commonly distinguished from the industrial buildings through a change in scale and sometimes (as at Redlers at Dudbridge) by changing materials and architectural treatment – generally having a more domestic appearance.

Roadside and canalside buildings are frequently quite low, with a strong horizontal emphasis and a general lack of windows or doors: later phases of expansion are often found at the perimeter of these sites, particularly the redbrick northlight buildings of the late C19th and early C20th, with their distinctive zig-zag roofline. These buildings occupy some of the largest footprints in the conservation area (up to 50m wide by typically 30-40m deep), and the distinctive self-supporting roof can span huge, flexible internal spaces without the need for partitions.



Red brick is typical of Stonehouse mills and many later C19th buildings. **Above:** The distinctive and unusual mansard roof at Upper Mill, Stonehouse (1875). The steeple-like clock tower, capped with decorative ironwork, is reminiscent of nearby Ebley Mill. **Right:** Robust detailing on a warehouse at Lower Mill, including projecting brick piers. Merretts Mill, Inchbrook, **(below)** is similarly robust in character, thanks partly to the use of black brick. It is used more sparingly at Griffin Mill **(right)** and Lewiston Mill **(below right)**, producing a lighter, more airy appearance.





Above: water towers, together with clock towers, chimneys and (in more modern times) lift shafts and loading bays, are common features of mill sites and often provide a landmark vertical emphasis. **Right:** The Hill Paul clothing factory, built at the close of the 19th century.

Further sources of information on mills and mill-related structures are listed in the **BIBLIOGRAPHY.** Amongst these, the *Buildings of England* series is a good basic reference for the location, date, characteristics and significance of local mill buildings. *Gloucestershire 1: The Cotswolds* (1999) and *Gloucestershire 2: The Vale & Forest of Dean* (2002), both by David Verey & Alan Brooks, published by Penguin.

…Canal-related structures

- locks, wharfs, basins, overflow weirs
- bridges (hump-backed, swing, iron)
- lock cottages; wharf cottages, etc
- warehouses
- pubs

7.44 Three canals pass through the IHCA study area: the **Stroudwater Navigation** (which opened fully in 1779), the **Thames & Severn Canal** (1789) and a short stretch of the **Gloucester-Sharpness Canal**, which was begun in 1794, but only reached Saul Junction (where it crosses the Stroudwater) in 1820.

7.45 In many respects, these Georgian canals pushed at the frontiers of the building technology at the time. These were impressive feats of engineering – to climb the Cotswold escarpment, the Thames & Severn required a staggering 28 locks to be constructed, and the Sapperton tunnel is another triumph.

7.46 But they were, nevertheless, constrained by the sorts of materials and skills that were available and much of **the canals' infrastructure and associated buildings reflect the prevailing local vernacular of the 18th and early 19th centuries.**

7.47 **Brick** is well-used for canal infrastructure by both Stroudwater and Thames & Severn. In the case of the Stroudwater, at least, bricks were manufactured from the clay that was dug out during the canal excavation, and temporary brickworks were sited on Saul Fields, just south of the canal, and at Chipman's Platt, as well as elsewhere along the route.

7.48 A great variety of **bridge** designs exist, partly due to the building or rebuilding of bridges at various points following the canals' original inceptions. Originally, both the Thames & Severn and Stroudwater had very distinctive bridge designs. Of the hump-backed type, the vast majority were brick built. Occupation Bridge, Wesfield Bridge and Newtown Bridge are good examples of the original 'house style' on the Stroudwater – the latter also known as Roving Bridge, as the design incorporates the towpath 'roving' from one side of the canal to the other. On the Thames & Severn, Whitehall Bridge, dated 1784, and Stanton's Bridge (c.1785) are typical brick examples, while 1783 Clowes Bridge at Chalford is a striking stone bridge, named after the canal's principal surveyor and engineer, Josiah Clowes.

7.49 Swing bridges were also common on the Stroudwater. Some were original to the canal, but many of the hump-backed bridges were replaced over time. Early swing bridges were flat-bed timber decks, with minimal timber handrails. In the 1880s a distinctive iron design was introduced, braced diagonally by iron rods. At Saul Junction a bridge survives largely in tact, but the basic structure of such bridges can sometimes still be spotted beneath modern alterations, as at Bonds Mill in Stonehouse. Iron lattice-sided bridges also feature, including the pretty swing bridge at Ryeford (Stroudwater) and the Jubilee Bridge at Thrupp (Thames & Severn), both of which date from the later 19th century.

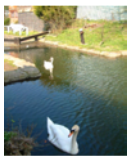
7.50 At bridges, the **canal sides** often curved inwards, forming pinch-points to allow the bridges to span a minimal distance. Here, the canal edges were often lined with brick, forming a hard edge. Similarly, lock chambers and specific points on the canal edge such as wharfs and dry-docks were usually built in brick, although stone examples exist too, notably at Saul Junction, where massive blocks of pinkish Forest of Dean Sandstone are seen. Hefty stone slabs were usually used as coping, below which the brick or stone lining was rarely visible above water (except when the lock chambers were in low water). Wharf edges generally sat close to water level, to allow easy transfer of goods ashore; the modern tendency to build hard, "wharf-style" walls at the canal edge (often in conjunction with new canalside development) is entirely untraditional.

7.51 **Aside from these occasional features, the edges of the Stroudwater and Thames & Severn Canals have always consisted of soft, grassy banks.** These are fundamentally rural canals, which bypassed the centres of the villages and towns along the canals corridor, instead serving the outlying mills.

7.52 **Inns** (or former inns) account for a significant number of canalside buildings. Most boats using the canals were day boats, with no living accommodation on board. Inns and alehouses sprung up **close to many locks, bridges and wharfs**, offering accommodation and facilities.

Left: The wharfkeeper's cottage at Eastington coal wharf (now concealed behind massive extensions) was typical of the dolls-house-like simplicity and modest scale of canal-related cottages.

Puck Mill Lock cottage **(right)**, once typical of Thames & Severn cottages, has also been extended. The original scale and form of the cottage has been lost, although the extension has been sensitively detailed **(below)**.



Above: Thames & Severn warehouses (Wallbridge and Brimscombe), stone built with distinctively tall loading doors, edged by large dressed-stone quoins.The massive stone retaining wall at Wallbridge Wharf can be spotted on the painting in chapter 1.

Below: cottages backing onto the stone-edged towpath at Framilode

Above right: The Stroudwater warehouse at Wallbridge. **Right:** the clay-tiled boathouse at Dock lock, Eastington

Below: A painting of Brimscombe Port, housed in Stroud's Museum in the Park. Stone walls encircled the port, many of which are still intact – particularly at the Bourne Mill end. Stone boundary walls are a particular feature of the Thames & Severn

Pike Lock Cottage (Stroudwater, 1878) and the Roundhouse at Chalford Wharf (Thames & Severn, 1790-1) are examples of the several variations on the classic rectangular workers' cottages built by the canals companies. The Roundhouse is one of five on the Thames & Severn, all clearly designed and sited for their visual effect. Built of rubblestone (originally rendered), with a conical roof, one theory is that the roundhouses were inspired by the teasel towers and wool stoves that were already a familiar feature of the local industrial landscape. The later Pike Lock Cottage, built of red brick under a slate roof, with brick and stone ornamentation, timber bargeboards and sash windows, is a typical late-Victorian transport-related dwelling. It is comparable in many ways with the railway architecture that also features locally.

Below clockwise from top right: Stroudwater bridges often have stone springing stones and keystones. Grooves have been worn by the tow ropes dragging against the stone; Westfield Bridge (Stroudwater); stone-built Clowes Bridge and brick Stanton's Bridge (Thames & Severn)

Below: The Stroudwater has a strong tradition of swing bridges, which have a discreet, streamlined character. To some extent, the low visual impact of replacement flat-bed structures (or much-altered originals) does repect this.

See **BIBLIOGRAPHY** for further sources of information on the location, history, characteristics and significance of canal-related structures in the study area. Two readily available references are: *The Stroudwater Navigation* by Joan Tucker (2003) and *The Thames & Severn Canal – History & Guide* by David Viner (2003), both published by Tempus.

7.53 Names such as the Ship or the Anchor were common, denoting their canal dependence. Some inns were purpose-built, such as the Stroudwater company-built Ship, which formerly sat at Wallbridge Basin. The Daneway Inn was built by the Thames & Severn company in 1784 to provide lodgings for navvies working on the Sapperton tunnel. It was formerly known as the Bricklayers Arms and is vernacular in its styling and materials.

7.54 Inns were also adapted from private houses, as at Framilode (also the Ship) and the former New Inn at Newtown. **The various origins resulted in a variety of architectural treatments**, although the New Inn and Ship are not untypical, being examples of the late 18th century vernacular: brick built with stone window heads in the pattern of stepped voussoirs, sash windows, and brick dentil cornice at eaves level.

7.55 **Along the length of both the Stroudwater and the Thames & Severn canals, the number of canalside houses is actually surprisingly small - and canal-fronting houses are even more rare.** At Framilode, a row of brick cottages called Canal Row backs onto the towpath. These were historically occupied by boatmen and their families and the canal company charged the occupants annually for every window that overlooked Stroudwater property. Almost all the windows on the canal side of the Row are modern; this was originally a very **blank elevation**. This story perhaps provides one of many potential reasons for the historic rarity of canal-fronting dwellings on the Stroudwater and the Thames & Severn.

7.56 By far, the majority of houses and cottages that do exist have had some **direct historical and functional association with the canals**, whether specifically built by the canals companies or by private enterprises. Those built for lock keepers, swing bridge operators, lengthmen and wharfmen were sited in extremely close proximity to the place of work and were often quite **remote**, due to the rural nature of the canal. These cottages provided minimal, basic accommodation – but to a very high standard for the day.

7.57 Those constructed in the late 18th and early 19th century are typical of **local Georgian cottage vernacular** (predominantly brick for the Stroudwater and stone for the Thames & Severn). The smallest consist of dolls-house-like simplicity, with a wide frontage and shallow plan depth, and a simple pitched roof. Brick chimneys punctuate either end of the roof ridge, and the near-symmetrical fenestration consists of central plank door, flanked by arched-headed casement windows. Both clay tiles and Welsh slate were used to roof buildings in the west, while many Thames & Severn buildings originally had stone slate roofs, some of which were subsequently replaced with slate or, unusually, clay double-Romans.

7.58 Some houses and cottages were originally built with a small single-storey lean-to, providing storage, stabling, a wash house, kitchen or brew house (brewing was a common source of additional household income). These are often sited to the side and sometimes to the rear.

7.59 A few canal-related dwellings have rather more architectural pretension, including the former **Stroudwater company's headquarters**, built 1795-6 to house the company clerk at **Wallbridge Basin.** The design, with a wide pediment (with central oval window) and two-storey flanking wings, is curiously similar to the Thames & Severn wharfhouses at Cricklade, Cirencester and Kempsford (all three outside the study area and all dating to c.1789). This is an interesting building – a hybrid of vernacular and polite influences. To the rear, the rubblestone building has a scattering of stone mullion windows, while the front is formal, with fine ashlar stonework and large sash windows with fine glazing bars.

7.60 A tiny brick weighbridge house, with a hipped slate roof, once stood in front of the house at Wallbridge Basin. Although the infilled basin is barely discernible today, much of its stone edging may be intact, and the distinctive **Stroudwater company warehouse** also survives. Built of red brick with contrasting stone dressings, it has a very attractive appearance, although it has suffered considerable alteration.

7.61 An intriguing stone gateway marks the western entry point to Wallbridge Basin on the towpath. It bears the scars of the countless tow ropes dragged against it and many bridges show similar deep grooves. This gateway suggests the canal companies positively

marked the extent of their property and enclosed key features (such as the basin) with **substantial boundary walls**. These certainly existed at Brimscombe Port, and **the Thames & Severn is particularly characterised by the long stretches of good stone walling which often border the towpath.**

7.62 Wallbridge Basin and Brimscombe Port were important inland ports and were historically predominantly open spaces, with bustling wharfs. At Brimscombe, goods were transferred from the broad Severn Trows to narrow barges – the Thames & Severn is considerably narrower than the Stroudwater.

7.63 Among the **Thames & Severn's late 18th and early 19th century warehouses**, those surviving at Wallbridge Upper Wharf and at Brimscombe Port share characteristics. They are simple, two-storey rectangular buildings with a pitched roof and informally scattered openings. At Brimscombe, the 'salt warehouse' has a chunky timber louvred window. The vernacular rubble construction necessitates hefty stone quoins, which lend a particularly distinctive appearance to the tall, two-storey loading door openings that dominate the elevations (although the opening is infilled at Wallbridge).

7.64 Other much smaller **basins, inlets or ponds** occured sporadically along the length of the canals, often associated with boat-building or maintenance. A dry dock existed at Eastington (between Dock Lock and the old workhouse), with a maintenance yard sited on an island. The island is no longer surrounded by water, but a 19th century boat house does survive – albeit greatly altered. This structure (brick and ship-lap timber, with a clay Double-Roman tile roof) once housed the Stroudwater's icebreaker barge.

7.65 A distinctive and highly-engineered **spill weir**, just west of Dock Lock, has been extensively restored by the Cotswold Canals Trust. Nearby, the traces of a basic tramway can be spotted in the undergrowth, leading from Meadow Mill to its wharfing area. Interesting circular overflow weirs survive at Ebley (in the grounds of Holly Tree House and Bridge House and at Bowbridge, near the old dyehouse.

...Road- and Rail-related structures

- stations
- station houses and level-crossing cottages
- rail bridges and viaducts
- turnpike cottages and lodge cottages
- milestones & signposts
- coaching inns, hotels & pubs

7.66 In 1847, the Great Western Railway Company completed the Cheltenham-Swindon link, which passed through Stroud (the Stroud section opened in 1845). Stroud Station is the only one of numerous original GWR stations and halts to survive basically unaltered. The 1845 station buildings, designed by the famous Isambard Kingdom Brunel, are typical of Victorian railway architecture. **Provincial railway buildings often tended towards a rather eclectic 'cottagey' style, typically taking loose references from the local vernacular.** Here at Stroud, the golden limestone buildings (including some Arts & Crafts-influenced 1914 extensions) hark back to the early Cotswold vernacular, with features such as the robust chamfered stone window- and door-surrounds, hoodmoulds, pointed gables and tall chimneys.

7.67 Decorative iron columns and brackets, supporting the flat platform canopy, are also distinctive characteristics of this railway style. **The Victorian penchant for decorative detailing is also evident in the use of painted timber embellishments**, such as the charming canopy fascia, which looks almost like inverted picket fencing, hanging down like a pelmet.

7.68 At Nailsworth station, built for the now-disused Midland railway branch line in the 1860s, the station house has decorative timber bargeboards and deep overhanging eaves. The **fragmented form** of the building, with its projecting wings, assortment of single-storey lean-to rooms and its robust, statement chimneys, is typical of the Victorian interpretation of the local vernacular. The Victorians' (sometimes crazy) tendencies towards eclecticism saw architectural styles of all sorts thrown together: here, we also have an arcade of Romanesque arches with stout columns and intricately carved capitols.

Above, left & right: bridges and viducts are characterised by robust matierials, including iron and black brick. A detail from a painting in Stroud's Museum in the Park (c.1848) shows the original timber-built GWR viducts.
Top: Stroud Station adopts architectural characteristics of the earlier local vernacular.

Above: smartly painted timber, including decorative bargeboards, is a strong element of Victorian railway buildings
Right & below: 'cottagey' revivalist styles on Cainscross toll house and two roadside lodge cottages.

Inns and hotels were crucial to the vitality of the roads and railways, as with the canals. Many historic inns survive as landmark buildings in the Study Area and their architectural styles are often strongly related to the period during which the adjacent transport infrastructure was developed. The Ryeford Arms (bottom left), with its hipped slate roof, sash windows and its red brick highlighted by dressed stone details, is typical of mid-C19 roadside pubs. Behind its painted walls and modern alterations, the King & Castle at Brimscombe (bottom right) was once just as well-proportioned, well-deatiled and even more imposing.

7.69 On a more modest scale, **cottages were also provided for rail workers.** Like canal cottages, these were **generally sited immediately adjacent to the place of work**, such as the tiny brick cottage at the old level crossing in Woodchester. This cottage is much less ornamented, and its use of red brick and slate shows less acknowledgement of local traditions – it was probably a Midland Railway standard pattern (a similar cottage was built at the level crossing by Stonehouse Wharf, now demolished). But its form and proportions, like the Nailsworth station house, owes a lot to idealised views of cottage architecture.

7.70 There were a number of 'standard' GWR designs for Station Masters' houses, and also for signalmen, platelayers and station staff. These came out between 1885 and 1910, when the GWR had the money to carry out the work on a large scale. At Stroud, the former station master's house seems to be a variant of GWR's 'Type C': a slightly anomalous brick building, amidst Stroud Station's other golden limestone structures. This lovely, simple, square building is evocative of an early 19th century farmhouse or vicarage and has a polite (albeit provincial) elegance about it – although it seems likely the house was actually built in the early 20th century.

7.71 Some 19th century cottages exist, which are rather simpler and often have a very upright, skinny character – such as the red brick cottages adjacent to the level-crossing keeper's wooden hut at St Mary's, Chalford.

7.72 Like the Woodchester level-crossing cottage and several station buildings in the study area, a rather self-consciously cottagey architecture was also favoured by road-improvers in the late 18th and early 19th centuries. **Many of the former tollhouses dotted about the turnpike roads in the locality were built with an eye to the picturesque.** In the study area, a toll cottage was built for the opening of the 1825 Cainscross Road; a hipped slate roof and some form of a half-hexagonal bay on the front are typical toll-house features, and the tudor-arched recess at first floor would have housed a board displaying the toll prices. Many of the details here are 'revived' and reinterpreted from past styles, including gothic and the local vernacular.

7.73 Picturesque, 'revivalist' styles were also common on **lodge cottages**, another variety of roadside building, examples of which can be found throughout the study area. Big houses weren't the only buildings to have lodges. Many of the study area's mills have lodges or lodge-type office buildings adjacent the site entrance. On the Bath Road at Rooksmoor, a charmingly simple, small stone cottage, once acted as the gate lodge to the Woodchester priory. Its simplicity of form is given some architectural politeness by its delicately latticed casement windows, set in Tudor-arched stone mullions. **Lodge cottages often have a strong visual relationship to boundary walls or fences and are very often sited alongside grand gate piers and gates,** all of which are usually high quality – designed and built as a foretaste of the grand house beyond.

7.74 The railways are particularly characterised by the use of painted wooden picket fences adjacent to the infrastructure. Iron railings with simple arrow-head finials are also common, as at Stroud station and along the London Road between Brimscombe and Chalford.

7.75 **Railway structures often featured a livery, to provide a strong corporate identity:** bridges, fences, signage and the external joinery on many railway buildings (windows, doors, porches and bargeboards) were often painted in the company colours. Sadly, though, this tradition has virtually disappeared: throughout the conservation area, buildings have fallen into individual private ownership in modern times and have been redecorated.

Small details contribute much to the conservation area – things like milestones, ground surfaces, lamp posts or the characteristically robust forms of signage seen on business premises historically associated with the roads or railways.

…Clothiers' mansions, other large houses and polite domestic architecture

7.76 If you dig into the history of almost any of the study area' s most substantial houses, you will find some connection with the local cloth industry.

7.77 By the early 18th century, the fashionable new architecture of **classicism** was beginning to reach the provinces of Britain. As we have seen, the early local vernacular of the Stroud valleys was changing by c.1690, adopting classically influenced motifs and proportions (eg Southfield House in Woodchester, p36). But when Nether Lypiatt House was built c.1710, it was unlike anything seen before in the locality and it sparked a frenzy of home improvements amongst the wealthy and socially competitive Stroud clothier families.

7.78 Throughout the 18th century and early 19th, many existing mill houses were extended or rebuilt, while some were abandoned in favour of more fashionable new buildings, often sited at a little distance from the mills. In the valleys, mill owners' houses from this period are often set within substantial garden grounds on the valley sides, slightly elevated above the mills and overlooking the industrial valley bottom – including Dunkirk House, Wallbridge House, Stroud House (formerly Longford House), Fromehall (now demolished) and Stanley Park (overlooking Ebley Mill).

7.79 A large proportion of such buildings fall into a style that is popularly referred to as "Georgian". Although the impact of polite architecture really began to make its mark locally during the Georgian period (1714-1830), this loose term envelops a diverse range of distinct architectural styles (including Baroque, Neo-Palladianism, Neo-Classicism), which does not strictly correlate with the Georgian period. However, classical polite architecture is broadly characterised by features such as **symmetry**, classical **columns or pillars** (particularly in the form of porches), **pediments** and **sash windows** (which tend to give buildings a more **vertical emphasis**, in comparison to the vernacular mullions and casements).

7.80 St Mary's House at Chalford (late C16th with c.1720 and c.1820 additions) is a classic example of an early mill house, re-fronted and massively extended to give it a brand new up-to-the-minute façade.

7.81 Whereas the local vernacular is so distinctive with its attic gables and steeply pitched roofs, here the **formal, square proportions of the façade** are emphasised by the balustraded parapet, which minimises the visual impact of the roof. The **hipped roof** is a key development in the changing face of local and national architecture. **Shallower, less visually dominant roof pitches** were made increasingly possible in the later 18th and 19th centuries, as **Welsh slate** was increasingly available locally (although stone slates continued to be used). The **double-pile roof** (where two pitched roofs sit side-by side, so that the roof line looks 'M' shaped from the side) allowed deeper plan forms to be spanned without making the roof too tall and overbearing.

7.82 Similar facelifts were carried out at Chalford Place c.1710 (an expensive Baroque flight of fancy, which was never completed) and Lower Gannicox House near Lodgemore Mill (probably to keep up with its fashionable new neighbour, Far Hill, built in the mid-18th century and sadly now demolished).

7.83 While this style commonly makes use of **finely dressed ashlar stone**, Lower Gannicox House provides an example of a **brick** version. **Stucco** render was also used to immitage ashlar, while roughcast render often conceals the scars of such facelifts, particularly on more modest properties.

7.84 Late 18th and early 19th century houses are more streamlined in their detailing, relying heavily on **proportion and simplicity** to give them a formal elegance. Window and doorheads are often plain, lacking the ornate mouldings, architraves and pediments of earlier houses. Wallbridge House, Belvedere House (Chalford), Hillgrove House (Woodchester) and Eastington Park are typical of this period. Canted **bay windows** and bow-fronts were popular and often feature on more minor houses in the study area too.

Left and above: The frontage of Lodgemore House is one of the most splendid early 18th century mill house re-facings and contrasts with the gabled vernacular C17th rear. The 12 pane sash windows are among the most consistent features of C18th and early C 19th architecture.

Left: St Marys House at Chalford. An early C18th re-fronting of a late C16th mill house. The curved shell porch and architraves are typical of early C18th.

Above: Grigshot House at Rooksmoor was built in the mid-18th century and is an interesting hybrid: a formal frontage with fashionable sash windows, but still three cross gables. Lower Dudbridge House **(above right)** is late 17th century, re-fronted in the early 19th.

Below: Simplicity and proportion at Wallbridge House and Belvedere House; The mill house at Stonehouse Upper Mill was attached to the mill range and is now surrounded by industry; brick frontage at Lower Gannicox House (Cainscross) and Ryeford Lodge:

Right: Eastington Park was built c.1815 for powerful mill owner Henry Hicks. The frontage is formal with multi-paned sash windows (typical of the period), a Doric columned porch and minimal horizontal bands ("string courses"). An elegant three-storey bow at the side overlooks the grounds: the house is set in extensive parkland.

By the end of the 18th century, **polite architecture** was no longer limited to classically-derived forms and motifs. A more romantic movement brought revivals of earlier styles, such as Neo-Gothick, which harked back to medieval styles – including details like pointed 'lancet' windows and gothic-arched doors. Although many of these buildings have an affinity with the local vernacular, the difference is that they were **consciously designed in a particular style**, rather than being the product of strong local building traditions.

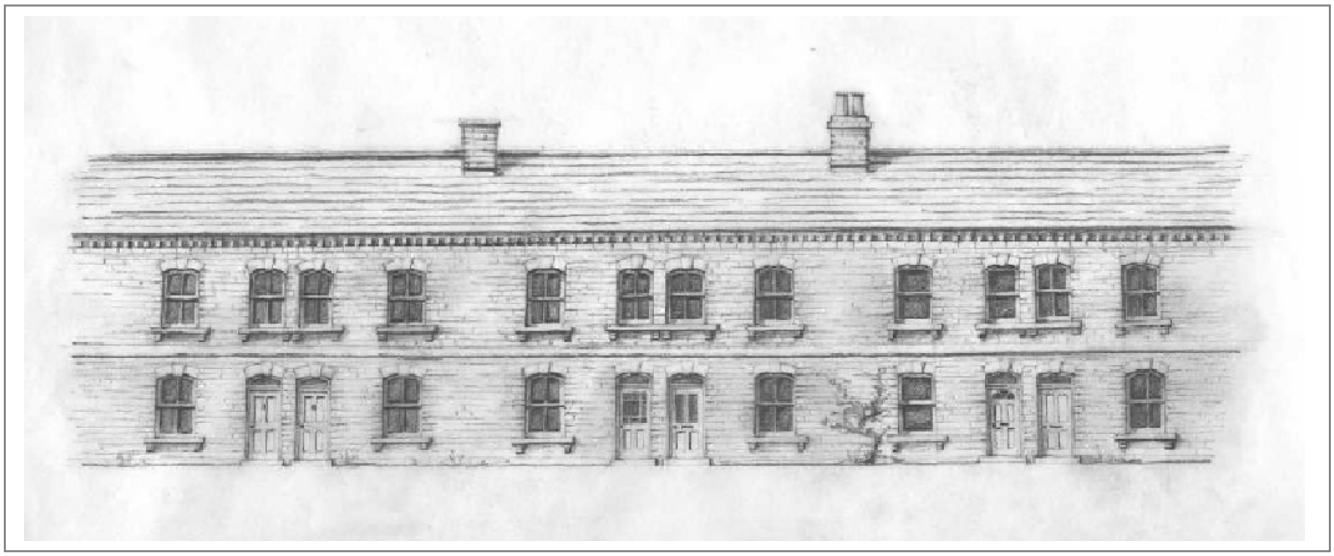
The Gables at Dunkirk Mill was built for the mill foreman, about 1840 and is a charming example of mid-19th century Tudor-Gothick architecture. The appropriation of a diverse range of earlier architectural styles and details culminated in the high Victorian eclecticism of the late 19th century. Ebley House (rebuilt 1875) includes some crazily ornate detailing.

7.85 **Sash windows** are amongst the most recognisable components of 'polite' architecture. Early sash windows (late 17th and early 18th century) have multiple panes –commonly twelve (six-over-six) with fairly chunky Ovolo-moulding **glazing bars**. Sash boxes were often exposed, and the windows sat flush with the outside wall or very close to the front of the opening. As glass technology improved, the designs were refined, with finer glazing bars and larger panes. 19th century sash windows typically have 'lambs tongue' mouldings on their glazing bars. **Sash boxes** were concealed in recesses from the late 18th century (a 1774 Act decreed that all sash boxes should be fully concealed – but these Acts were none too scrupulously adhered to, particularly in the provinces, and the gradual move to concealed boxes sashes was mostly driven by fashion). Throughout the 18th century, sash windows became less and less expensive, and began to appear as commonplace on even relatively humble cottages. Some even chopped out their old casement windows and inserted sash windows, to give the house a fashionable facelift. **'Horns'** (the short projections of the vertical stiles) were introduced from the mid 19th century, to give windows greater stability as the glazing bars became fewer and finer. These are characteristic of Victorian and Edwardian windows – they never appeared before the mid-19th century. When selecting a design for a replacement window or a new window in a n extension, attention to these sorts of details is essential. Windows can be among the most important clues when it comes to dating a building, and windows from the 'wrong' era can cloud the issue – and they simply look out of character.

Polite architecture was first experimented with by the wealthy, who lavished money on their own homes. However, trends quickly filtered down to a host of **minor domestic and commercial buildings**. 283 Westward Road (below, right) is an example of the many smaller houses and villas with polite characteristics, here typical of the later 19th century: sash windows, dormers, pitched slate roof with bargeboards, 4 panel doors. The simplicity and formality is an interesting contrast with the brick industrial range, to which the house is attached at the rear.

In the 19th century, the **terrace** became one of the most common building forms, characterised by repetitive fenestration and uniform windows and doors. Sash windows, which provide a distinct vertical emphasis to a building, are among the most persistent and recognisable characteristics of 18th, 19th and early 20th century polite architecture, except where conscious revivalist styles styles are concerned.

Below: a typical section of Upper Dorrington Terrace, Stroud. A very archetypal artisan terrace from the turn of the century. The uniformity of windows and doors and the regular pattern of openings is absolutely crucial to the original design concept and the character of the row. Alterations to wndows and doors, plus additions such as porches and dormers, can be very harmful to buildings like this, which rely on 'group value'.



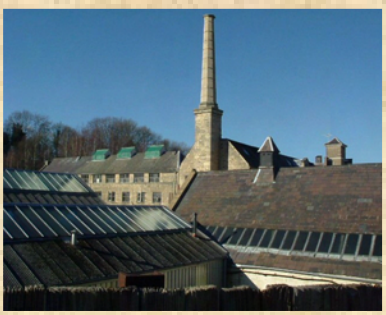
…Materials

7.86 From the 18th century, there was progressively better access to a broader range of building materials. Although stone continued to be used extensively, today a variety of materials, textures and colours are closely juxtaposed in the Industrial Heritage Study Area.

7.87 New and non-native building materials, which could be mass-produced and transported over great distances, began flooding into the local built environment from the mid-18th century.

7.88 By the 19th century, the impact of new materials and technologies was making its presence felt in the locality. The building types, styles, colours and details of this period account for an important component of the Study Area's character. Many of the new materials and styles are typical of contemporary buildings throughout the country and are less specifically linked to the 'local vernacular'. However, the ways in which these new materials were used, the types of buildings they were needed for, and subtle details that were incorporated, nevertheless maintained a sense of local distinctiveness.

- **Brick**
- **Slate**
- **Terracotta; clay tiles**
- **Iron**
- **Glass**
- **Slag block**
- **Steel**
- **Timber**



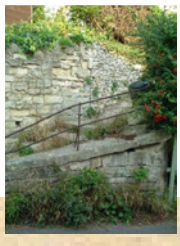
Clay tiles and terracotta:
Though far from common, examples of clay double-Roman tile roofs exist as far east as Puck Mill Lock (p48). These were mostly imported from the Bristol area, often occurring along the canal routes, and tend to be later replacement roof coverings. Terracotta was used decoratively from the mid C19th for a wide range of items, including ridge tiles.

Slate:
Traditionally, Welsh slate was the roofing material of choice in 19th century Stroud, usually laid in diminishing courses, like stone slates. Today, however, as with the distinctive local stone slates, traditional roofs are being eroded and lost, replaced by modern substitute materials, including concrete slates and tiles. Slate roofs are commonly repaired and replaced in Spanish slate today, which is cheaper and more widely available than Welsh slate, although it lacks the texture and subtle colour of the original material. Slate allowed shallower roof pitches to be constructed, which enabled buildings to meet the fashions of the day, including the hipped roof, popular from the mid 19th century.

Glass:
While the development of 'crown glass' had allowed glazed windows to be brought to the masses in the 18th century, 'plate glass' allowed larger panes to be produced and revolutionised window design in the late 18th century. During the 19th century, sash window design in particular benefited from increased pane size and finer glazing bars. In conjunction with cast iron (and later steel), new glass technology allowed larger windows to be incorporated into industrial buildings, too.

Stone:
Limestone still predominates as a building material in the valleys and hilltops to the east and south of Stroud. The villages at the foot of the Cotswold escarpment are also notable for a prolific use of stone.

Despite the influx of new and non-native materials, including Forest of Dean Sandstone (which features on several Stroudwater canal structures), the high quality native limestone remained in demand locally. Prized for its ability to be dressed into smooth ashlar and intricate ornamental details, it was also exported nationally. Throughout the Study Area, stone remains a popular material. It was used extensively during the earlier part of the 19th century and continues to denote status and quality on important key buildings.



- Walling
- Roofing slates
- Boundaries and retaining walls: ranging from rubble dry-stone walling to highly-crafted dressed stone walls (both dry-stone and mortared)
- Ground surfaces: 'hoggin', limestone chips, pavers
- Decorative dressed stone details. Window and door surrounds, ranging from early mullion windows to high Victorian and Edwardian embellishments (lintels, cills, date plaques...)
- Hefty slabs used for external structures such as steps and coping stones (including canal edging at wharfs and locks, etc)
- Major and prestigious buildings, including big houses (manors and courts, clothiers mansions) churches and mills

Limestone also provided the base material for **lime**: a versatile material, which can be used in mortars, plaster, render and as a protective paint-like coating on masonry. Buildings displaying flaky traces of old limewash are surprisingly common **(right)**.

The lower lias of the Vale produced poor, friable stone, unlike the good limestone of the Cotswolds. This marl or "mudstone" is crumbly and needed protective coatings of render when used for walling. Better quality Vale buildings feature limestone, transported from the east, while the red-toned Forest of Dean sandstone was also imported across the Severn.

Close to the escarpment, the best quality limestone "freestone" was easily quarried. This has a fine, fault-free texture and an attractive creamy grey colour. This stone is capable of being dressed to a smooth finish and is very robust:

- Large, **squared and dressed blocks** of freestone are characteristic of buildings in the conservation area around Stroud, and as far west as Stonehouse. Dressed stone and **ashlar** (the smoothest, most finely-dressed form of stone, where mortar joints can be as little as 3mm) was used on prestigious buildings, particularly those of the late 18th and 19th centuries.
- The stone was not always dressed, however. **Rubble construction** is also common, but some form of coursing is usual. Towards the eastern and southern extremities of the IHCA, rubble is more prevalent, including random rubble, which is uncoursed and undressed. Away from the escarpment freestone, the layers of sediment in the stone ("beds") are closer together, meaning that the size of block which can be cut from the quarried stone must be shallower.

When altering an historic building, or planning any new-build, it is important to pay close attention to the locally distinctive qualities of nearby stonework: the size of stone blocks, whether they are roughly squared-off or finely dressed, laid randomly or in horizontal courses, and the predominant colour and tone is important.

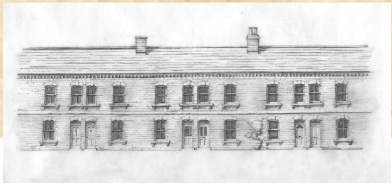
Getting this wrong can make even the most thoughtfully-designed building look alien. Some building products labelled "Cotswold" (both real and re-constituted) can be too yellow-toned to sit happily among traditional buildings in most of the Study Area.

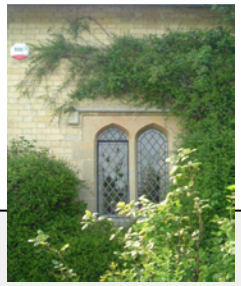
Brick:
Red brick is not simply 'red brick': each source of clay and each manufacturing process produced slightly different bricks, even within a very localised area. Over time, sources and processes changed, so that even neighbouring buildings can be made of bricks which have quite different characters.

In addition, a wide range of other brick colours are possible – locally, a creamy buff colour and a deep blue-black are among the most common, often used for decorative dressings. These bricks (together with the deep red bricks of the Stonehouse brickworks) are typical of the later 19th century and early 20th.

Red brick is a versatile material, used in a variety of ways throughout the study area. It is used in mass as a walling material, or sparingly for small details and additions to buildings made of other materials.

- **Minor additions**, such as chimneys, as seen on countless 18th and 19th century cottages, and sometimes as replacements for earlier stone chimneys.
- **Boundary walls**, ranging from long stretches of high garden wall, to the low front yard boundaries of 19th century roadside terraced housing.
- **Terraces of brick houses**. Many buildings relating to the 19th century road improvements are of red brick, often with detailing in contrasting coloured brick or stone.
- Many 19th and early 20th century **warehouses** and **ancillary industrial buildings** were built of brick.
- 19th and early 20th century **extensions**, particularly rear lean-to additions, to earlier stone buildings, houses and cottages. A thoughtful and sympathetic modern example of this is at Arundell Mill Cottages, where the brick is used attractively and serves to distinguish the extensions from the original stone 'core' of the cottages.
- As a **paving material** – for example, at the Bath Road end of Lodgemore Lane, bricks are used to form gutters in conjunction with the stone hoggin road surface.





The buff brick is similar in colour to the local stone. Indeed, like stucco render, it was sometimes used to give the impression of stone. In some cases, what appear to be stone details and dressings are in fact formed from a contrasting coloured brick.

Throughout the study area, yellow or buff coloured brick is used in a variety of ways.

- **Decorative** panels in conjunction with red and black on Lodgemore Mill, above
- As contrasting **dressings**, often **simulating stone**, around windows or as quoins, in conjunction with red brick (C19th brick terraces; the Hill Paul building)
- **Minor additions**, such as chimneys, as seen on Lodgemore House. There it has the effect of simulating stone

Black or 'blue' engineering brick – largely a material of the 19th century. Used in large quantities, these bricks have the ability to create very imposing structures. The Midland Railway viaduct and Lodgemore Mill both share qualities of robust, bold design, intended to create a statement of power, rigidity and stability, despite their rather utilitarian and unglamorous nature.

- Used to very striking **decorative** effect on Lodgemore Mill, and in smaller scale ways above doors and windows, in conjunction with red brick
- **Copings** to brick walls, including specially shaped bricks with a triangular or semi-circular section.
- Large structures related to the **railways**, including the former viaducts of the Midland Railway.
- A characteristically industrial **paving material** – including pavers with an incised diamond lattice pattern, often seen adjacent to canal infrastructure.

- Copper slag has natural water resistant qualities, so makes an excellent natural damp-proof course. Often used to form the **foundation courses** of brick or stone buildings (as at the Mill House, Lower Framilode), sometimes visible as a distinctive black 'plinth' at the base.
- On the waterside elevation of the 18th century range of Fromebridge Mill, large rectangular blocks are used for **walling** – possibly benefiting from water resistance.
- Used, like black brick, as **ornamentation** – contrasting against red brick or stone walling. Rectangular blocks make striking decorative **quoins** at Fromebridge Mill.
- Triangular or half-round blocks, cast in specially shaped moulds, used as **wall capping or coping** – not to be confused with black brick (see previous page).

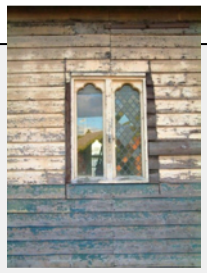
Slag block:
One rather unusual material in the study area has a peculiar interest due to its close links with industry and the local waterways. Slag block (sometimes called dross block) is a bi-product of copper smelting, which was carried out on a massive scale in the 18th century at Redbrook in the Forest of Dean, as well as Swansea and Bristol. Waste material could be cast in moulds, resulting in distinctive black building blocks.

Originally, blocks may have been used as ballast for boats transporting materials to and from the copper smelting sites – slag blocks are extraordinarily heavy. Hence, road transport (on roads which were often very poor, muddy and uneven) would have been difficult. Distribution and use of slag blocks in construction seems to be water-related, with 18th and 19th century examples scattered along the banks of the Severn and the Wye. In the IHCA Study Area, the Stroudwater brought this material at least as far as Wallbridge, although known examples are rare.

The production of slag blocks probably ceased towards the end of the 18th century, but blocks have almost certainly been re-used in 19th century structures.

While brick and stone are certainly typical building materials in the Study Area, Stroud's industrial environment also includes a wide variety of rather less substantial structures. Buildings of **timber** or **corrugated iron** (sometimes known as "crinkly tin") contribute a great deal to the character, texture and variety of the locality, but their heritage merit is often overlooked.

Although many are brightly painted (adding a welcome splash of colour to the industrial environment) with decorative details such as bargeboards, these buildings are all too often considered to be of negligible importance or aesthetic value – popularly seen as flimsy, temporary or tatty. The stock of these buildings is at very real risk of erosion, as more and more examples of a once common building type are simply swept away.



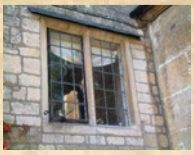
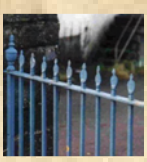
Above:
At Nailsworth, near the old Midland Railway terminus, some modern timber-clad houses show an echo of the Study Area's minor industrial buildings

Iron and Steel:
Iron window casements were used in early vernacular buildings and iron has been used for centuries to make decorative railings and items such as hinges and door furniture. But it was towards the end of the 18th century that the use of iron really took off, and technological advances over the 19th century allowed increasingly intricate and innovative uses to be made of the metal.

- **Decorative railings, gates** and other **ornamentation**, such as porches and canopies in cast and wrought iron. From highly formal to basic and functional, these are often integral parts of a building's design or setting. Today, many traditional designs are still produced in steel – although lacking the texture and craftsmanship of original cast and wrought iron.
- **Windows**. Wrought iron casements with leaded lights were introduced from the 18th century. Many C19th cottages have casements with a single horizontal glazing bar; stays and latches are often beautifully crafted. Iron (and later steel) allowed large multi-paned windows to be created, giving many of the mills a distinctive character. Crittal-style steel windows contribute to the industrial character of countless smaller buildings.
- **Structural reinforcement; cast iron columns and brackets** e.g the innovative fire-proof structure of Stanley Mill and the distinctive decoration at Stroud railway station. Columns allowed large, uninterrupted spaces to be created inside mills.
- **Utilitarian items:** cast iron rainwater goods; cast iron kerbs are distinctively robust - essential in a hardworking industrial setting
- **Bridges.** The canals, railways and roads made great use of iron and, later, steel.
- **'crinkly tin' buildings** (see facing page) Use of corrugated iron for roofing, minor additions and even for entire buildings, is quite characteristic of the local industrial environment. It was also commonly used in agriculture and was even considered acceptable for more socially prominent buildings, such as schools and churches – the Blue Tin Chapel at Thrupp lies within the IHCA and is quite a local landmark.

Timber:
The Victorians were great fans of decorative timber work, with particular attention paid to roof details. Many buildings of the period feature ornate fretted bargeboards, perhaps set off with a finial, and often combined with rafters projecting beneath overhanging eaves. The Victorians were also keen on porches and glasshouses, which benefitted from developments in glass technology. They often have a lightness and delicacy which adds to the character of historic buildings, where more solid brick or stone porches might appear bulky and obtrusive. These sorts of wooden details are traditionally always smartly painted.



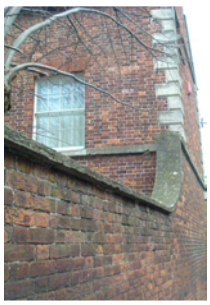




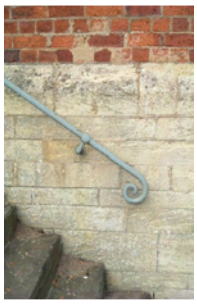

















The Little Details...

The character of a building is often in its detail, while quirky features bring an area to life. Decoration, ornamentation, 'scars', old signs, names and even historic paint colours can provide visual clues to the past and often represent expressions of local craftsmanship. These can all too often be the little things we simply do not notice until they are gone.

Every era has had materials and proportions, which give its buildings a distinctive look and make them seem 'right'. Historically appropriate windows and doors, for example, do an enormous amount to complete the appearance of a building.