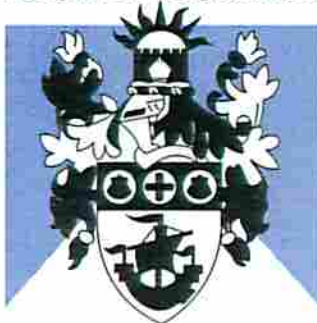


**Suffolk  
Coastal**

District Council



On 1<sup>st</sup> April 2019, East Suffolk Council was created by parliamentary order, covering the former districts of Suffolk Coastal District Council and Waveney District Council. The Local Government (Boundary Changes) Regulations 2018 (part 7) state that any plans, schemes, statements or strategies prepared by the predecessor council should be treated as if it had been prepared and, if so required, published by the successor council. Therefore this document applies to the part of the East Suffolk Council area formerly covered by the Suffolk Coastal District until such time that it is replaced.



This document was superseded on 1<sup>st</sup> June 2021 with the adoption of the Historic Environment Supplementary Planning Document by East Suffolk Council.

# The Suffolk Coastal Local Plan

## Supplementary Planning Guidance



13

## Historic Buildings: Repairs, Alterations and Extensions



Following the reforms to the Planning system through the enactment of the Planning and Compulsory Purchase Act 2004 all Supplementary Planning Guidance's can only be kept for a maximum of three years. It is the District Council's intention to review each Supplementary Planning Guidance in this time and reproduce these publications as Supplementary Planning Documents which will support the policies to be found in the Local Development Framework which is to replace the existing Suffolk Coastal Local Plan First Alteration, February 2001.

Some Supplementary Planning Guidance dates back to the early 1990's and may no longer be appropriate as the site or issue may have been resolved so these documents will be phased out of the production and will not support the Local Development Framework. Those to be kept will be reviewed and republished in accordance with new guidelines for public consultation. A list of those to be kept can be found in the Suffolk Coastal Local Development Scheme December 2004.

Please be aware when reading this guidance that some of the Government organisations referred to no longer exist or do so under a different name. For example MAFF (Ministry for Agriculture, Fisheries and Food) is no longer in operation but all responsibilities and duties are now dealt with by DEFRA (Department for the Environment, Food and Rural Affairs). Another example may be the DETR (Department of Environment, Transport and Regions) whose responsibilities are now dealt with in part by the DCLG (Department of Communities & Local Government).

If you have any questions or concerns about the status of this Supplementary Planning Guidance please contact a member of the Local Plan team who will be able to assist you in the first instance.

We thank you for your patience and understanding as we feel it inappropriate to reproduce each document with the up to date Government organisations name as they change.



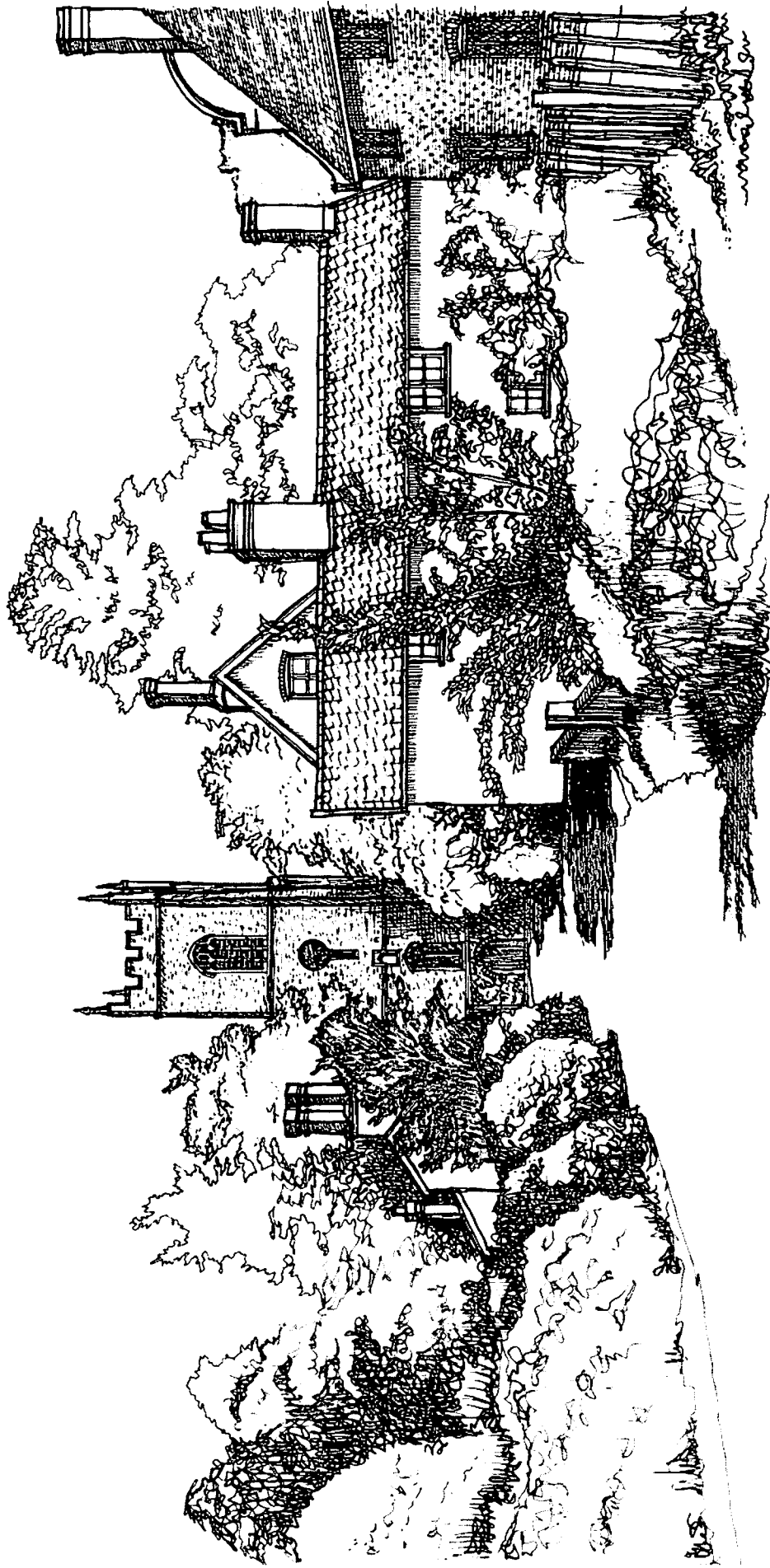


**HISTORIC BUILDINGS:  
REPAIRS, ALTERATIONS  
AND EXTENSIONS**

*PUBLISHED IN AUGUST 1997 BY:*

**THE DEPARTMENT OF PLANNING AND LEISURE  
SUFFOLK COASTAL DISTRICT COUNCIL  
COUNCIL OFFICES  
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Church Lane, Ufford

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# INTRODUCTION

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The Suffolk Coastal area has a landscape and built heritage which is widely recognised as being of highest quality and importance. There are over 2,700 Listed buildings in the District and currently (1997) 33 Conservation Areas. Much of the District lies within the Suffolk Coast and Heaths Area of Outstanding Natural Beauty, and there are also other important landscape areas such as the river valleys which have been designated as Special Landscape Areas.

The District Council is not only very aware of the value of this rich heritage but also, as Local Planning Authority, the responsibility it has for ensuring that the Area's attractiveness and architectural and landscape importance is properly conserved and safeguarded.

Pressure for change and development within the District has grown significantly in recent years and while much of this has had beneficial effects, it has also had unfortunate consequences. Adoption of the Suffolk Coastal Local Plan in December 1994 has now provided a clear policy framework for action to conserve and enhance the District's natural and built environment and one of the principle aims of the Plan is to achieve an appropriate balance between its conservation objectives and encouraging beneficial economic growth and change.

The Local Plan policies for conserving the built environment of the District include specific references to the publication of Supplementary

Planning Guidance. This Guidance will help to amplify how the District Council envisages the objectives of the Local Plan and its policies being interpreted and implemented in practice. The relevant Local Plan policies to which this Guidance is supplementary are reproduced as Appendix 1.

The Guidance is also complimentary to the Government's Planning Policy Guidance Notes (P.P.G.'s) to which the District Council must have regard in reaching decisions on Planning Applications and applications for Listed Building Consent. Of particular significance are P.P.G. 1 'General Policy and Principles', P.P.G. 15 'Planning and the Historic Environment' and P.P.G. 16 'Archaeology and Planning'.

This Document provides important information and advice for anyone who might own, or may be involved with proposals to repair, alter or extend an historic building. It explains why the District's heritage of buildings are so valuable and the reasons why the Local Plan policies are framed as they are. Clearly a wider acknowledgement and understanding of the value of the District's heritage of buildings and the aims and objectives of the Local Plan will go a long way in helping to prevent the wrong sort of change taking place.

**Within the scope of this Document emphasis is placed upon the District's domestic vernacular buildings and its Georgian and**

**early Victorian houses, (although some of the information and advice will also relate to later 19th or even some early 20th Century buildings). It is important that the reader realises that the information and advice is of a general nature and that its relevance will vary according to circumstances. With buildings located within conservation areas or the Area of Outstanding Natural Beauty, it is far more likely that the higher standards advocated will need to be achieved. With Listed buildings, it will normally be necessary for the higher standards to be achieved.**

The Document is divided into 4 Sections. Section 1 provides a brief outline of the development of the Area's architectural tradition, with particular emphasis on the evolution of the ordinary house up to the mid 19th century. Sections 2, 3 and 4 covers repairs, alterations and extensions. **If you own a property which is Listed then it is important that you read Appendix 2.**

This Supplementary Planning Guidance has been prepared following consultations with the public and various local and national organizations who represent both private and public interests. After reconsideration of the Consultation Draft in the light of representations received the Council's Planning Committee authorised its adoption and publication as Supplementary Planning Guidance.

*J G Schofield, BA (Hons), MCD, MRTPI  
Director of Planning and Leisure*

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# SECTION 1 – BACKGROUND



*[Faint, illegible handwritten notes in cursive script, likely bleed-through from the reverse side of the page.]*

Cretingham

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## 1.1 INFLUENCES

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The development of the architectural and historic character of both the individual buildings of an area and its towns and villages is derived from a combination of many different factors – geographical, political, social, economic and so on.

In Suffolk, for example, towns and villages were shaped by their geographical location. Market towns grew up on road intersections and ports on the coast and rivers. What is not quite so apparent today though, is the fact that from the earliest times, Suffolk was one of the wealthiest and most densely populated counties in England.

This wealth was primarily based on agriculture and because in Medieval times over one third of the country's resources went into the Church, this accounts for the very large number of extremely fine churches in the County. Today, the size and grandness of these churches often appears out of proportion to the population of the parishes they serve. This is because the number of these once flourishing villages has today dwindled and their population declined to such a degree that many now amount to no more than scattered hamlets.

In East Anglia, the wool trade in particular accounted for a substantial part of the Area's

wealth. From this the cloth industry grew in importance, encouraging the settlement of Flemish weavers and clothmakers (which reached a peak in the 14th Century). This, together with the cross-channel trade which developed (often involving importing continental building materials as ballast), greatly influenced the earlier building styles in the Area.

The vernacular building traditions of the Region, however, were primarily determined by the materials that were available locally. Before the industrial revolution, communications were difficult and transport was very slow. The Area remained comparatively isolated and remote prior to the coming of the railways. Transport costs and delay meant that building materials which had to be imported from elsewhere in the country were not normally used.

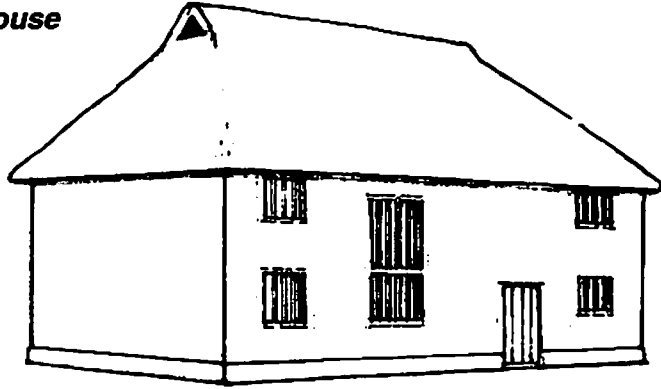
Up until the 16th Century, apart from the more important buildings such as churches, priories, abbeys, castles and the large manor houses, many of the buildings of the Region were almost certainly very basic, small and elementary, and because of the impermanent nature of the building materials used, very little evidence of them remains today.

The lack of any form of stone suitable for building (apart from flint) meant that most of the early domestic buildings which have managed

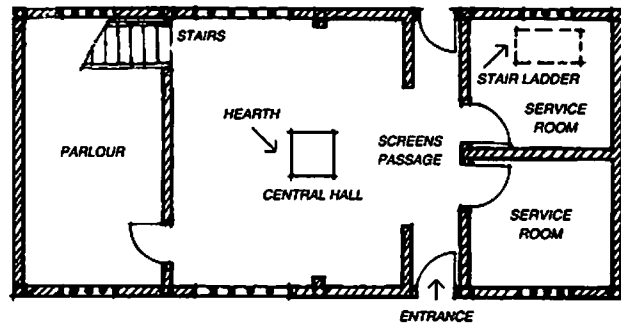
to survive are those which were constructed with substantial timber frames cut from the massive Oak forests which once covered most of the Region. Originally, in the majority of cases, the spaces between this timber frame would have been infilled with unfired clay, straw, dung, etc., combined with sticks and rendered over. Roofs would have been covered with either straw from the fields or reed from the rivers.

# SECTION 1 – BACKGROUND

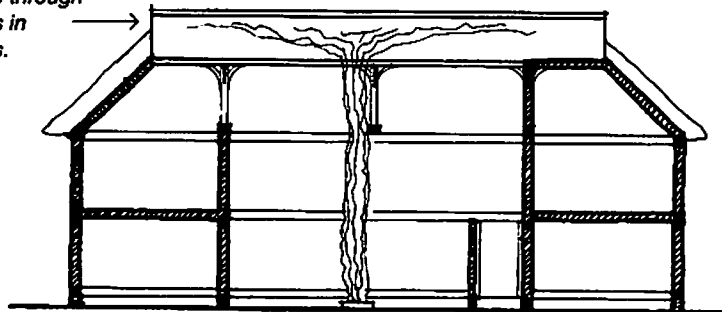
*The Hall house*



*Medieval Hall house (above).  
Floor plan (below).*

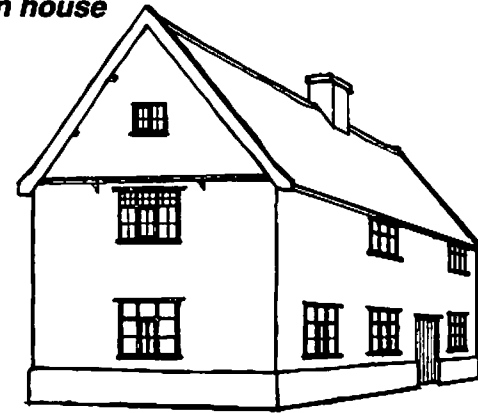


*Smoke can escape through louvres in gablests.*

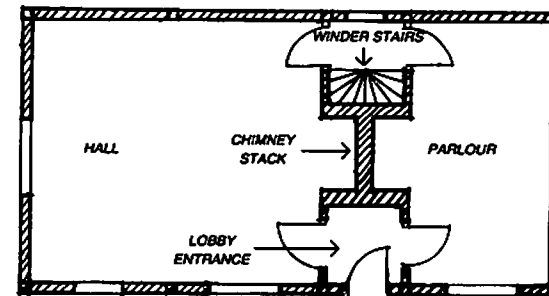


*Cross Section.*

*Single span house*



*A 17<sup>th</sup> century single span house (above) which still expresses its original form.*



*Original ground floor plan.*



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## 1.2 THE FORM AND APPEARANCE OF BUILDINGS

---

Right up until well into the 18th Century, the general appearance and form of the vernacular buildings of the District, despite numerous variations, was essentially constant. Houses were of a single room depth, usually based upon a 16-18 ft internal width, determined by the constraints of available timber lengths. This, coupled with the necessary high, steeply pitched gabled roofs covered with thatch, produced the traditional proportions of the typical Suffolk house. Those which have survived to the present day are therefore of the greatest importance, as they firmly establish the unique character of the built heritage of the District.

### **The Hall House**

The Region's domestic architecture evolved extremely slowly from the very simple Medieval Hall House (see illustrations opposite). This rectangular structure, with steeply pitched, and often hipped roof, had a fairly consistent pattern throughout the country. It had a large, communal area open to roof, usually separated from two, much smaller, service rooms at one end by a 'Screens Passage', at either end of which were the two external doors to the building. Sometimes there was another room at the other, or 'upper' end of the communal area which served as a more private space for the head of the household. Often, both single and double ended Hall Houses had a first floor, or 'Solar' above the service rooms.

Indications that a property may have originally been built as a Hall House is often provided by evidence of early door openings in the relevant location, smoke blackened timbers in the roof or indication that a 'Screens Passage' once existed (eg, the position of main frame posts, beams, studs, redundant mortices, pegholes etc).

### **Single Span Houses**

The Hall House was a plan form which originated at the more eminent levels of society, which eventually passed down to the lower ranges of the social scale. Hall Houses however, did not provide a particularly comfortable environment. Smoke from the central fire caused a nuisance as there were no chimneys, just vents in the roof. In the 16th Century, the emergent middle, or 'Yeoman' class, began to be able to afford to build in a more permanent manner and an intermediate building type, between the large Hall House and the very small and basic peasant's cottage, began to appear.

With their growing affluence, the middle classes were able to afford a higher standard of comfort and this was made possible by the development of new building techniques. For example, glass manufacturing allowed draughty wooden shutters to be replaced by proper windows and the introduction of the hearth and brick chimney

stack, often sited at one end of the communal area, allowed a first floor to be continued over the whole of the building. The chimney stack also meant that roofs could be simplified with gabled roofs becoming more common place.

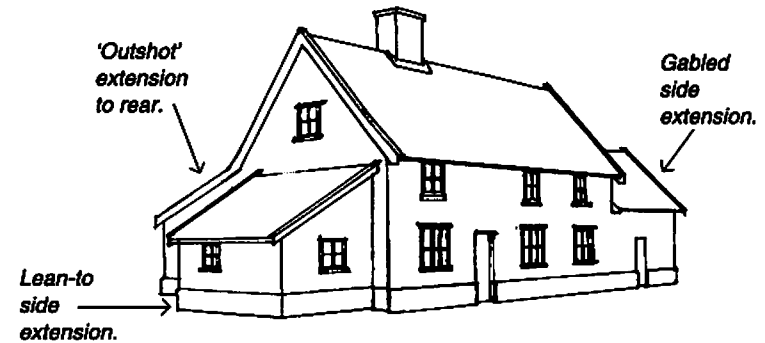
The narrow rectangular ('single span') form and the ground floor plan, however, remained essentially unchanged until the beginning of the 17th Century. It then became common for the 'Screens Passage' arrangement to be abandoned in favour of having the entrance alongside the chimney. The stack was a considerable size and the space left over at the opposite side was often occupied by the staircase, (see illustrations opposite). This arrangement still survives in a number of old houses in the District. Variations also developed though, and these had chimney stacks at the ends of the house or, less commonly, along the flank walls.

# SECTION 1 – BACKGROUND

## Extended 'single span' houses

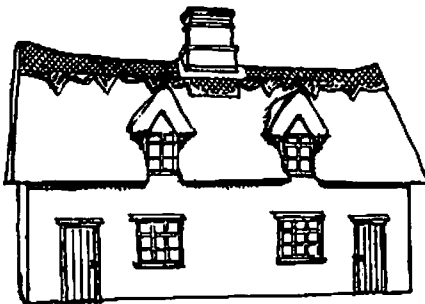


*This 16<sup>th</sup> Century house now has an H-shaped plan after extensions were added during the 17<sup>th</sup> Century.*

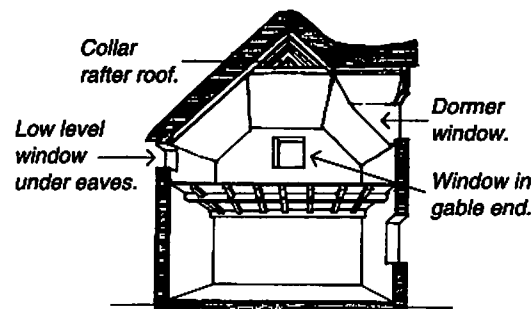


*Typical 17<sup>th</sup> century timber framed house with single storey extensions.*

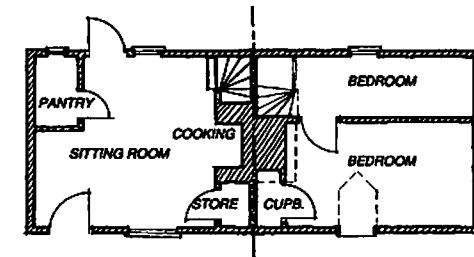
## One and a half storey houses



*Traditional 17<sup>th</sup> Century 1½ storey cottages.*



*Cross Section.*



*Ground floor plan. First floor plan.*

---

## 1.2 THE FORM AND APPEARANCE OF BUILDINGS

---

### **Extended Single Span Houses**

The 17th Century saw the basic rectangular house form altered and extended in various ways in order to improve standards of comfort. Extensions took various forms. Two storey wings were often constructed either at one end, at both ends or at the rear.

Extensions at the end of the building either formed a continuation of the existing structure, being of the same width and height or, sometimes, extensions were set at right angles to form projecting cross wings, usually with gables front and back. Rear extensions were often smaller than the main house, with lower eaves and ridge heights. On the other hand, some quite large extensions were occasionally built which were significantly larger than the original house, (see illustrations opposite).

Single storey extensions were common. The roof of the two storey house was often extended downwards at the rear to enable some small rooms to be added to the ground floor. This form of extension was known as an 'outshot'. Single storey lean-to extensions were also added to the gable ends. Later additions to existing houses tended to have shallower pitched roofs and were often covered with clay tiles. Furthermore, the timber framing was frequently of a lighter weight than that on the main house.

### **One and a Half Storey Houses**

The steeply pitched roof of the early vernacular buildings enclosed a fairly large space. Indeed, the early Hall Houses which were built without chimneys had quite high roofs in order to reduce the effects of the smoke given off by the open fire. However, the use of this space when inserting a first floor was often restricted by the roof structure and difficulties with providing daylight. Despite these practical problems there is surprisingly little existing evidence of a vernacular tradition in the District for single storey dwellings. Virtually all the early buildings which survive in the Area today do in fact provide some form of accommodation at an upper floor level.

To overcome the obstacle of lack of headroom, many cottages and farmhouses were constructed with, or adapted to incorporate, a collar rafter roof which does not necessitate obstructive tie beams, (see illustrations on page 14). In the case of rows of cottages, tie beams were often restricted to party walls. Daylight was provided by windows formed in gable ends, by incorporating dormer windows, or by raising the eaves in order to allow for low level first floor windows.

### **The Size of Houses**

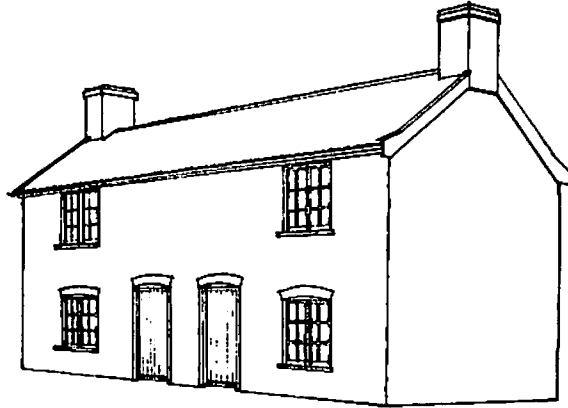
Some later houses in the District were constructed as two and a half storey houses

incorporating ground and first floors, with further attic rooms on a second floor in the roof space. When combined with various extensions that were added, many of these buildings, despite their single-span form, ended up quite large.

On the other hand, it is often difficult to grasp just how minute most of the early, smaller vernacular cottages were. Many buildings which appear today as single buildings probably started life as a row of two, three or even four individual houses. Many comprised just one small room on the ground floor and a small sleeping area in the roof space.

## SECTION 1 – BACKGROUND

### *Post-Medieval houses*

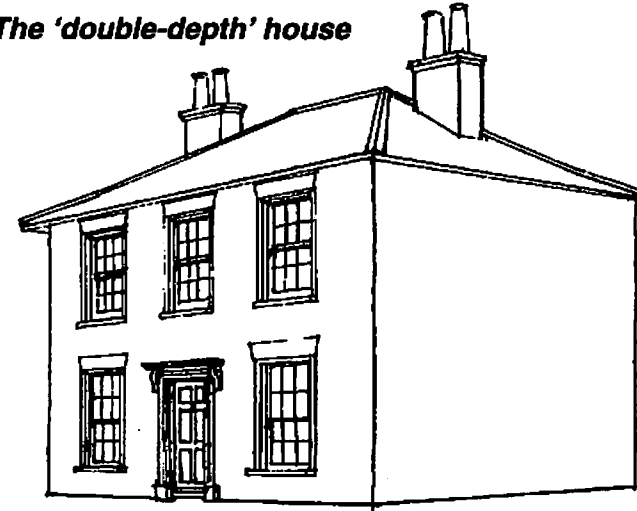


*18<sup>th</sup> Century vernacular brick cottages with casement windows, boarded doors and simple brick arches.*

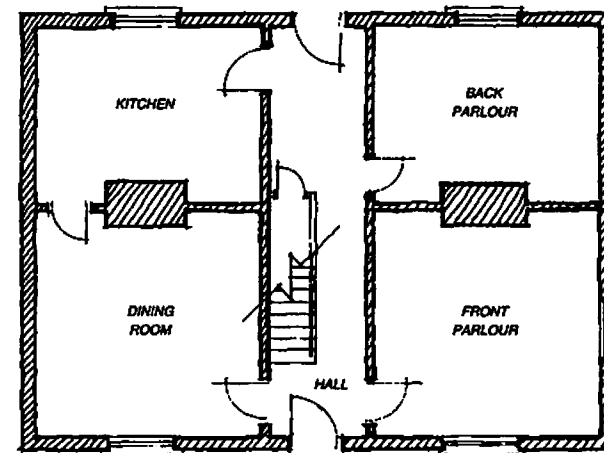


*An 18<sup>th</sup> Century brick cottage illustrating the influence of the classical tradition with its sash windows, panelled door, decorative doorcase and flat brick arches.*

### *The 'double-depth' house*



*Early 19<sup>th</sup> Century 'double-depth' house (above), ground floor plan (below).*



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## 1.2 THE FORM AND APPEARANCE OF BUILDINGS

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### **Post-Medieval Architecture**

The true vernacular architecture of the Area began to be diluted during the 17th Century, when great changes took place nationally in architectural and building fashions. Most notable were the adoption of the classical tradition by the wealthy, together with the development of mass brick and clay tile manufacturing.

Around this time, good quality timber became a rarer commodity and, as a result, timber framing became less substantial and inferior to that of earlier times. The introduction of brick meant that plinths, chimneys, gable walls, etc, could be constructed in masonry. Imported pantiles rapidly replaced thatch as the preferred roofing material and by the 18th Century brick had supplanted timber as the most common walling material.

During the 18th Century single span houses were constructed with walls entirely made out of brick and the typical Suffolk brick cottage began to appear (see illustrations opposite.)

### **The Double Depth House**

The shape of buildings began to change. Although two-storey extensions which ran parallel to the main house were sometimes built they necessitated having either valley gutters between the two pitched roofs, or a leaded

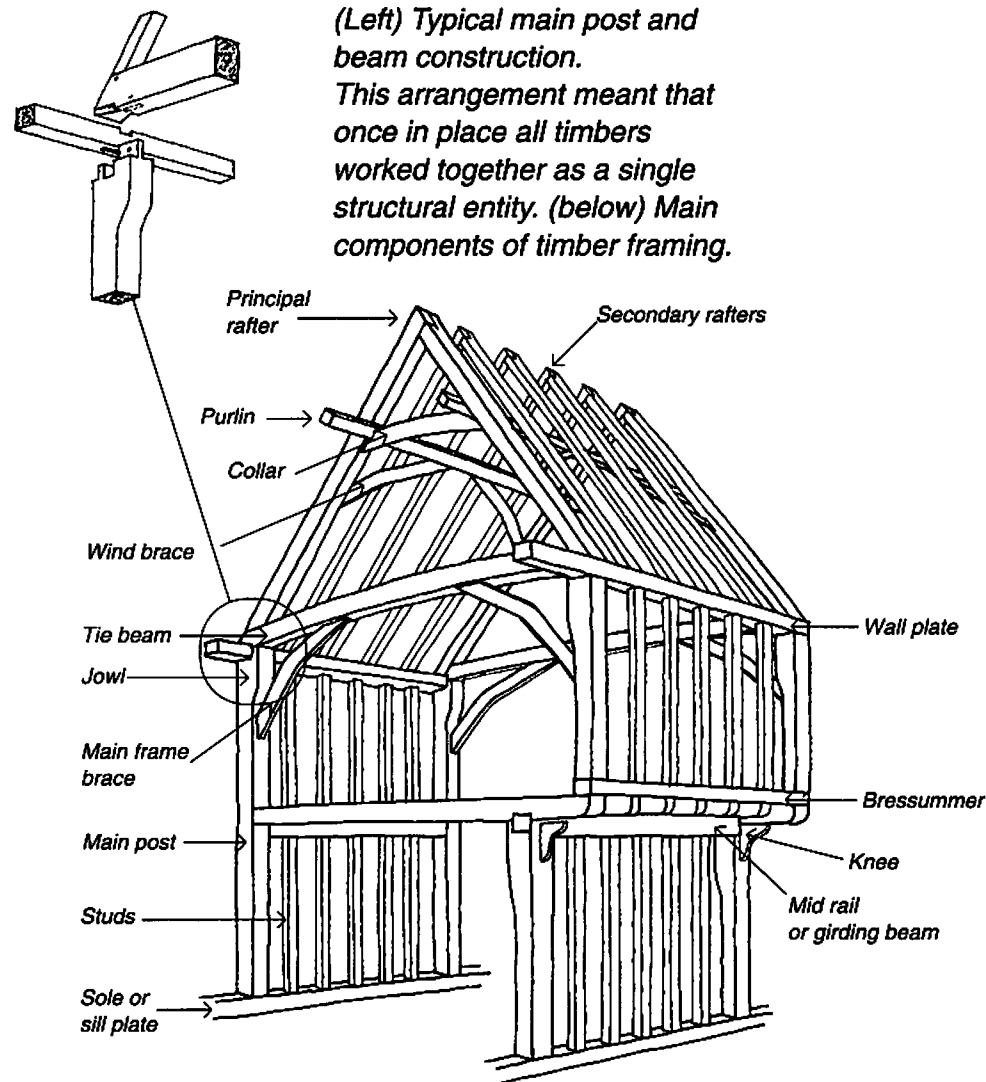
central flat area. This required specialist expertise and was expensive. The costs involved meant that such arrangements were generally restricted to only the more grand houses or to non-domestic buildings.

In the mid 18th Century, however, the 'square' or 'double depth' plan began to be adopted for more modest houses. This usually comprised four rooms entered off a centrally located hall. The introduction of slates for roofs meant that roof pitches could be reduced and improved construction techniques allowed longer spans to be achieved. For most of the 19th Century this basic 'double depth' house was retained as the preferred option for the house builders. The houses of the working classes also emulated this form for new semi-detached and terraced properties in both the towns and the villages of the Area.

This fundamental change in the basic form of the house coincided with other innovations. The influence of the classical style, in particular, became wide spread with the adoption of the symmetrical facade and the changes in window proportions, with horizontal casements being replaced by vertical sliding sash windows.

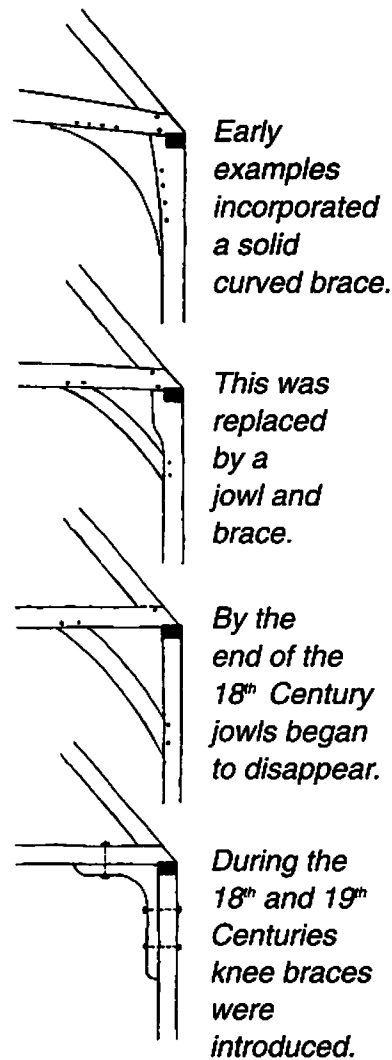
# SECTION 1 – BACKGROUND

## Structural elements of traditional timber framed construction.



(Left) Typical main post and beam construction. This arrangement meant that once in place all timbers worked together as a single structural entity. (below) Main components of timber framing.

## Development of main frame bracing.



Early examples incorporated a solid curved brace.

This was replaced by a jowl and brace.

By the end of the 18<sup>th</sup> Century jowls began to disappear.

During the 18<sup>th</sup> and 19<sup>th</sup> Centuries knee braces were introduced.

## Carpentry marks.

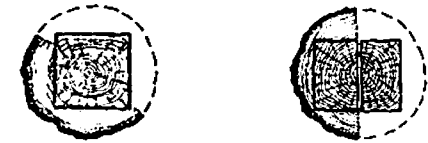
(Timber frames were often pre-cut and marked prior to assembly).



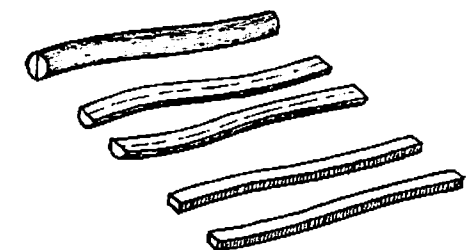
Early forms of carpentry marks comprised of long light scratches.

Later examples were carefully cut Roman numerals.

## Beam and post manufacture.



Conversion of logs into square and rectangular sections (above). The sapwood was removed and the edges were squared with an axe or adze. Logs which were not straight were still made use of (below).



## 1.3 THE STRUCTURE OF BUILDINGS

### Timber Framing

Many of the older buildings in the District are timber framed. Generally, the older the building, the more intricate is its carpentry, and the more substantial are its timbers.

During the 16th and 17th Centuries especially, the abundant forests of the Region were felled and their timbers cut and shaped to form the framed structures of buildings. First, a brick or flint plinth was built around the perimeter to the desired shape. On top to this was laid a horizontal timber or 'sole' plate. The upright main posts were morticed into this plate and these were temporarily propped. The intermediate or secondary studs were then added, along with the necessary bracing members. Next, the wall plate was dropped onto the top of these, and finally, the tie beam was placed into position, simultaneously locking the post, wallplate and tie beam together, (see illustrations opposite). Sometimes sections of framed buildings were constructed on the ground and then swung up into position.

If a first floor was to be incorporated a horizontal mid rail was carried off the main posts at the appropriate height into which the floor beams were morticed. In the 16th Century, first floors were often cantilevered or jettied out in order to create more space on the upper floors and to produce a stronger structure.

When constructing timber framed buildings, carpentry marks were used to identify joints and the pre-shaped pieces of the frame to assist with the erection process. The earlier forms were long, light incisions, later Roman numerals were used. Timbers from one building were often re-used in another, so whilst carpentry marks (as well as redundant joints and pegholes) can be a useful guide when studying framed buildings, they can also cause considerable confusion!

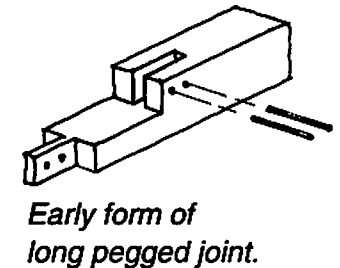
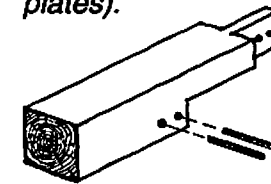
Without the benefit of mechanical sawmills the best early timber framed buildings were constructed out of timbers which were very carefully shaped and worked with hand saw, axe and adze. On other buildings, rougher, less finished timber members were used. Logs which were not straight were still cut into rectangular shapes and used for wall and roof members such as studwork, rafters, braces, collars and ties. In many buildings ordinary logs were used, especially in roofs, and many of these still exist, complete with their bark.

Oak was the predominant timber used for structural purposes, although Elm and imported softwoods were increasingly utilized as the once plentiful supplies of good quality Oak began to be exhausted. The combination of a diminishing supply of suitable timber, together with changes in carpentry techniques, resulted

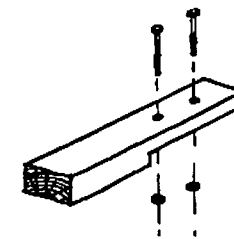
in a tendency over the years for timber framed construction to become more lightweight.

The availability of machine cut softwood timber and the widespread use of technical manuals and pattern books, which advocated the use of bolts and metal straps, meant that the elaborate carpentry of earlier timber framing techniques were no longer required. By the end of the 18th Century, timber framed walls were almost completely supplanted by load bearing brickwork.

**Scarf joints**  
(often found in wall and sole plates).



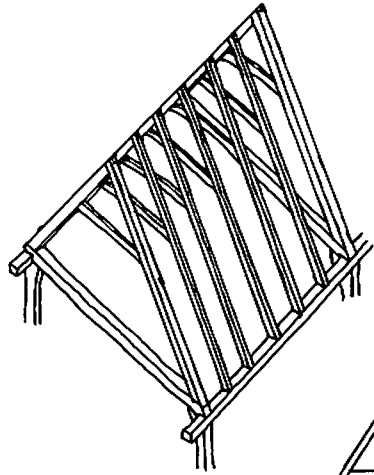
Early form of long pegged joint.



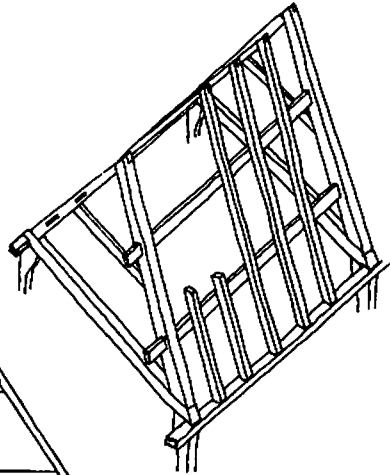
Simple, lapped pegged or bolted joints replaced the more complicated earlier forms.

# SECTION 1 – BACKGROUND

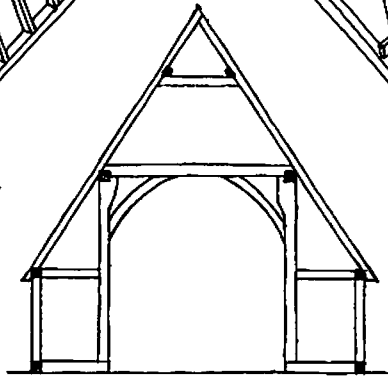
## Examples of traditional roof structures.



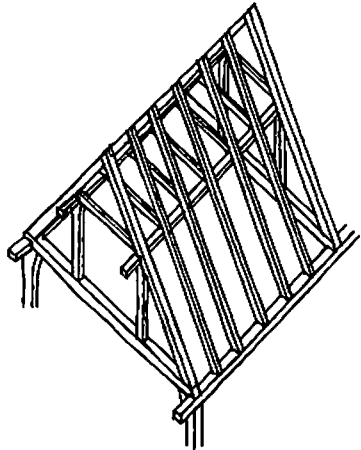
A collar rafter roof  
(a 'single' form of  
roof construction).



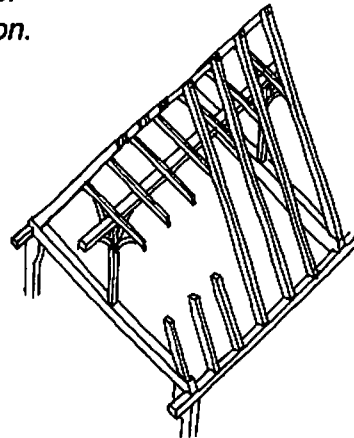
A butt purlin roof  
(a 'double' form of  
roof construction).



Aisled roof  
construction.

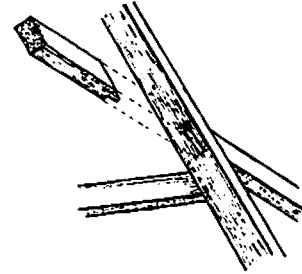


Queen post roof.

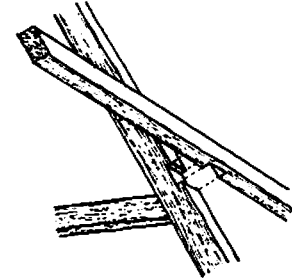


Crown post roof.

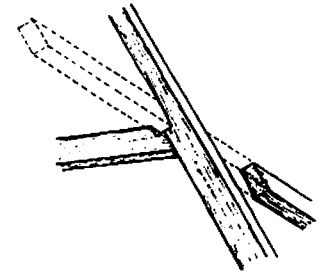
## Purlin details



Butt purlin.

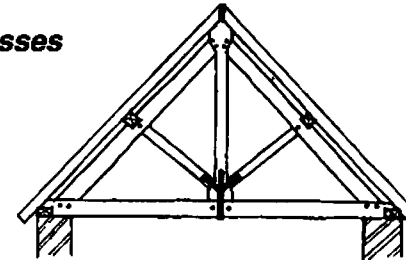


Trenched purlin.

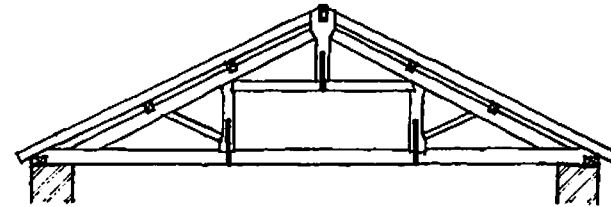


Clasped purlin.

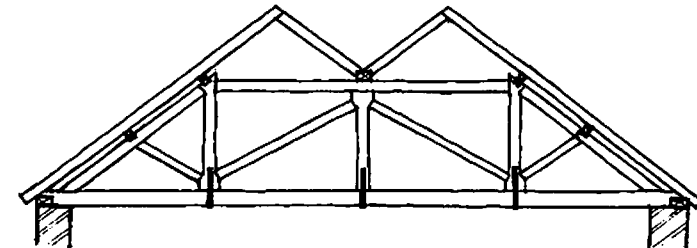
## Trusses



An 18<sup>th</sup> Century king post truss.



Early 19<sup>th</sup> Century long span queen post truss.



Early 19<sup>th</sup> Century 'M' shaped roof truss incorporating  
a central valley.



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## 1.3 THE STRUCTURE OF BUILDINGS

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### Roof Structures

The structure of timber roofs varied a great deal and were sometimes extremely complicated and sophisticated. They included 'single' and 'double' forms of construction. The former was a very simple type comprising just rafters, halved, jointed and pegged at the apex and triangulated by ceiling joists or collars. The 'double' roof was more complicated, consisting of principal rafters, located above the main posts, which carried horizontal purlins which, in turn, supported secondary rafters.

Both roof types were extended in order to form aisled roofs, which were initially a very primitive method of covering a larger area. In some instances aisled construction was used to create some very grand Medieval Hall houses. Aisled construction was used for a much longer period for barns, possibly well into the 19th Century, and the existence of these buildings provides a striking impression of what some early Medieval Halls were actually like.

Many variations of 'double' roof structures developed over the centuries. An important example was the crown post roof which consisted of a crown post located centrally on a tie beam which supported a longitudinal crown plate which in turn connected and supported the collars in the roof. Crown post, collar and crown plate were connected by arched braces.

Another quite common type was the queen post roof. This involved vertical posts being positioned on the tie beams directly below where the collar, purlin and principal rafter met.

Some roofs were built with just purlins supported off principal rafters with tie beams. In most cases collars were introduced, sometimes the tie beams were omitted. Purlins were either continuous or were cut and tenoned into the principal rafters (a butt purlin roof). With through purlin roofs, the purlins rested on or were 'trenched' into the backs of the principal rafters, or they were 'clasped' between the underside of the rafter and the top of the collar.

When brick became more readily available, roofs were less often designed as an integral part of a timber framed structure and much more as something which was fitted over a brick structure.

Furthermore, whereas previously local carpentry techniques had been handed on from master to apprentice, carpenters in the 18th and 19th Centuries began to make use of standard pattern books for roof structures which showed new and recommended designs. The influence of these manuals was slow but significant change did occur particularly with the development of roof trusses and the use of metal bolts and straps rather than the traditional carpentered and pegged joints.

The roofing of 'double-depth' houses necessitated a different approach to 'single-span' houses. Quite often the longer spans were achieved through large king post or queen post trusses. In other situations internal walls were used to support purlins or pairs of trusses. Sometimes the roof was formed into an 'M' shape and incorporated a central valley.

The number of different structural combinations for roofs which were used over the Centuries in the Area is far too great to cover in this Document, but some of the more common or important examples are illustrated opposite.

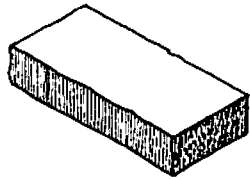
# SECTION 1 – BACKGROUND

## Brick

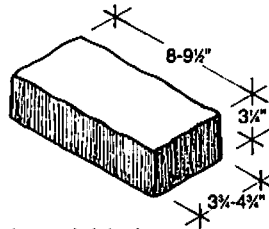


A number of timber framed buildings were refaced in brickwork during the 18<sup>th</sup> century.

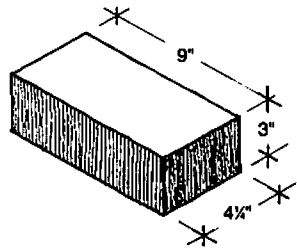
## Brick sizes



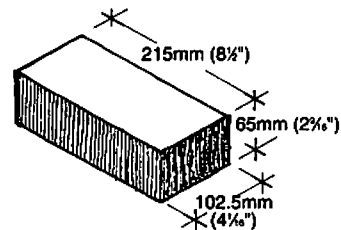
Early bricks tended to be long and thin.



Later, brick sizes became more standardised although their height varied reaching a maximum of 3<sup>1</sup>/<sub>4</sub>" after the introduction of brick taxes in 1784.

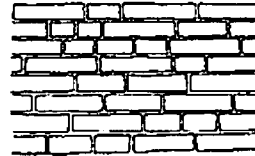


Standard (1840) imperial brick.

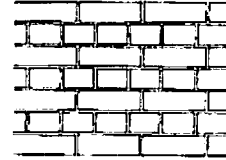


Modern metric bricks.

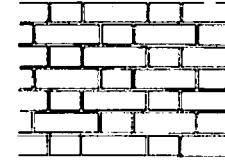
## Brick bonding



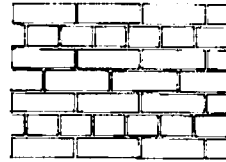
Early brickwork. (Random colour and bond. Bricks were noticeable thinner).



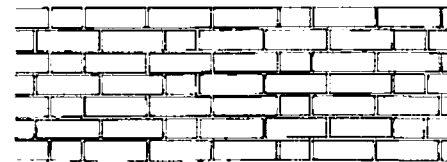
English bond. (Common during 16<sup>th</sup> to mid 17<sup>th</sup> Century).



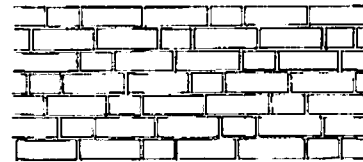
Flemish bond. (Replaced English bond from mid 17<sup>th</sup> Century).



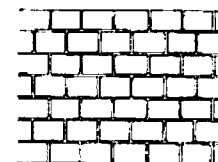
English Garden Wall bond.



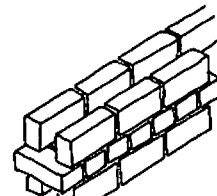
Flemish Garden Wall (or Sussex) bond.



Monk bond.



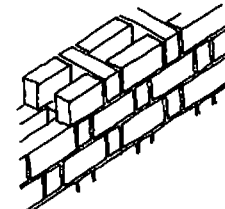
Header bond.



Deames bond. (Stretchers laid on edges).



Stretcher bond.



Rat-trap bond. (Stretchers and headers laid on edges).

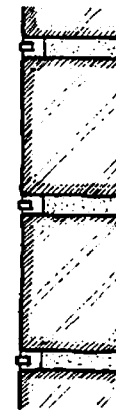
## Brick joints



Early brickwork had thick Joints.



Very thin joints were achieved in the 18<sup>th</sup> and 19<sup>th</sup> Centuries.



'Tuck' pointing.



'Penny' Round pointing.

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## 1.3 THE STRUCTURE OF BUILDINGS

---

### Brick

The use of brick for structural purposes in England dates back to Roman times, although following their departure, brick making virtually ceased until the skills were reintroduced in the 15th Century by Flemish settlers. During the Middle Ages brick, often imported from the continent, was primarily restricted to the more superior buildings of the Region or for providing plinths to timber framed structures.

Brick became a more common material for vernacular buildings during the 16th Century, when a great many brickworks were established locally. East Anglia was particularly suitable for the industry because of the abundance of clay.

By the early 18th Century, fashion and events such as the Great Fire of London, increased the popularity of brick to such an extent that many existing timber framed buildings were refaced in brickwork. The existence of a brick upstand parapet at the front of some older buildings, with a hidden gutter behind, is often evidence of this having happened.

The proportions of the 'Georgian' style of architecture, often adopted for the refacing of earlier structures, however, did not easily lend itself to the size of existing openings or to the floor to ceiling heights, and so designs had to

be adapted to overcome these practical problems. This created some unique and extremely interesting compositions, many of which still grace the streets of most of the towns and villages in the District.

Early brickwork bonding tended to be irregular. Then in the 16th Century an established pattern for laying bricks developed when alternating courses of headers and stretchers was generally adopted. Called 'English' bond, its use was widespread during the Tudor period. This pattern was eventually replaced around the middle of the 17th Century by 'Flemish' bond, where alternate headers and stretchers were used in the same course. Over the years, these more common patterns of brick bonding were modified with a number of variations appearing (see opposite). Cavity walls, with the facing brick made up entirely of stretcher bond, is a 20th Century invention.

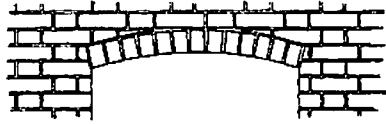
Early bricks were very irregular in shape, size and colour, although they tended to be noticeably thinner than later examples. By the end of the 17th Century bricks had become thicker, averaging 2½". With the introduction of Brick Taxes in 1784, thicker bricks of around 3"-3¼" became common. A brick size of 9" x 4½" x 3" remained relatively constant until recently when metric bricks were introduced. Metric bricks are slightly smaller than the old imperial sizes.

Because of the random shape of early bricks, joints tended to be fairly thick, but when their size became more uniform, much thinner joints became possible. Indeed, in the 18th and 19th Centuries, the more precise machine-made bricks were able to be laid with extremely thin joints.

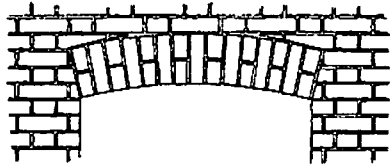
In order to produce an illusion of geometrical exactness in brickwork, which was the fashion during the 18th and 19th Centuries, 'tuck' pointing was often used. This involved the wall being built with recessed joints. These were then pointed with a coloured mortar which matched the colour of the bricks. Then horizontal and vertical grooves were carefully formed in the joints and these were filled with a white lime putty to produce the desired effect. A cheaper variation of this was 'penny round' pointing, where a thin line was just incised into the joints.

# SECTION 1 – BACKGROUND

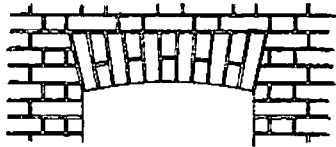
## Brick arches



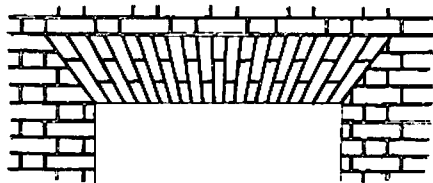
*Rough segmental arch of bricks laid on edge with tapered joints.*



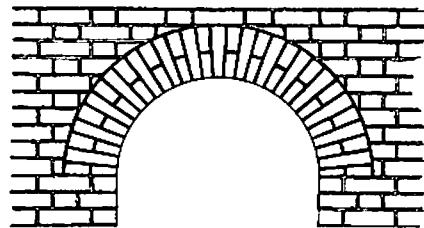
*Segmental arch of rubbed bricks.*



*Cambered arch of rubbed bricks.*



*A flat arch made up with shaped bricks 'voussoirs'.*

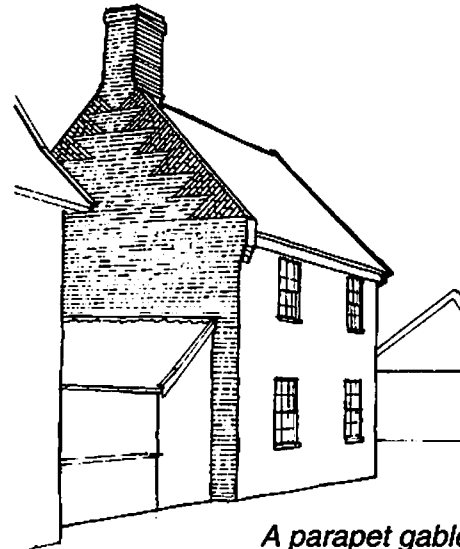


*Semi circular arch.*

## Brick gable details



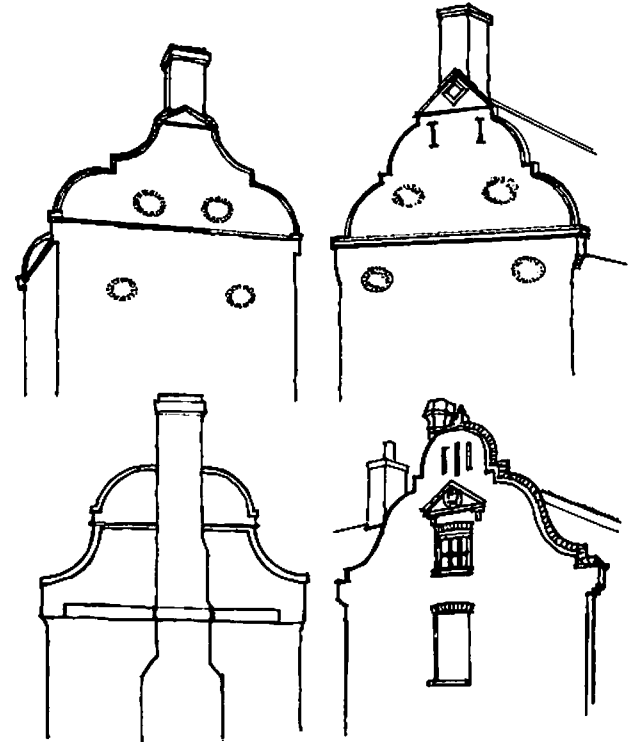
*Crow-stepped gables.*



*A parapet gable with 'tumbled-in' brickwork.*



*Above and below, examples of 'Dutch' gables.*



## 1.3 THE STRUCTURE OF BUILDINGS

### Brick (continued)

The traditional Suffolk red brick is in reality an orangey red in colour. Old bricks, with a patina of age, having been weathered through the industrial revolution, appear darker as a result. For a period, towards the end of the 18th Century, the common red brick became less fashionable and the use of 'white' or 'gault' brick became more popular. The white colour was produced from local clays with a high lime content, rather than the red clay, which contains a significant amount of iron. Over the years these white bricks, where they have been left uncleaned, have weathered to quite a dark grey.

In some early vernacular buildings, openings in brick walls often had no proper arch or lintel, the weight of the wall was carried over by a heavy window or door frame. Timber, and later metal lintels were commonly used to produce openings in brick structures, although it was more usual for the brickwork itself to be laid in such a way that the bricks formed an arch, working against each other in order to carry the loads.

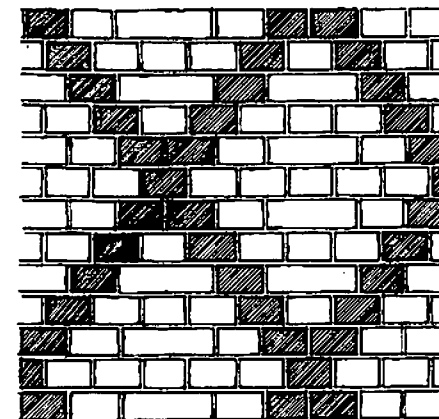
The simplest was the rough brick segmental arch, where uncut bricks relied on tapered joints to achieve the required shape. Arches which incorporated 'rubbed' bricks, or purpose-made shaped bricks ('voussoirs') were fairly easy to produce. Flat topped arches, which were either

straight or curved at the bottom were also common, especially for the more elegant buildings of the 18th and 19th Centuries.

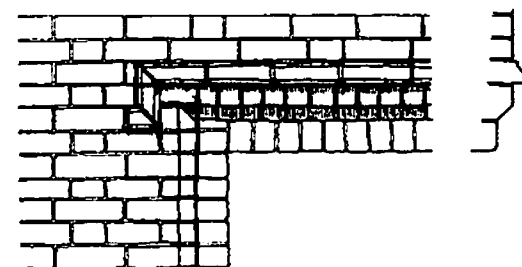
From the early 16th Century onwards the Flemish influence was not only significant for the promotion of the use of brick for structural reasons, but also encouraged its use for its decorative possibilities. Traditional Flemish brick designs were imported from the continent and their influence is particularly noticeable in the number of decorative brick parapeted gables which exist on buildings throughout the District.

The use of brick for decorative effects continued to grow in popularity during the 18th and 19th Centuries. It was a comparatively cheap way of embellishing buildings through the creation of surface patterns using different coloured bricks, and modelling, using moulded, cut and shaped bricks. Terra-cotta was also used for a decorative purposes, especially in the 19th and early 20th Century.

### Decorative brickwork



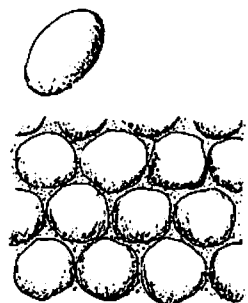
*Diaper patterned brickwork was common during the 18<sup>th</sup> and 19<sup>th</sup> centuries.*



*A brick hood mould over a simple soldier arch of bricks on edge.*

## SECTION 1 – BACKGROUND

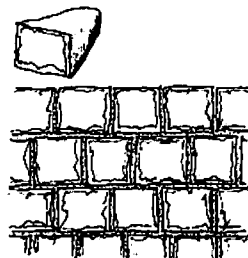
### Flint



Flints used 'as found'.

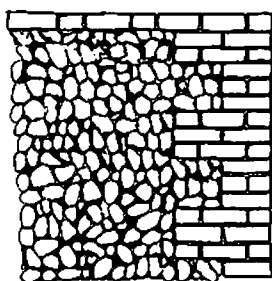


Split or 'knapped' flints.

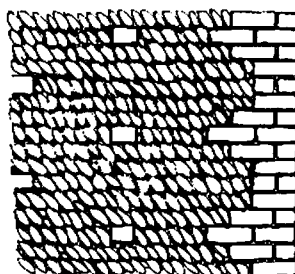


Flints 'dressed' to a consistent square end.

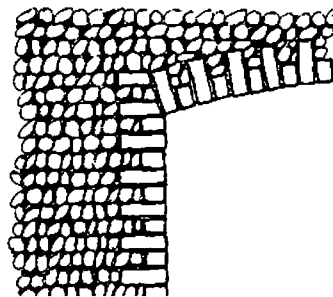
### Flint Walling



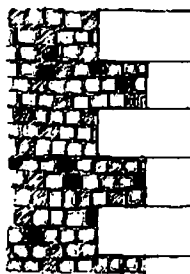
Flints laid in a random pattern with brick quoins.



Elongated cobbles laid in a diagonal pattern with decorative brickwork.

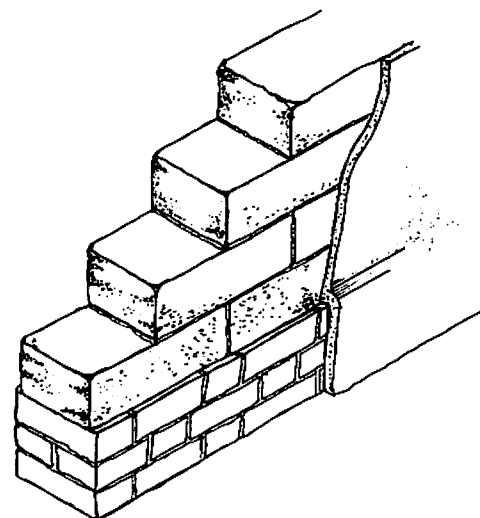


Flints laid in regular courses with simple brick detailing around an opening.

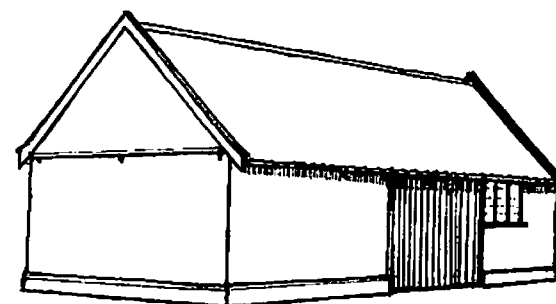


Square knapped flints laid in a pattern similar to brickwork. These were often used in conjunction with stone.

### Clay Lump



Clay lump blocks were laid on a brick or flint plinth and rendered over. Usually they were given a coating of tar.



Some buildings in the District (especially out-buildings) incorporate clay lump walls, (the left hand portion in this case), and retain the traditional 'pentice boards' on gable ends.

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## 1.3 THE STRUCTURE OF BUILDINGS

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### **Flint**

Despite the fact that virtually every church in the District is at least partly constructed in flint, it is not quite as common a building material as it is in some other parts of East Anglia. Although a difficult material to work with, in the absence of other suitable materials, it often provided an extremely useful medium for the construction of plinths for timber framed buildings and as a walling material.

Flints are found in two forms, rough stones from the surface of fields and excavations, and smooth cobbles from beaches. Because of its small size and variations in shape, flint is not particularly suitable for constructing corners or for creating openings on buildings and so it is normally used in conjunction with other materials such as brick or stone.

Flints were used either as found or were split or 'knapped' to give a fairly flat outer surface to the wall. Split flints could be further shaped to provide a consistent flat square end. These 'dressed' flints were sometimes used in conjunction with brick or stone to form some very impressive decorative effects.

### **Clay Lump**

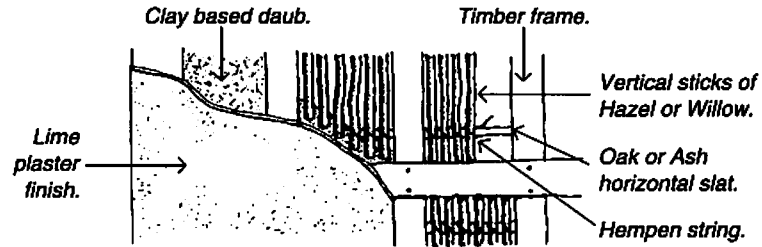
Because of the very nature of the material, archeological evidence of the use of unfired clay for structural purposes is scarce. In East

Anglia generally though, a number of buildings still survive, primarily smaller single-storey structures on farms, which were constructed using sun-dried clay blocks. In Suffolk Coastal, the few surviving examples are mostly in the north and west of the District.

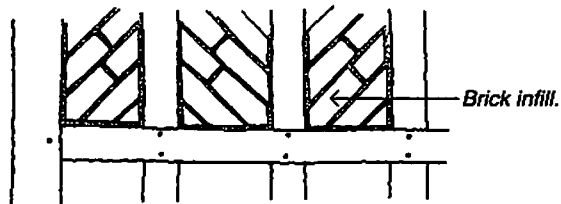
The clay was made into blocks by wetting and mixing it with short lengths of straw or grass. The prepared clay was then placed into wooden moulds and left to dry. The blocks were taken out of the moulds and when completely dry, were laid on top of a flint or brick plinth (or a combination of the two) and bedded in with a clay mortar. Because the material was very susceptible to weathering, the outer face of the wall would be rendered with a clay slurry and then often given a coating of tar. Sometimes, buildings were given a sanded finish and then colour washed. On gable ends, as with many plastered timber framed buildings, drip shelves or 'prentice boards' (wooden planks) were often built into the wall at intervals to throw off the rain.

# SECTION 1 – BACKGROUND

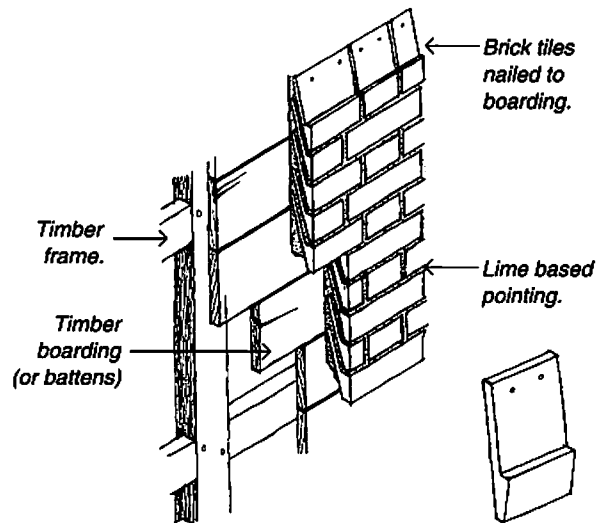
## Wattle and daub infill to timber framing.



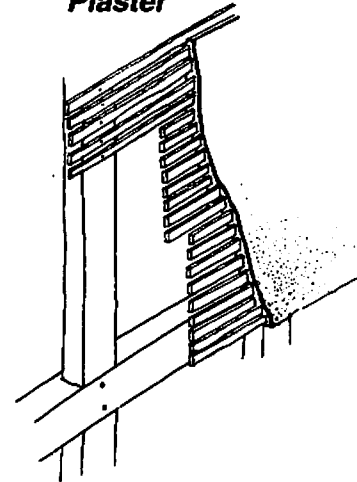
## Brick 'nogging'.



## Brick tiles (Mathematical tiles).

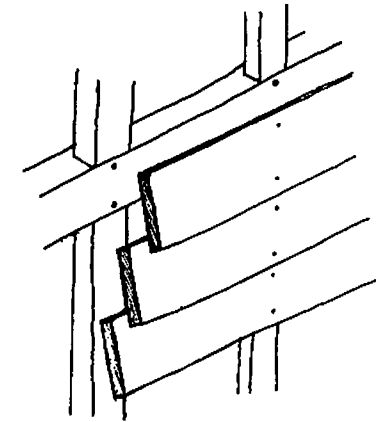


## Plaster

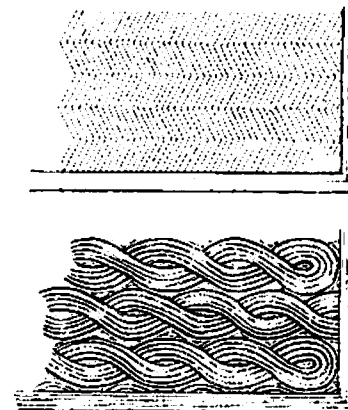


A plain lime plaster finish applied in two coats on split wooden laths.

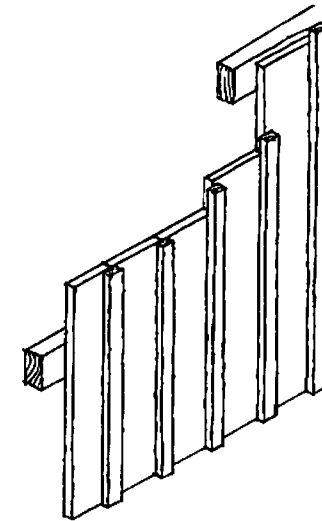
## Weatherboarding



Traditional weatherboarding comprised wide, flat planks which were fixed directly to the timber frame.



Two examples of traditional pargetting patterns: closely spaced chevron (above) and Guilloche (below) both set within a decorative border forming individual panels.



A later variation involved the timber boarding being fixed vertically with timber battens covering the joints.



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## 1.4 CLADDING AND INFILL MATERIALS

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### **Wattle and Daub**

The most common material found as an infilling on timber frame buildings was 'wattle and daub'. This involved the formation of a framework of small stakes and branches (the wattle), into which was pushed a clay based daub. There were variations in the methods adopted but the most common practice in this part of the country involved slats of riven Oak or Ash notched horizontally into adjoining studs to support the vertical 'wattles'. The wattles were Hazel or Willow sticks often with the bark left on and these were attached, closely spaced, to the horizontal slats using a crude form of string usually made from hemp. Into this framework was pushed, from both sides, a mixture of clay, chopped straw, horsehair, dung, etc. The panels were then rendered inside and out with a lime plaster. Wattle and daub infill panels were used in both internal and external walls.

### **Brick as an Infill Material**

Brick was sometimes used to infill newly-constructed timber framed buildings or was used as a replacement for old wattle and daub. Brick 'nogging' was arranged in herringbone fashion, diagonally or vertically, as well as in conventional coursing. Bricks laid on their edges were sometimes used with lighter timber sections.

### **Brick Tiles**

Unlike Kent and Sussex the use of clay tiles for cladding walls of buildings never formed part of the Suffolk vernacular tradition. A form of tile hanging which should be mentioned however, is the use of 'dummy bricks' or 'mathematical tiles'. This is a clay tile made exactly to the dimensions of facing brickwork. The tiles had a concealed nib with holes so that they could be secret nailed onto wooden battens or boarding. These tiles were made both as headers and stretchers and when well constructed and pointed up they were practically indistinguishable from solid brick walling. Probably an 18th Century invention, mathematical tiles on a building are rare and should be retained.

### **Plaster**

Many timber framed buildings were covered with an unbroken layer of lime plaster, either directly onto wattle and daub or on wooden laths. Where laths were used, they were closely spaced and nailed to the studs, and the plaster applied to two coats. A separate internal plaster and lath lining was applied to the inside of the frame, the ceilings and internal walls. Reed and straw has been known to be used instead of wooden laths to form a key for the plaster. The finish on the exterior plaster was left plain, sometimes it was incised to imitate stone, or quite often it was moulded into various decorative patterns, a technique known as

'pargeting'. This was especially popular during the 17th and early 18th Centuries.

### **Timber Cladding**

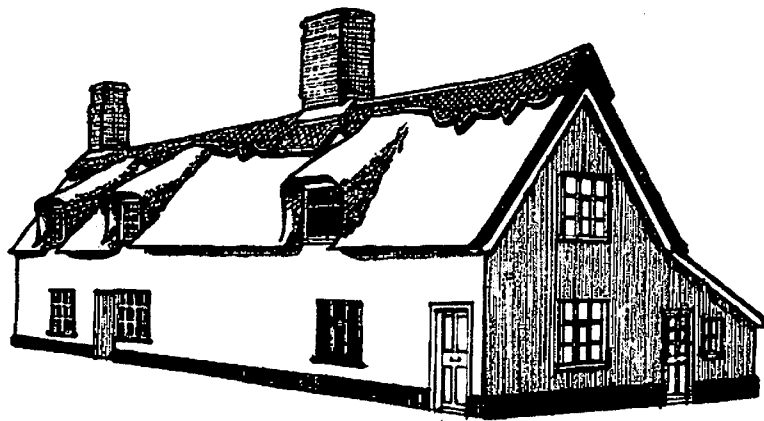
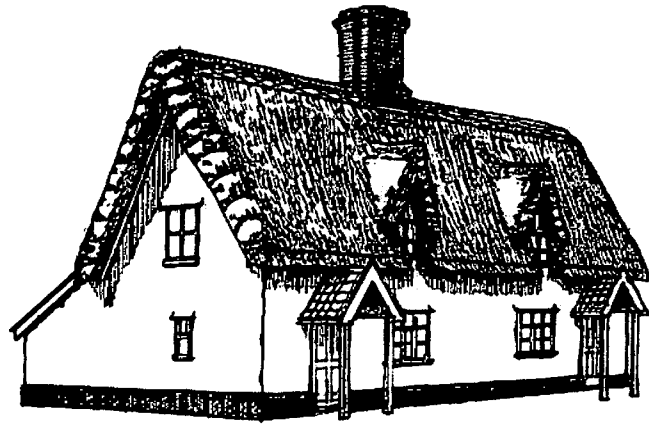
Despite the fact that many old agricultural, maritime and industrial buildings in the Area are weatherboarded, its use was not so popular for domestic buildings. This is not to say that there is no precedent for weatherboarded houses in the District, as examples can be found throughout the Area, particularly near the coast.

Timber boarding was used in two ways, either horizontally or, less commonly, vertically with timber strips to mask the joints. Early weatherboarding was of Oak or, less frequently, Elm cut into wide flat planks and sometimes pegged to the timber frame. Later on, featheredged boards made from softwoods were used and these were nailed to the studs. Boarding was either covered in tar or, as on many mills and other industrial buildings, was painted with white lead oxide.

There are a few important examples in the Area of the use of planed and painted timber in imitation of ashlar masonry although it was more common for stucco rendering to be used. (See illustration on page 51).

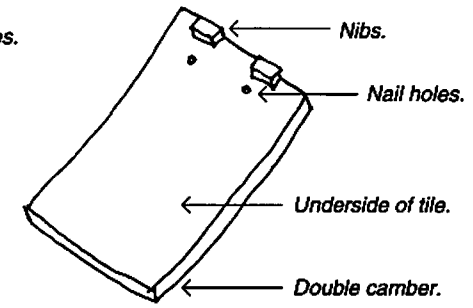
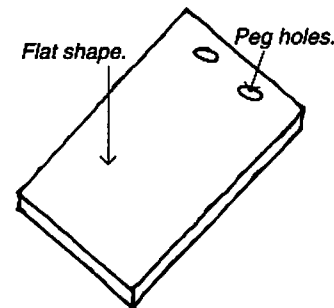
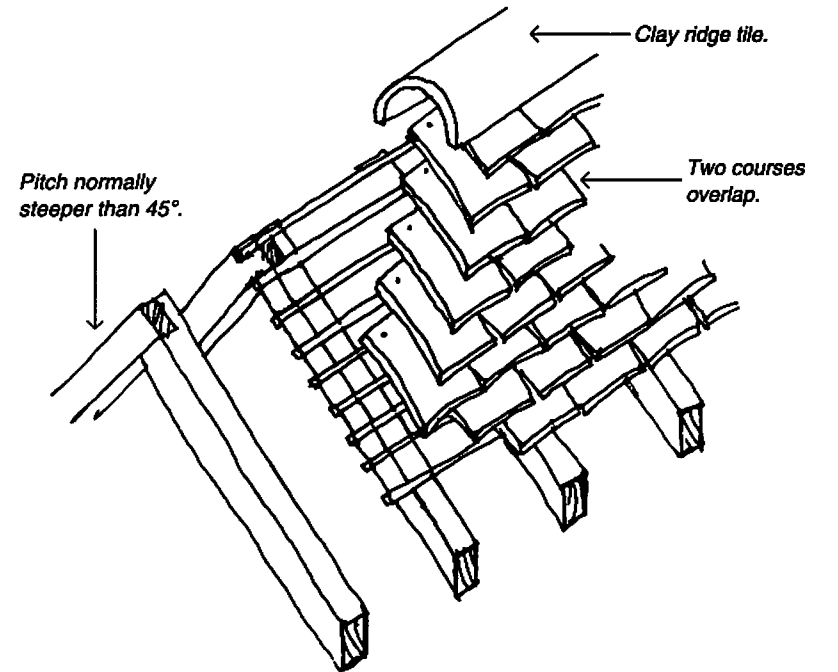
# SECTION 1 – BACKGROUND

## Thatch



Long straw thatch (above), reed (below).  
Notice the marked difference between their appearance.  
Straw is thicker and has a more rounded, softer character.  
Its attractive simplicity is enhanced because there is no  
need for a raised block ridge.

## Plain or peg tiles.



(Left) Early tiles were plain flat slabs with peg holes.

(Right) Later they were cambered in both directions and incorporated nibs and nail holes.

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## 1.5 ROOF FINISHES

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### Thatch

For centuries, thatch was the most used material for roof coverings and it was not until the end of the 16th Century that clay tiles began to replace its widespread application. Although both straw and reed were readily available in the District for thatching purposes, reed was more common in the coastal areas and by the rivers, whereas straw prevailed in the more western parts of the District.

The technique of thatching involves laying small bundles of straw or reed onto timber battens, which are normally fixed to the rafters at approximately 9" centres. The bundles are tied to the battens and fixed in place with hazel stays. The roof is built up in layers to a thickness of about one foot with reed and about 18 inches with long straw.

Visually, there is a marked difference between the finished appearance of roofs thatched with reed and those covered with long straw. Straw thatch is thicker and has a more rounded, softer character, whereas reed has the cut ends exposed on verges and around dormer windows, and has a much more 'angular' appearance.

As reed cannot be bent over the ridge of the roof, the apex on reed-thatched buildings has to be given an extra thickness, using straw, sedge

or tough grass. The edge of this raised ridge is almost always formed into ornamental shapes, with each thatcher having their own distinctive style. Although many have them, a raised ridge is not necessary nor is it a traditional feature on long straw thatched roofs. On both types of thatch, hazel stays are used for fixing purposes and to create decorative patterns along the ridge and on verges and eaves.

In order to properly throw off rainwater, rather than absorb it, thatched roofs need a pitch of at least 45° (50°-55° is preferable). The number of old properties in the District with such steeply pitched roofs is evidence of how widespread the material used to be, but over the years, many buildings have had their thatch replaced with tiles.

### Plain or Peg Tiles

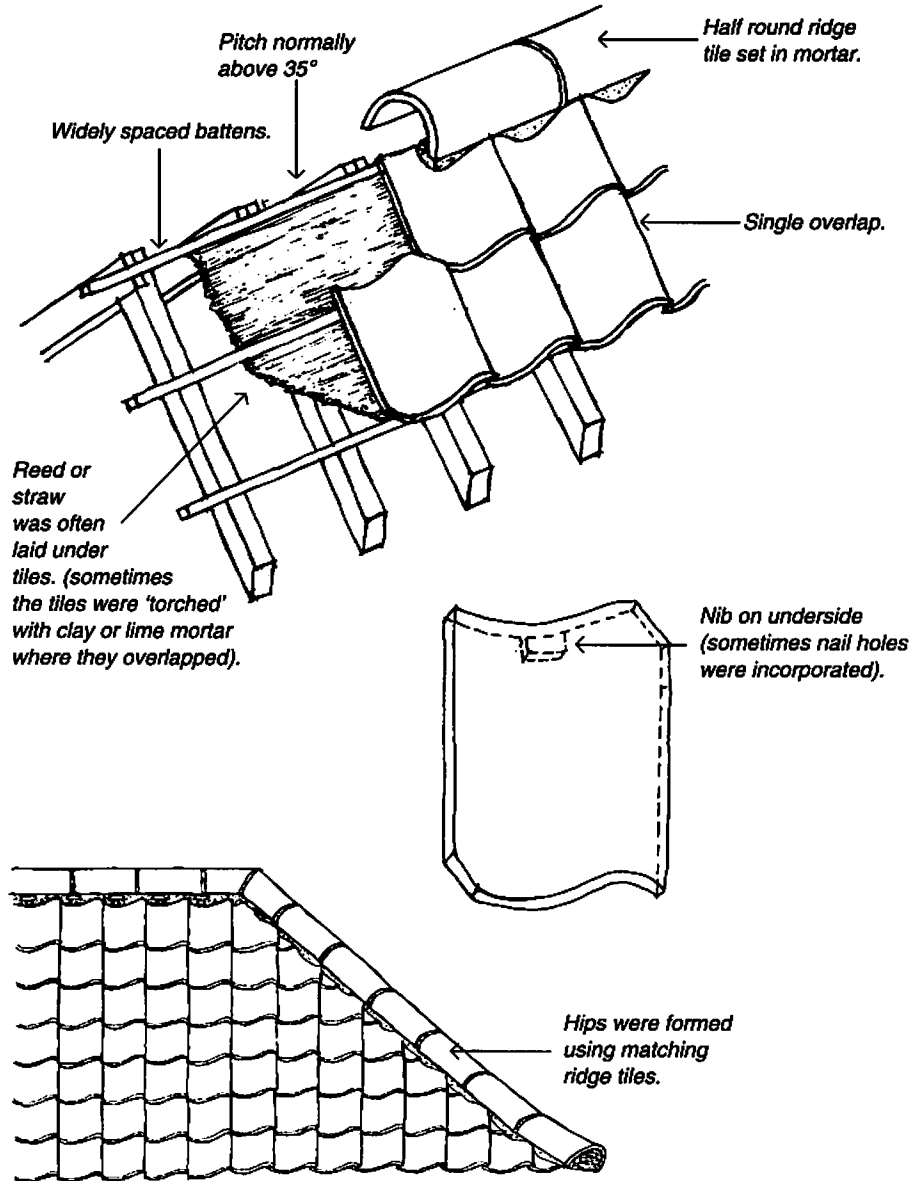
The manufacture of clay plain tiles developed alongside brickmaking. The size of plain tiles was standardised in the late 15th Century to 10½" by 6½" by ½" thick. Their use, particularly in East Anglia, became common during the 16th and 17th Centuries, especially in towns where the spread of fire from one building to another was a great threat. Early plain tiles were laid on steeply pitched roofs with wooden pegs. Later on nibs were moulded into the tile which allowed them to be hung from lighter battens. Often holes were provided so that the

tiles could also be nailed into place. The size of the tile when laid in regular courses meant that 4" was exposed when each tile lapped two others, thereby, adequately masking the joints.

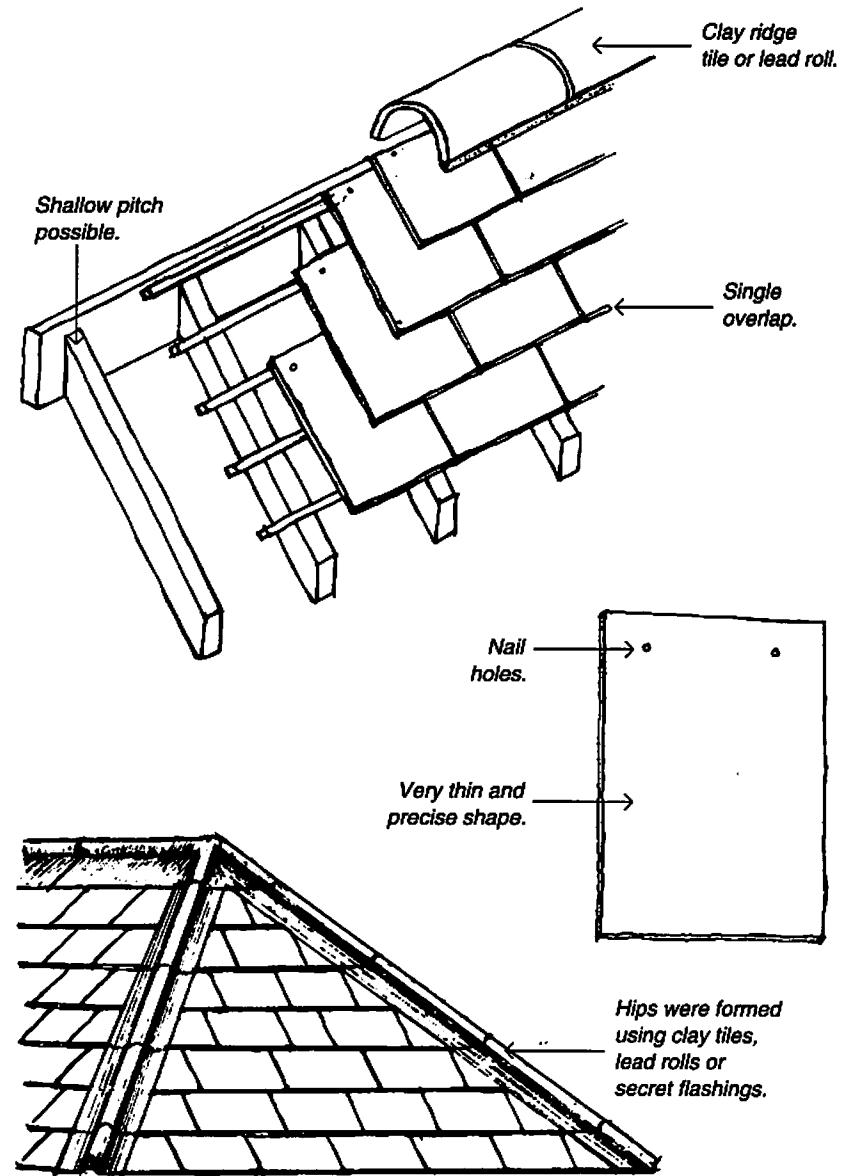
The earliest plain tiles were hand made out of plain flat slabs of clay. Later on they were made with a strong camber across their length and width. Each has a degree of variation which gives old plain tiled roofs their unique character. Special tiles for ridges, hips and valleys were also produced and later, decorative tiling became common, with different colours and shapes creating intricate patterns on the roof. Tile hanging on walls was never a vernacular building tradition in the Area.

# SECTION 1 - BACKGROUND

## Pantiles



## Slate



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## 1.5 ROOF FINISHES

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### **Pantiles**

Pantiles were first imported into the District from Flanders in the 17th Century. They were later produced locally and increased in popularity because they were a relatively cheap and effective roof covering. By the beginning of the 18th Century they were displacing thatch as the first choice for roofing material.

Pantiles are a single lap tile, in that each only needs to overlap one tile beneath by a small amount. This is due to their shape, which allows the tile to overlap across the roof as well as downwards. Because of this, they are able to be laid at a shallower pitch than necessary for thatch or plain tiles.

Pantiles formed an attractive, long-lasting, well designed replacement for thatch in the Area, partly because they were so suited to the simple gabled roof forms which prevailed. Early hand made pantiles, like plain tiles, varied in shape, and, therefore, in order to make the roof more wind and rain proof it was often found necessary for them to be laid on a bed of clay or lime mortar (this was called 'torching'). Sometimes they were provided with a lagging of reed or straw to give an extra degree of insulation as well as additional weather protection. The size of pantiles was laid down by an Act or Parliament in 1722 which stated that they should not be less, when fired, than 13½" by 9½" by ½" thick.

The colour of pantiles used in the District was a fairly constant rich orange-red, which complemented the local Suffolk red brick. An attractive variation to this was a black glazed pantile which was produced by the tile being dipped into a dark glaze prior to firing. White pantiles, made from the local clay with a high lime content, were produced in the Area but are no longer made and are now quite rare.

### **Slate**

Slates were hung using nails from sawn battens and were able to be satisfactorily laid at a much shallower pitch than either thatch, plain tiles or pantiles. The use of slate, therefore, enables larger spans to be covered without the need for a particularly high roof. They were therefore very suited to houses designed with a wider, 'double-depth' plan form.

Slate was imported into the Region from the 18th Century onwards. It became a popular roofing material for the many 'pattern book' Georgian and Victorian houses which were built, and was often used in conjunction with the then fashionable white brick. It was also used to re-cover existing roofs, including instances when earlier timber framed buildings were refaced with brick. Sometimes, when this was done, the use of slates allowed existing steeply-pitched roofs to be altered. The eaves were raised and a shallower pitch was

provided, thereby allowing greater headroom on the upper floor.

The slates that were used were almost universally Welsh, which meant that they were of a uniform thickness and size. Roofs covered with the material therefore, have a particularly smooth, thin and precise appearance, although they do have a subtle blend of colours and irregularities.

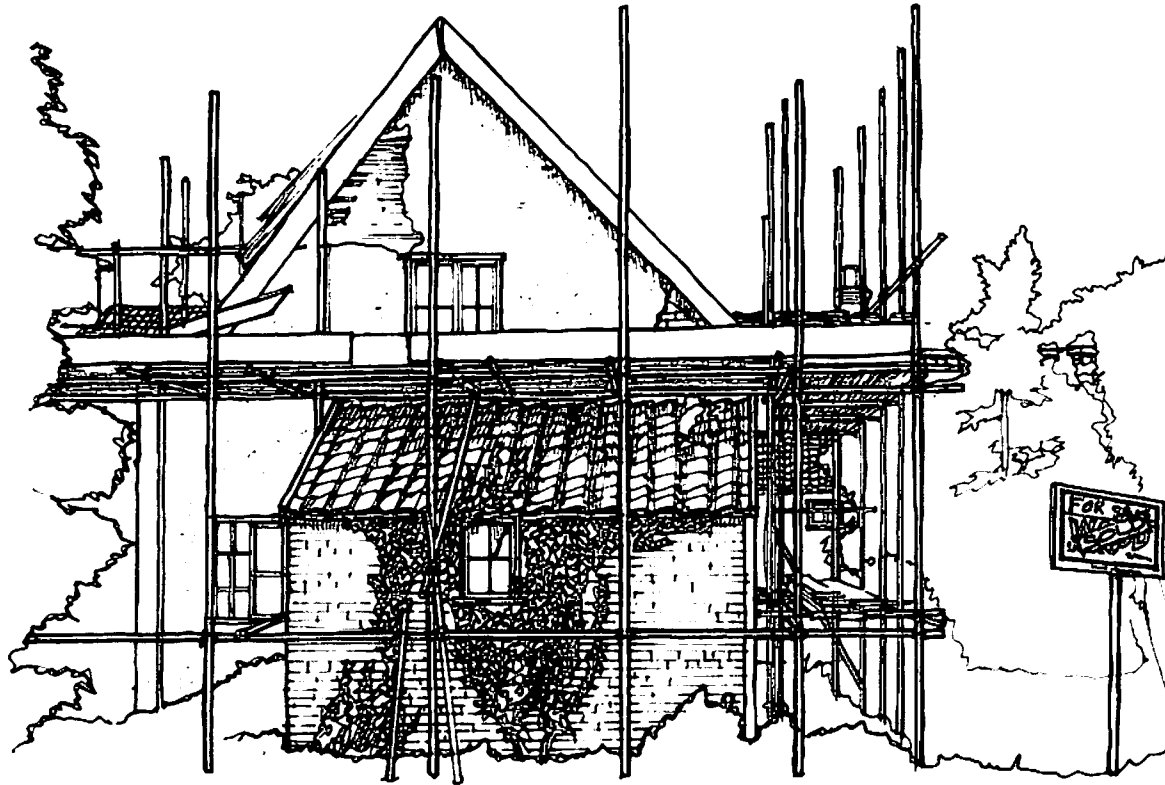
When slates were laid on buildings designed with hipped roofs they were often used in conjunction with standard or specially moulded clay ridge and hip tiles. Sometimes the slates were carefully mitred on hips and a lead flashing was used to cover the joint.

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## SECTION 2 – REPAIRING HISTORIC BUILDINGS

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*A built heritage 'at risk?'*



*What does the future hold for this old building? Is it going to retain its architectural character and historic significance? It may if the new owner's plans are to repair sympathetically. It is less likely to if the intention is to turn it into a 'modern' house. (If the building is Listed then it should be afforded adequate protection. Work that requires Planning Permission will also need to be sympathetic).*

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## 2.1 A BUILT HERITAGE 'AT RISK?'

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Suffolk Coastal has a wealth of historic buildings. Many of its old buildings are under threat though. A small number are obviously under threat because of neglect. Many more are also under threat, or have already been severely damaged, as a result of a process which is much more subtle – inappropriate repair, restoration and alteration.

Buildings which are neglected or remain untouched are sometimes actually less 'at risk' than those where a new owner plans to renovate and modernise. Many people embark on this sort of work with the very best of intentions. They see a property which has not had anything to it for years as an opportunity to "restore it to its former glory." Sadly, the work that is undertaken often involves stripping away and replacing much of the fabric of the building and consequently its history and character, leaving it virtually rebuilt and devoid of any special interest.

Prospective purchasers should not be tempted by phrases such as "plenty of scope for modernisation" or "potential for improvement", because it is all too easy for a new owner who professes to care about an old building to inflict severe damage through the culminative effect of incremental change and replacement. Such things as the removal of timber studs and infill from internal walls to create larger spaces,

installing a wider staircase, replacing old windows with new ones or building an inglenook fireplace, can all dramatically change the character of a building.

In many cases it is simply not possible to provide the level of modern amenities and space standards that some people expect without destroying the character of an old building. Furthermore, such buildings and their historic features are a finite resource, they cannot be replaced nor can any historic feature be lost without the architectural and historic importance of the building being undermined.

Inappropriate repairs and alterations can also affect the resale value of the property because in general, potential buyers are now prepared to pay more for houses which retain original or historically important features.

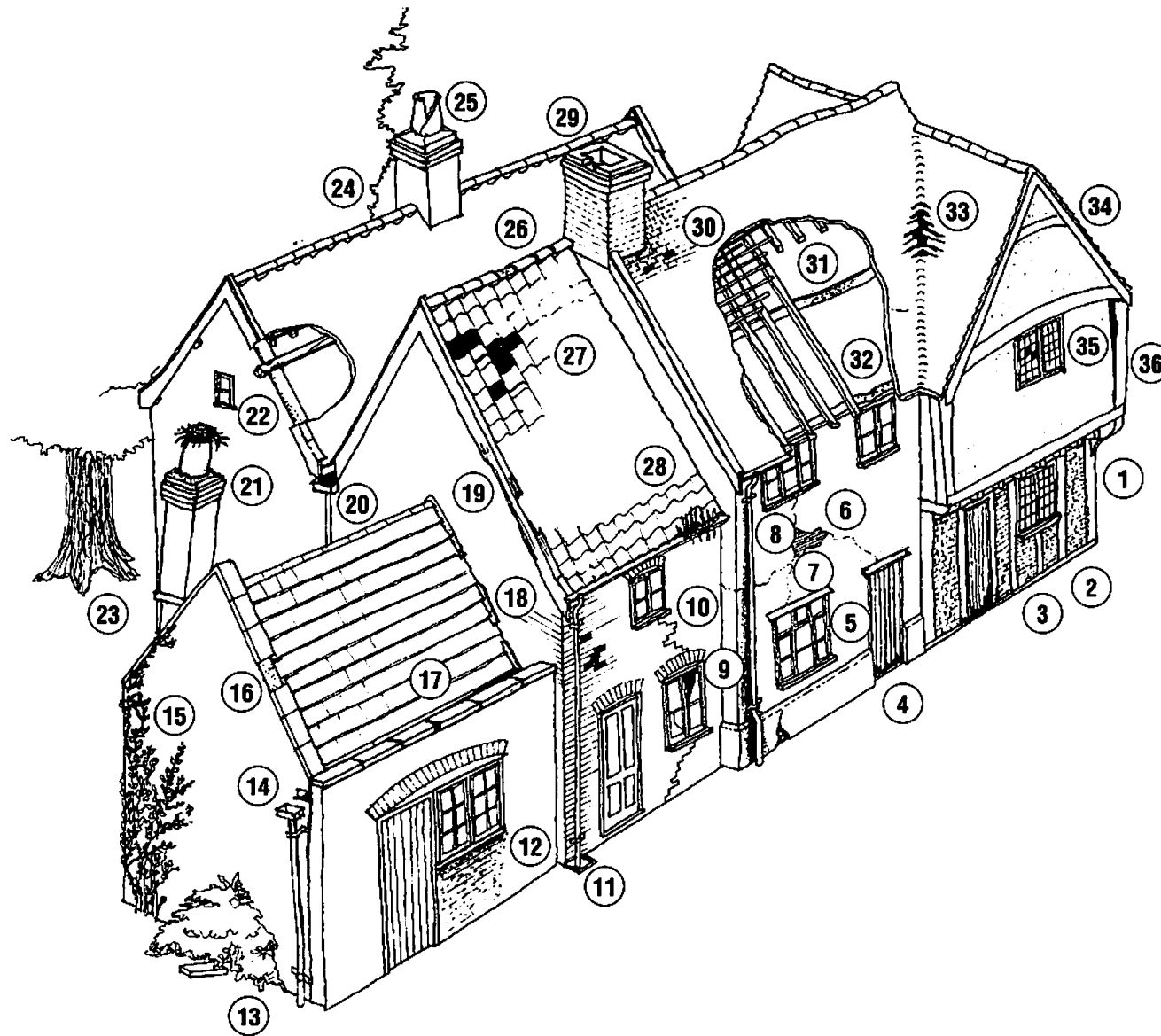
Preserving the character of an old building whilst carrying our repairs and renovations is no easy matter. Character is a subjective term which is formed by a combination of many factors. Particularly important is the fact that such buildings illustrate the history of an area and the changes that have taken place in the architecture, the economy and the social make-up of the locality. Their historical form, their often unique architectural features and details and their patina of age all contribute to this. Buildings are Listed for these very reasons.

The next few pages attempt to provide some advice on what should be considered when faced with repairing an historic building and what sort of alterations are likely to be appropriate in order that its essential character is retained. Clearly it is impossible within the scope of this Document to provide sufficiently detailed advice to cover every possible situation. Its aim therefore, is to cover general principles and the more common examples so that owners will have a better understanding of the importance of their property and the likely implications of carrying out work in a particular way.

It is strongly recommended that wherever possible expert architectural advice is sought from an historic building specialist and names of experienced practitioners can be obtained from the Society of the Protection of Ancient Buildings, 37 Spital Square, London, E16DY (see Appendix 4).

## SECTION 2 – REPAIRING HISTORIC BUILDINGS

### Common defects in old, neglected buildings.



#### Key

- 1 Decayed timber framing at junction with brickwork.
- 2 Wall plate resting on ground with no damp proof course or masonry plinth leading to rot.
- 3 Gaps between brick and timber framing. Brick nogging requiring repointing.
- 4 Ground level outside above floor level inside. No water barrier causing door and frame to rot.
- 5 Metal window frames corroded.
- 6 Dislodged render.
- 7 Fine cracks in render allowing dampness to get behind.
- 8 Rainwater down pipe blocked or defective causing spillage and damp walls.
- 9 Failure of arches and lintels.
- 10 Cracked and bulging brick wall.
- 11 Rainwater outlet blocked causing build up of water, dampness and damage to foundations.
- 12 Absence of proper sill allowing water to soak wall below causing dampness and spalling brickwork.
- 13 Vegetation or earth at foot of wall encouraging damp and decay.
- 14 Blocked or defective rainwater hopperhead.
- 15 Vegetation causing physical damage to walls, roof, rainwater goods and joinery.
- 16 Copping to parapet wall missing.
- 17 Blocked or defective parapet gutter.
- 18 Inadequate flashing to abutment.
- 19 Damage or decayed barge boards and capping pieces.
- 20 Blocked or defective valley gutter.



## 2.2 GENERAL PRINCIPLES

- 21 *Chimney stack out of plumb and dangerous. Birds nest blocking flue.*
- 22 *Purlin fractured and decayed where built into the wall.*
- 23 *Large overgrown tree on clay soil possibly contributing to ground shrinkage or heave when weather is excessively dry or wet.*
- 24 *Overhanging branches causing accumulation of leaves in gutter, shade prevents building from drying out.*
- 25 *Chimney pots cracked and loose.*
- 26 *Sagging ridge caused by defective roof. Loose tiles and open joints allowing water to enter.*
- 27 *Roof tiles loose or missing due to defective pegs, nails or battens.*
- 28 *Blocked, inadequate, damaged or corroded rainwater gutters.*
- 29 *Cracked and missing copings, loose brickwork, stack needs repointing.*
- 30 *Cement fillet cracked or pulled away from brickwork.*
- 31 *Sagging purlins and rafters causing distortion of roof.*
- 32 *Rafter feet and wall plate decayed.*
- 33 *Defective valley admitting water.*
- 34 *Gable verge tiling needs repointing.*
- 35 *Panes of glass missing.*
- 36 *Failure of joint in timber framing causing outward thrust.*

### Priorities and Urgency

When faced with an historic building which is in need of repair choices frequently have to be made over what should be done first, especially when funds are restricted. It is at this stage that the professional advice of an historic buildings specialist is most useful.

Priority should always be given to keeping the building "wind and weather tight", even on a temporary basis, to prevent any further deterioration as a result of rain and damp entering and being trapped inside the building.

Ensuring the roof flashings, gutters and downpipes are working properly is essential, especially as many historic buildings have fairly complicated roof forms details and methods of rainwater disposal. Rising and penetrating damp should be eliminated as soon as possible and adequate ventilation should be provided and maintained not only to rooms but also to roof spaces, sub floors, etc. Any structural defects should be tackled after thorough investigation of the likely causes.

Do not rush into undertaking work before ensuring that the problem is one which actually needs to be tackled. What may seem a major defect may be something that occurred decades, or even Centuries ago and has not got any worse since. If this is the case and as

long as the building is not deteriorating it should be left alone – it has become part of the character of the building!

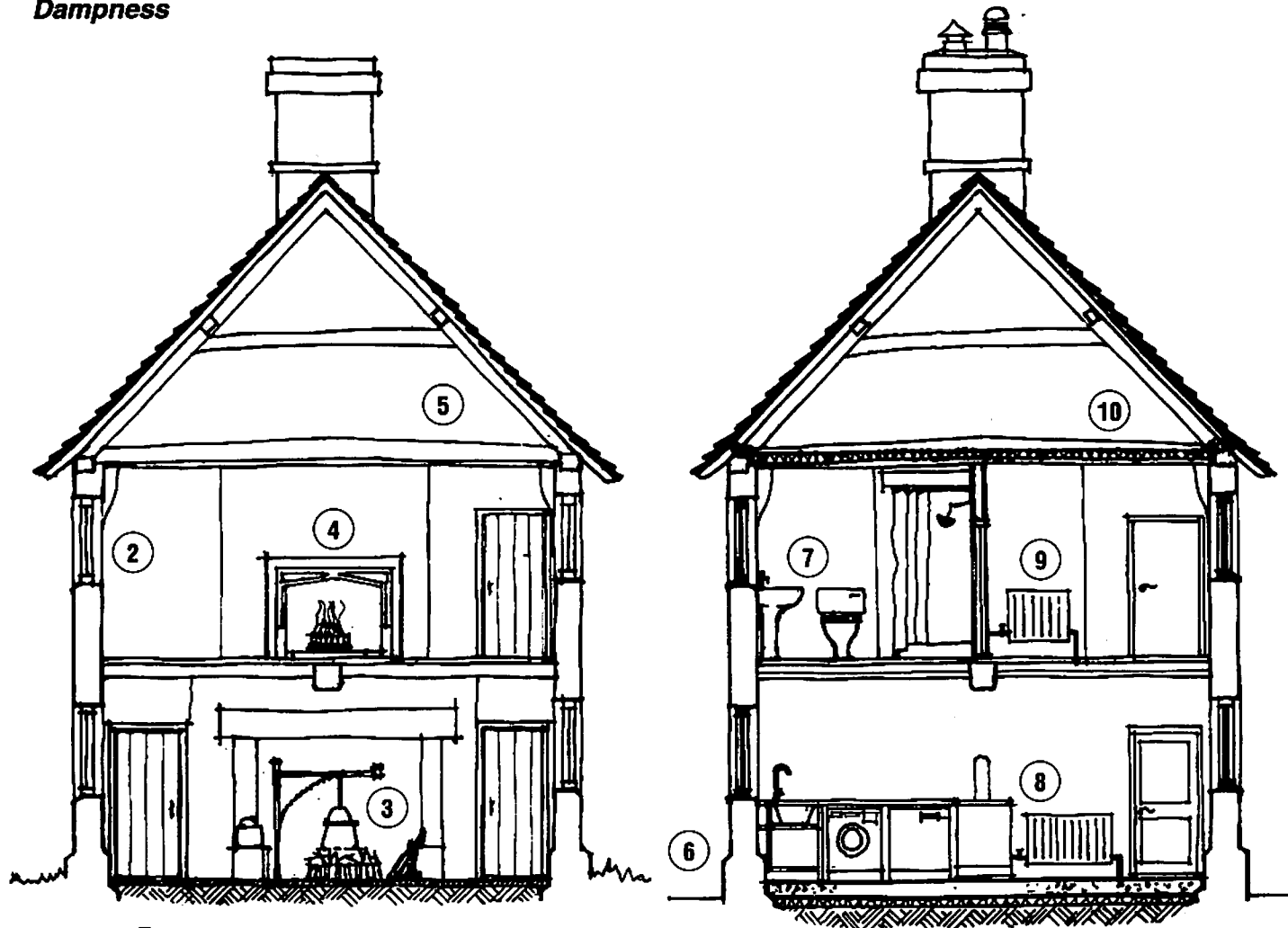
Having said that, every building needs to be repaired occasionally and undertaking minor repairs and regular maintenance can save the cost and inconvenience of major work later. Work should be carried out using materials, techniques and details to match the traditional ones which exist on the building in order that new problems are not created and that the building retains its historic character.

### Statutory Approvals

**You may need Planning Permission, Listed Building Consent, Conservation Area Consent or approval under the Building Regulations for certain repairs or alterations so check with the Local Authority before you start. It is important to seek advice if you live in a conservation area and essential if you intend to carry out works to a Listed building. Even if you do not need approval the District Council can provide general advice on techniques and materials to suit your property.**

## SECTION 2 – REPAIRING HISTORIC BUILDINGS

### Dampness



① Old buildings were designed to accommodate simple life styles (left). The impact of modern lifestyles is very different (right).

#### Key

- ① Rising damp through walls and floors dries out because of high levels of ventilation.
- ② 'Soft' nature of material and finishes allows water to penetrate but also enables the moisture to escape and the building to dry out.
- ③ Occupants did not expect the high standards of comfort and simple life styles produced less water vapour.
- ④ Open fireplaces draw in fresh air from outside. Chimneys provide ventilation.
- ⑤ Roof ventilation through gaps between tiles and at eaves and verges, allow timbers to dry out.
- ⑥ Proper floors with damp proof membranes and walls with damp proof courses prevent rising damp. This traps and leads to a build up of moisture which could create problems in areas where the damp proofing as failed.
- ⑦ Modern hard materials (e.g. hand cement renders and gypsum plaster finishes) help trap moisture within the fabric of building. They are also more likely to cause condensation.
- ⑧ Modern life styles and conveniences create high levels of water vapour. Occupants expect a much higher standard of comfort. For example, providing ventilation is often seen as causing draughts and wasting heat.
- ⑨ Central heating, double glazing and the blocking up of open fireplaces reduces ventilation levels in rooms.
- ⑩ Use of felt and insulation reduces levels of ventilation in roof space.

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## 2.3 DAMPNESS

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The most common cause of defects and decay in old buildings is allowing water to enter. This leads to rot, crumbling masonry, mould and fungus growth, damage from salt penetration and eventually structural failure. A dripping gutter, green algae around a downpipe, a loose piece of lead flashing and damp patches on walls, floors or ceilings should all be remedied without delay.

Rising damp is caused by water in the ground being drawn up through the structure and finishes of the building by capillary action. Modern living standards, central heating, improvements in insulation and draught proofing has meant that rising damp in old buildings has become much more of a problem than it used to be.

Although measures can be taken to alleviate the problem by allowing an old building to "breathe", for example by providing adequate ventilation, rising damp is invariably seen, by modern building standards, to be the direct result of a lack of a physical damp proof barrier.

The damp proofing of an existing building can be carried out by the insertion of a physical damp proof course or by a chemical barrier being injected into masonry walls. With solid floors, the laying of a damp proof membrane or the application of a damp proof paint, are the

most common solutions.

Great care should be taken with the installation of all these as they are often unnecessary, can disfigure the exterior, and can lead to the loss of historically important internal finishes on both walls and floors. Rather than rely solely on the view of a damp proofing contractor, it is strongly recommended that independent advice is sought from an Architect or Surveyor who specialises in historic buildings work. Ideally, such advice should be sought right from the start because the methods that different damp treatment companies use may not be suitable for your property or for the problems that need to be solved.

One common example of unnecessary work being undertaken is that it is often a requirement of a damp proof guarantee that when a damp proof course is installed internal plaster should be hacked off to a height of at least 450mm above any damp affected area. This is not necessary in many instances and an historic building specialist would be able to advise whether such a requirement is reasonable in particular instances.

Sometimes existing damp barriers can fail and they will need to be replaced. Most often the failure is likely to be due to the barrier being 'bridged' in a particular location. This can occur when ground levels are raised or floors lowered

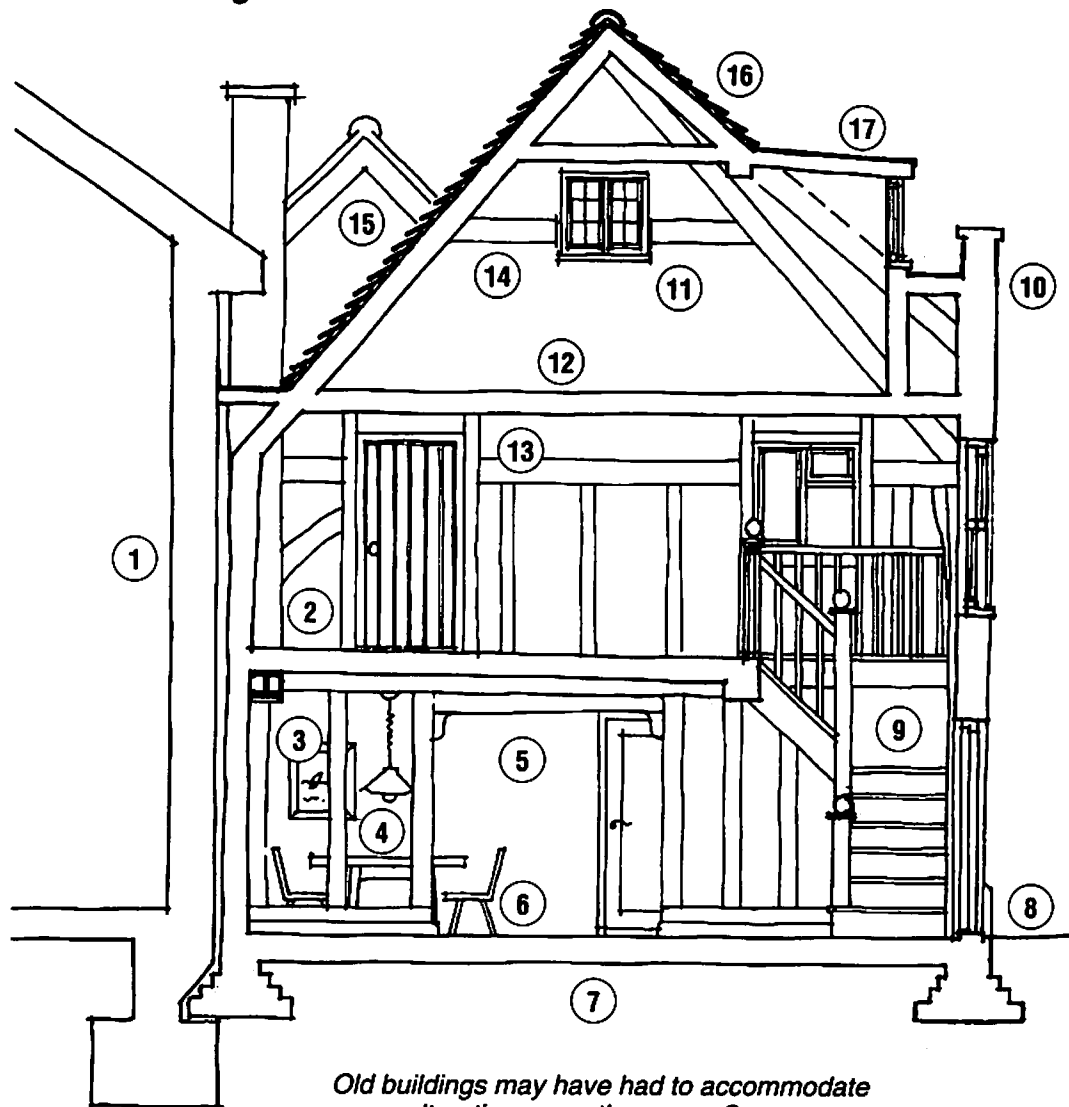
or when an adjacent wall or render or plaster finishes form a way round for moisture. Again these sorts of "failures" need to be rectified straight away.

The Society for the Protection of Ancient Buildings have produced an excellent leaflet on damp problems in historic buildings, (see Appendix 4).

**Some damp proofing work, especially if it involves the removal of traditional plaster finishes, affects the historic fabric or other important finishes on a Listed building will require Listed Building Consent (see Appendix 2).**

## SECTION 2 – REPAIRING HISTORIC BUILDINGS

### Structural changes.



Old buildings may have had to accommodate many alterations over the years. Some examples are illustrated here.

### Key

- ① New building constructed on adjacent site could have affected ground conditions and foundations.
- ② Wall brace cut to form new doorway.
- ③ Base of chimney and fireplace removed, steel lintel added.
- ④ Infill between studs removed.
- ⑤ Studs removed to form new opening.
- ⑥ Sole plate and plinth removed.
- ⑦ Concrete floor inserted.
- ⑧ Footway and road raised over years.
- ⑨ New staircase inserted.
- ⑩ Brick facade and parapet upstand added.
- ⑪ Windows added.
- ⑫ Ceiling raised.
- ⑬ Door inserted.
- ⑭ Collar beam cut.
- ⑮ Extension added.
- ⑯ Front roof slope raised.
- ⑰ Dormer window inserted.

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## 2.4 STRUCTURAL PROBLEMS

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### Structural changes

Many of the structural problems in historic buildings are caused by incompetent and ill-considered earlier alterations, often done by jobbing builders with no structural knowledge or understanding of good conservation practice.

When a building is changed structurally a number of times it becomes progressively more difficult to adapt yet again and each time change takes place it contributes to the buildings eventual destruction.

In many instances the distortion of a timber frame, floor or roof can be traced to individual structural members being cut or removed. Examples include tie beams, braces and collars being removed in order to form new doorways, beams and joists are cut so that a new staircase can be inserted, or studs in an internal wall being removed in order to create one large room out of two smaller ones. All these sorts of "improvements" result in the severance or removal of structural members of the building thereby putting much greater loads on the remaining ones.

The best way to ensure the future of an old building, apart from proper maintenance, is not to make any unnecessary changes to it.

### Structural Quality

The structural quality of historic buildings varies greatly. Surprisingly, it is often the older

buildings which actually have the better structure. Most surviving Medieval timber framed buildings for example were originally very well built.

The quality of the original construction is an important key to a building's future stability but it is not always easy to assess as even the worst builders were often adept at covering up their shortcuts and misdeeds. Also, structures built to impress, such as grand houses, were not always particularly well constructed, especially if they were commissioned during a "building boom".

Some older properties are only just stable, particularly terraces and abutting groups of buildings where each one helps to prop the others up. Attempting only relatively minor changes to one of them can have disastrous implications which may not be immediately evident.

### Structural Movement

Evidence of structural movement in old buildings, including settlement, is very often something which has happened at some time in the distant past and is no longer a problem. Old timber framed buildings for example, can, over the years, have acquired a considerable distortion through natural movements, shrinkage etc. of individual timbers. Normally there is no

harm in this as long as the joints remain sound. However, if an old building which has been stable for many years suddenly shows signs of movement, the cause should be investigated. Thorough examination of the building is crucial. Movements can be indicated by doors and windows sticking or cracks appearing in walls and ceilings. Cracks which are dirty and dusty or where they are partially filled with old paint can mean that they have been there for a long time. If the crack is clean and has sharp edges, it is probably new and will need to be carefully watched.

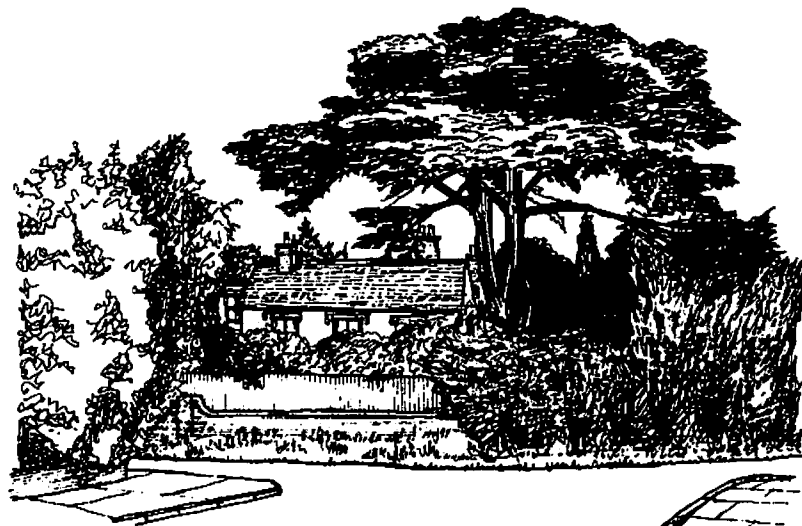
Structural movement can be due to a variety of causes including subsidence (or the reverse, 'heave'), movement in an adjoining building, earthworks on an adjacent site, trees growing too large, or too close to the building, failure of a structural member or the long term effects of weather (too dry, hot, cold or wet). Most old buildings are constructed with materials which allow a surprising degree of movement without it adversely affecting their structural integrity. Monitoring should be carried out over a period of time to determine the direction, rate and possible cause of movement.

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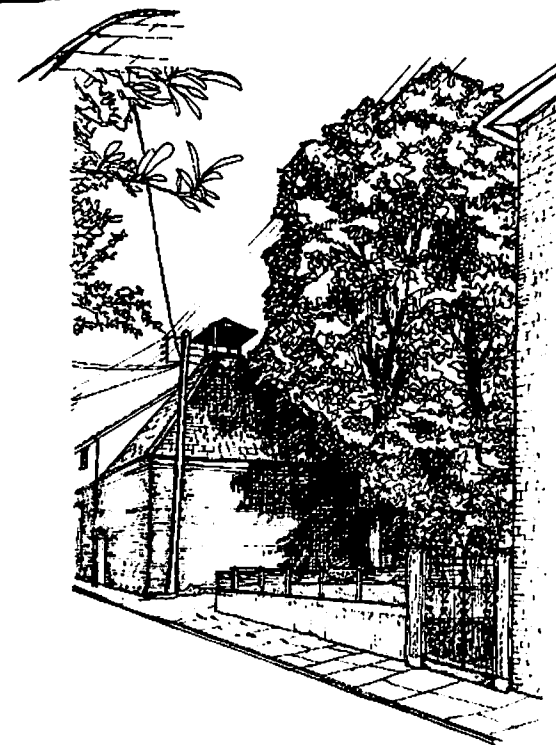
## SECTION 2 – REPAIRING HISTORIC BUILDINGS

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### *Trees and historic buildings.*



*Mature trees are an attractive feature alongside many historic buildings. In most instances they do not cause structural problems.*



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## 2.4 STRUCTURAL PROBLEMS

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### **Underpinning**

Underpinning (providing additional foundations) is expensive and should be seen only as a last resort. It is also seldom necessary unless the building is being altered. Indeed, underpinning or introducing new foundations for an extension can cause serious damage to the existing structure if it restricts certain parts of the building from moving the way it has done in the past or introduces a change in the way loads are distributed through the structure and into the ground.

### **Trees**

Trees are often unjustifiably suspected of causing structural movement and damage to old buildings. Tree roots are also often seen as the reason why drainage systems fail. Roots seldom cause direct mechanical damage to old buildings which are built with materials which are capable of accommodating a degree of structural movement. Roots of a tree which has been allowed to become too large for the space it occupies can cause damage to paved areas and retaining walls. They will also be attracted to the additional source of moisture caused by a defective drain.

Trees and their root systems can exacerbate structural problems in old buildings because they can be a contributory factor to ground shrinkage during hot, dry spells by removing

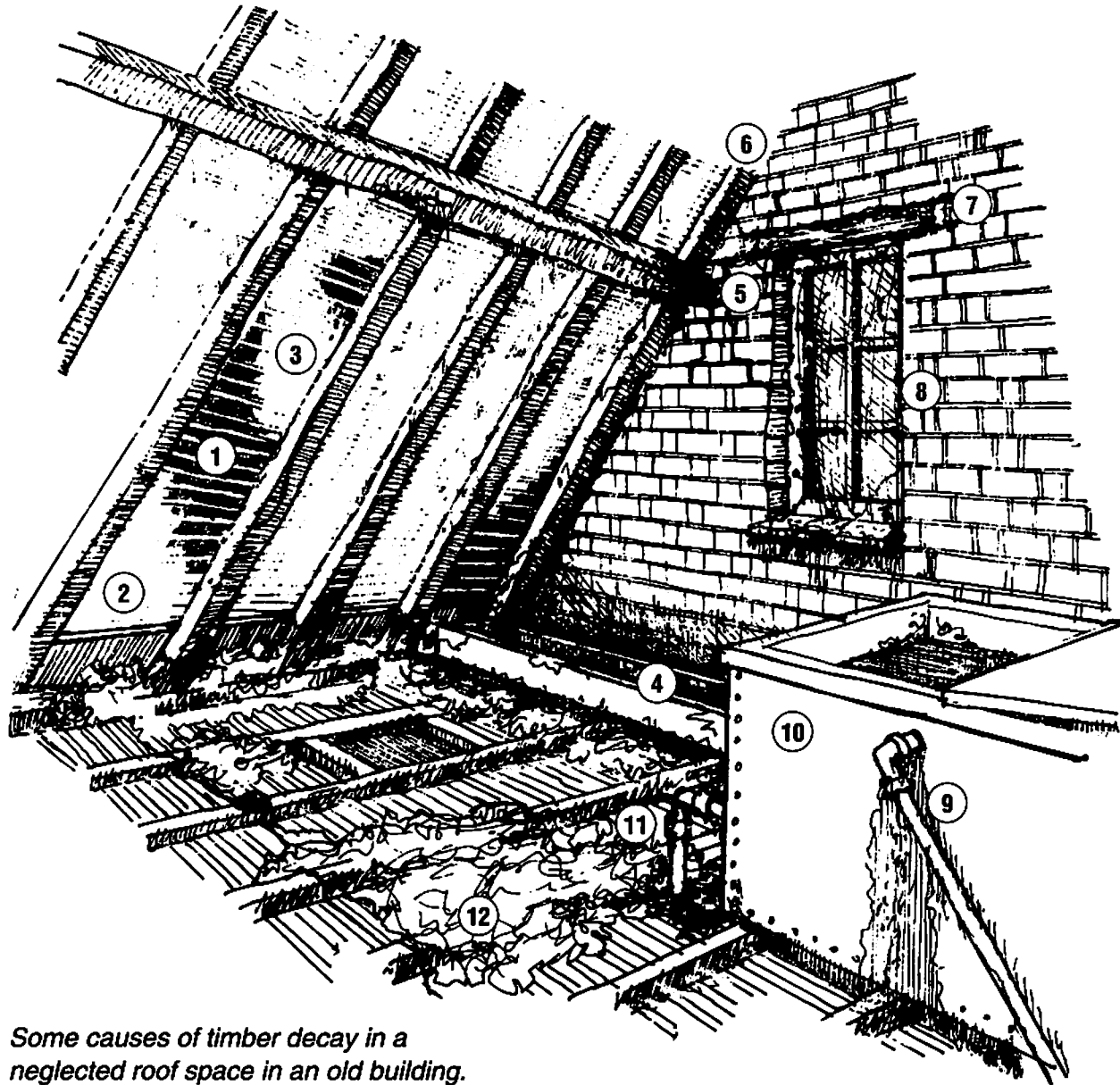
too much water from the ground. Such problems are more likely to occur in clay soils rather than sandy soils. Tree surgery including thinning and crown reduction will reduce the moisture take-up.

Removal of the tree though, can actually cause more damage than leaving it where it is because of the likelihood of ground heave occurring as the tree would no longer be taking any moisture out of the ground.

Trees should not be planted too close to buildings nor should new buildings or extensions be built too close to existing trees. Consideration should always be given to how large a tree and its root systems will eventually grow.

## SECTION 2 – REPAIRING HISTORIC BUILDINGS

### *Timber Decay.*



*Some causes of timber decay in a neglected roof space in an old building.*

#### **Key.**

- ① *Leaking roof causes battens and roof timbers to rot and nails to rust.*
- ② *Leaking valley gutter causing damage to rafter feet and wall plate.*
- ③ *Damp plaster retains moisture and encourages rot.*
- ④ *Lead lined timber trough for discharging rainwater from valley gutter is blocked and broken.*
- ⑤ *End of purlin rotting where built into a gable wall with damp problems.*
- ⑥ *Rafter butting up against damp and decaying brickwork.*
- ⑦ *Damp and lack of ventilation causing lintel in brickwall to rot.*
- ⑧ *Plastic over windows reduces ventilation and so encourages damp and rot.*
- ⑨ *Leaking overflow pipe.*
- ⑩ *Leaking uninsulated cold water storage tank.*
- ⑪ *Leaking uninsulated cold water feed pipe to tank.*
- ⑫ *Damp debris in roof space.*



## 2.5 TIMBER REPAIRS

### Timber Decay

Timber in buildings deteriorates and decays as a result of being attacked by wood-rotting fungi ("wet rot" and "dry rot") or insects (commonly the larvae of various species of beetle).

Wet and dry rot fungi require certain conditions in which to grow. Principally, moisture, darkness, lack of ventilation and a moderate temperature. Avoiding the creation of these conditions can remove the threat of attack. Preventing moisture from entering the building, ensuring adequate ventilation and avoiding leaks in gutters, downpipes or the plumbing are very important in this respect.

Decay of hidden timbers, for example those which are plastered or bricked over or are fixed to or built into brickwork, are particularly problematic because they are prone to fungi and insect attack. Sole plates laid on masonry plinths have to be repaired if decayed, so do timber lintels. Timber purlins, wall plates at eaves level, built-in rafters, floor and ceiling joists are all similarly 'at risk' when they are in direct contact with masonry.

The warning signs of an active insect attack include small holes in the timber and powdery deposits. Prevention and treatment for most types of timber decay including pest attack are available through specialist firms. Many inspect

and report on a property free of charge in the expectation of carrying out work. Always get a second opinion, although it would be far better to seek independent advice from an architect or surveyor who is experienced in working with historic buildings.

Beware, stories abound about work being carried out on apparent fungi attacks and insect infestations which had actually ceased to be active years earlier. Also, inappropriate and expensive chemical treatments often fail to solve the problems they are meant to cure.

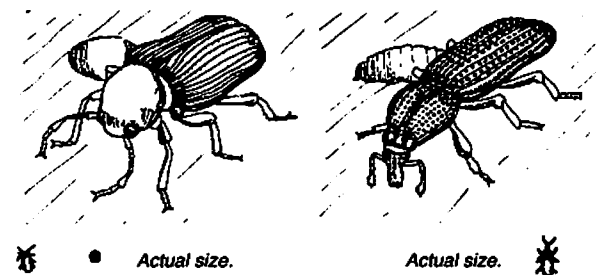
Some companies require at least three sides of a timber member to be exposed for treatment. This is often unnecessary and would sometimes involve the loss of historically important infill and finishes. In such situations independent advice is a must.

**Listed Building Consent will usually be required for repair work which affects or alters the structure, fabric or finishes on a Listed building.**



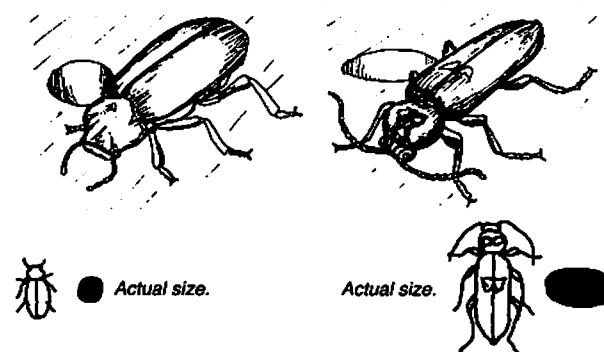
(Above) Timber decay caused by insect attack.

(Below) Damage is usually caused by the larvae of various species of beetle.



Common furniture beetle.

Wood boring weevil.

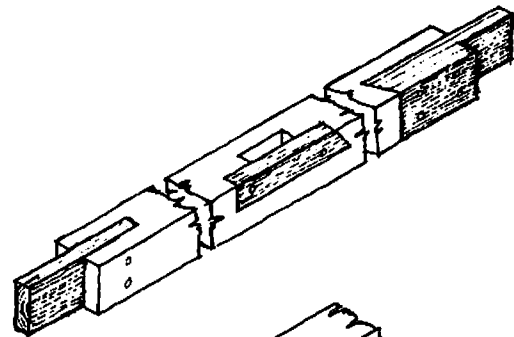


Death watch beetle.

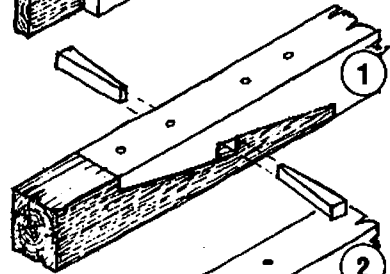
House longhorn beetle.

## SECTION 2 – REPAIRING HISTORIC BUILDINGS

### Traditional carpentry repairs.

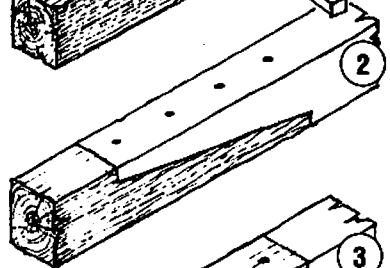


(Left) An example of mortice and tenon repairs.

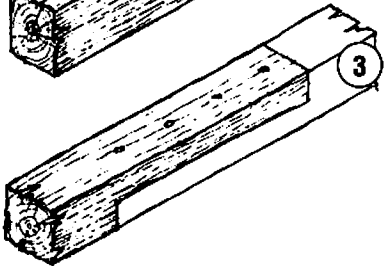


(Below and right) New wood can be 'scarfed' into the old.

① A wedged joint (used where bending, tensile or compression stresses are significant).



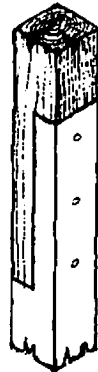
② Splayed joint (used where bending stresses are occurring e.g. rafters).



③ Horizontal halved joint (used in wall and sole plates).

④ Vertical halved joint (used in posts and studwork).

⑤ Scissor joint (resists lateral movement).

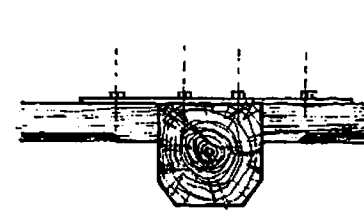


④

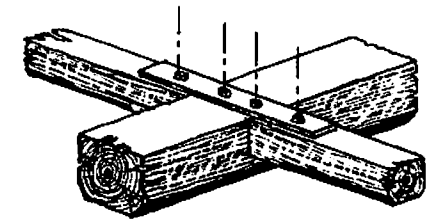


⑤

### The use of metal plates and straps in timber repairs.



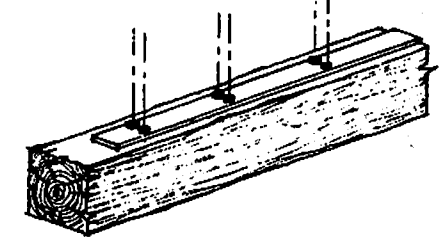
Metal plate bolted to top of beams in order to strengthen joint.



Metal plates bolted to top and bottom beam.



Metal fitch plate inserted through middle of beam.



Metal angle and straps used to strengthen joints.

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## 2.5 TIMBER REPAIRS

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### **Repairing Decayed or Broken Timbers**

Many structural timbers in historic buildings are oversized and even with a considerable amount of decay, once it is stopped, they will continue to satisfactorily undertake their structural function.

When necessary, there are various ways of carrying out repairs to decayed or broken timbers. The simplest involves a new piece of wood being 'scarfed' into the old, (see illustrations opposite). Repairs to joints should be carried out to enable the joint to undertake the structural function for which it was designed. This should involve reinstatement of part or all of the joint with sound timber.

For various reasons this may not be possible and it may be expedient to repair with metal. Normally the metal can be left exposed (as an 'honest' repair), however, in certain circumstances it can be detailed in such a way that is concealed when work is completed.

The use of infill and reinforcing rods made out of modern materials such as resins and plastics is often not appropriate but has been used in situations where it is absolutely vital to preserve as much of the original timber as possible.

**Listed Building Consent will, in many instances, be required for certain types of repair and for the replacement of historic timbers in a Listed building.**

### **New or Second Hand Timber**

The issue of whether to use new or second hand timber for repair and replacement work is a difficult one. Second hand timber is ideal from a structural point of view if it is the same type of wood and has aged under similar circumstances to that which has to be repaired.

Through the centuries, going back even to Medieval times, there has been a tradition of using reclaimed timber for new buildings or alterations or extensions to existing ones. Its use has often created significant problems and confusion though, for those trying to research the history of a building. Furthermore, second-hand timber has to come from somewhere and its availability for saving one building is more often than not the result of the destruction of others.

The use of new timber to repair part of the frame can sometimes cause problems because the new timber will move and set over the years. It should be very well seasoned and should be the same type as the original (i.e. Oak repaired with Oak, Pine with Pine, Elm with Elm etc).

The use of new timber for the construction of a single structural entity, such as a complete roof truss, should not cause significant problems and would be seen as an 'honest repair' to an existing building. In general terms therefore, if it

is not going to cause major problems, new timber rather than secondhand is probably the preferred option.

### **Cleaning and Decorating Old Timbers**

It is possible to clean internal and external timbers but in many instances it is not something to be encouraged because of the likelihood of the timber being damaged. Carvings, mouldings and carpentry marks can be eroded and evidence of the timber originally being shaped by hand totally lost.

Washing with clean water, brushing and using steel wool, will remove limewash. Paints and tar are more problematic, although solvent strippers and poultices may be successful. Ideally, independent advice from an historic buildings expert should be taken before embarking on any work.

Mechanical methods such as sand blasting should never be used. A light limewash may improve the appearance of cleaned timbers but modern paints and stains should not be used.

**Listed Building Consent will, in most instances, be required for cleaning, painting or staining timberwork on Listed buildings.**

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## SECTION 2 – REPAIRING HISTORIC BUILDINGS

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### Old Brickwork

Generally, in the District, all 19th Century or earlier brickwork was built using the local soft bricks with a lime based mortar. The use of cement and hard bricks is a 20th Century development. This “soft” construction, when compared to that used on new buildings, is why an old building can move and settle to some degree with changes in soil conditions or for other reasons without cracking or structural instability and why old bricks can so often be salvaged for re-use.

Old facing brickwork is an extremely important and attractive feature of the built environment of the District and every effort should be made to retain it in its intended original appearance. When walls begin to appear as though they are deteriorating the first question to ask should be – is any repair work really necessary? Many expensive treatments are carried out on walls that are in fact structurally sound. Whole buildings are repointed when all that is required is the careful repair of a small, badly-weathered patch on one wall. Worse still, walls with very little wrong with them are often painted or rendered over.

If there seems to be a problem that needs to be addressed it is best to seek independent advice from an architect, surveyor or structural engineer who is experienced and sympathetic to the conservation of historic buildings. If

repairs to brickwork have to be undertaken then they should be sufficient to ensure the soundness and stability of the wall.

**Listed Building Consent will be required for painting over or rendering facing brickwork on a Listed building. In some circumstances it may be required for repointing or replacing bricks. Planning Permission may also be required.**

### Painting and Rendering Facing Brickwork

Painting or rendering over old deteriorated facing brickwork may seem an attractive proposition because of its relative cheapness. However, it is actually likely to cause more problems in the long run than it solves in the short term, especially as it tends to trap excessive moisture within the wall preventing it from evaporating away naturally. The application of pebbledash and other types of coating or cladding should also not be undertaken for the same reason. The facing brickwork, which often has decorative elements, is much more attractive anyway.

Furthermore, painted, rendered, pebbledashed and similarly altered buildings which were originally designed with facing brickwork, invariably harm the appearance of the street and more often than not are worth less than those which retain their original appearance.

### Cleaning Brickwork or Removing Paint or Render

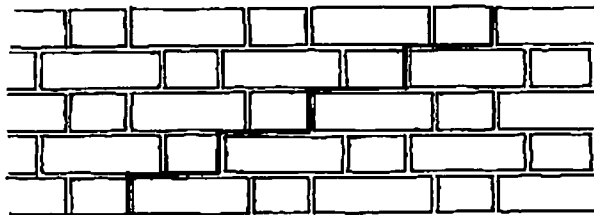
If brickwork has become excessively dirty, or if original facing brickwork has been covered over in the past, it may be possible to successfully remove excessive dirt or grime or some paints or other finishes, however, whether to undertake such work should be very carefully considered.

Saturating the brickwork with water and the use of chemicals should be avoided and coarse abrasives and grit blasting should never be used as they are liable to damage the brick surface, (older bricks are far more porous and less weatherproof if the face of the brick is damaged or removed). Sometimes, unfortunately, attempts at removing paint or render fail because it also takes off the surface of the brick or the brick has been scored in order to form a key for the render. In such situations the facing brick has been lost forever.

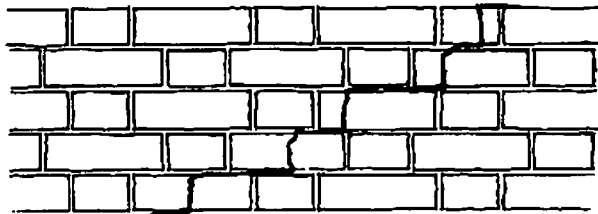
As well as damaging the brickwork, indiscriminate cleaning of dirty facing brickwork can also have an unfortunate effect visually, especially where groups of buildings have all-weathered to exactly the same patina. Buildings constructed in Suffolk white bricks during the 18th and 19th Centuries in the District are now quite a dark grey. Where there have been cleaned it has often been “overdone” leaving an unattractive “scrubbed” appearance.

## 2.6 BRICKWORK REPAIRS

### **Cracked brickwork.**



*Cracks following the line of the joints.*



*Cracks cutting across the bricks themselves.*

In most instances, especially where a building is one of a terrace or a group, cleaning should not be undertaken. **Listed Building Consent will normally be required for cleaning brickwork on Listed buildings.**

### **Cracks and Bulges in Brick Walls**

Cracks and bulges in brick walls can be caused by a number of different factors and care should be taken to accurately diagnose the cause before considering alternative remedial works.

Cracked brickwork can be caused by local subsidence, settlement following alterations or extensions to the original structure, or the failure of lintels or built-in timbers. Bulging can be caused by changes in loadings, by alterations or more frequently by the wall not being properly bonded into cross walls or tied back to an upper floor or at roof level.

There are four options once the cause of a bulge or cracking has been adequately diagnosed:

(a) Leave it alone if the cracking or movement has stopped and there are no structural problems or possibility of water penetration. A structural engineer can investigate and advise whether cracking or displacement is likely to continue.

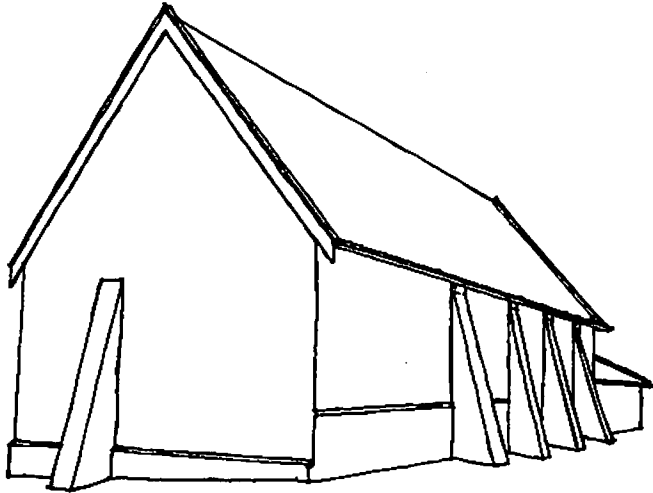
(b) If the cracks follow the lines of the joints and are not extensive then repointing may be all that is necessary.

(c) Cut out the area of cracked or distorted brickwork and reinstate. This is likely to be necessary when the cracks cut across individual bricks. It is sometimes necessary to locally reinforce the brickwork with stainless steel mesh in the joints or special brick ties can be incorporated so that the brickwork can be tied back to an inner skin. Straps can be built in where it is necessary to strap the wall back to a cross wall, upper floor or to the roof.

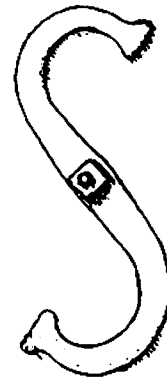
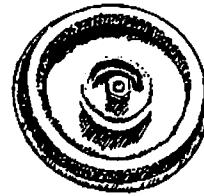
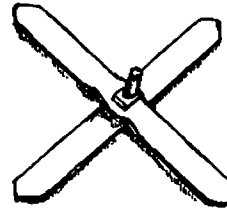
(c) In cases where cracks and bulges are clearly causing a displacement of the structure and are beyond repair in situ, the only cause of action is to likely to be the carefully taking down of the affected part of the wall and rebuilding it re-using as much of the original material as possible. The decision to undertake this drastic measure should not be taken lightly because in conservation terms it is the least desirable option.

## SECTION 2 – REPAIRING HISTORIC BUILDINGS

### *Bulging or leaning walls.*



*Over the years buttresses have been added to many old brick buildings (above). Metal plates connected to tie rods are also commonplace (below and right).*



### **Leaning Walls**

Many old brick walls are not completely plumb and it is a remarkable testament to their ability to “move” without cracking that some are still standing. Many old walls which have developed a lean have been tied back and restrained by the use of metal plates and rods which run back through the building. Others have had buttresses added externally. These features have often now become an attractive part of an old building’s character.

The drastic step of demolishing and rebuilding old brick walls should always be seen as a last resort and when a wall appears to have begun to move then it is important to consult a structural engineer who is sensitive to and experienced in dealing with such problems in historic buildings.

### **Replacing Bricks**

Where bricks need to be replaced repairs should be carried out to match the original wall in all respects. Sometimes finding a suitable brick can prove difficult. The original bricks may not be produced any longer or the existing wall may have weathered in such a way that the new bricks will never “catch up” with the patina of age of the old ones. New bricks may not be suitable in terms of texture and colour as the old ones may have been handmade or fired differently. Compounding the problem is the fact

## 2.6 BRICKWORK REPAIRS

that new standard metric bricks are actually smaller than the old imperial sizes. Possible solutions to the problem include:-

- (a) If a wall has to be taken down then it may be possible to salvage the old bricks and re-use them.
- (b) Damaged bricks can sometimes be reversed so that the undamaged inner face is exposed.
- (c) Often secondhand bricks to match can be found but make sure that a sufficient number are inspected before purchasing them because batches can vary a great deal. The colour and the quality of the face and arrises of the brick are particularly important.
- (d) The use of new bricks may be appropriate, either (with luck) from a manufacturer's standard range or if not a copy specifically produced for the job by a specialist supplier.
- (e) Where it has proved impossible to find suitable replacement bricks it may be a solution to cut single bricks to produce header or stretcher 'slips'. These slips are inserted into the wall after cutting back the faces of damaged bricks to a sufficient depth. This is a specialist job and should only be used for replacing individual bricks or relatively small areas of brickwork.

(f) Attempting to repair the face of damaged bricks using a mortar repair is frequently resorted to on the grounds of economy but in most cases it can create a very ugly effect and actually speed up the deterioration of the wall. Soft, old brickwork can be patched up with in exceptional circumstances a coloured mortar (brick dust, lime etc.) but this should be restricted to very small areas where it is important not to disturb the surrounding bricks. Using a hard cement mortar should never be contemplated for repairs of this type.

(g) It may sometimes be possible to achieve a successful repair by actually removing bricks from some other part of the building, for example where the bricks are not exposed to view or where alterations have or are being undertaken. Of course any historic fabric should not be sacrificed lightly and certainly the demolition, or part demolition, of any old structure would have to be fully justified in historic building terms.

### **Toning in New Brickwork**

Toning in replacement bricks which do not quite match existing ones may be desirable and possible by the application of a wash. A traditional treatment would be to leave a bag of

soot in a bucket of water for a day or two. Alternatively, a very diluted black paint stain (say one part paint to at least 20 parts water) may be used. With the latter, a water based paint is more appropriate and care should be taken not to seal the face of the bricks so that they cannot dry out. A sample area should be tried in an unobtrusive location and left to dry out before an assessment is made and a large area is treated. Specialist firms exist which can provide advice and materials or can undertake this sort of work.

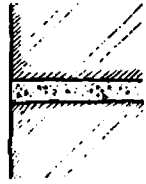
### **Climbing Plants on Walls**

Uncontrolled growth of ivy can cause damage to brickwork (and other wall finishes, roof coverings and joinery). The plant can actually cause physical damage, for example by dislodging bricks, and periodic inspection should be carried out to ensure that problems are not being caused.

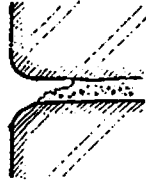
Although, like other climbers, ivy can look very attractive on the facades of buildings it is important not to let it get out of hand and pruning may be necessary. If it becomes necessary to remove the vegetation it should be cut just above the ground and left until it completely dies. Attempting to pull it off before can cause damage to the face of the wall. Virginia creeper should also be carefully controlled.

## SECTION 2 – REPAIRING HISTORIC BUILDINGS

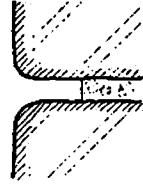
### Repointing.



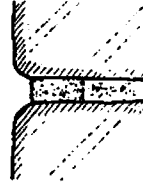
1 Original detail.



2 Eroded mortar and brick arises.

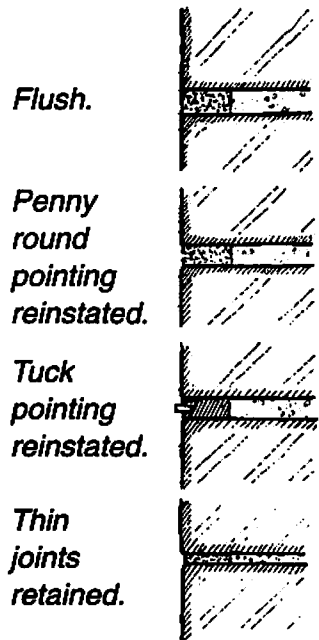


3 Joint raked out to an appropriate depth.

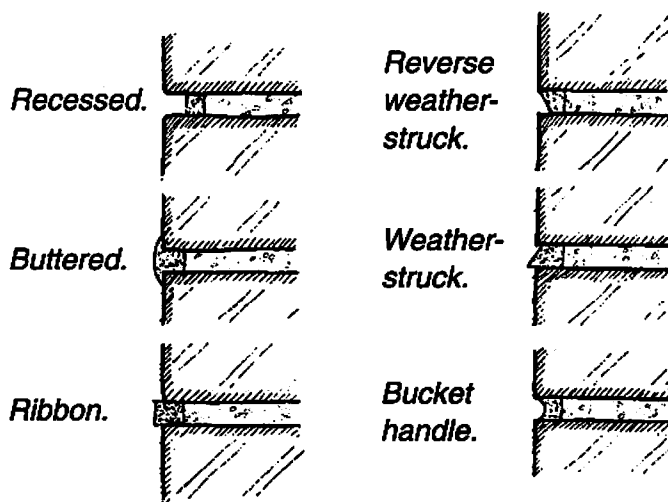


4 Repointing with mortar face kept to original width.

### Other examples of good repointing.



### Inappropriate repointing



A combination of 'plastic' mortar repairs and poor patches of cement based repointing have accelerated deterioration of this old wall.



## 2.6 BRICKWORK REPAIRS

### Repointing

Pointing is the way in which the mortar between the bricks is finished off. Over time, this can weather and deteriorate and may need re-doing. A great deal of unnecessary and damaging repointing is carried out on historic buildings. Old lime based mortars are sometimes described as “weak” but this does not mean they are not strong enough to hold the wall together. It means that they are relatively porous and flexible, which is just what they need to be. Mortars must be able to accommodate minor movements in the wall without the bricks becoming loose or cracks forming in the mortar or the bricks.

A rough weathered face of lime mortar which can be easily gouged out by a knife is not an indication that the mortar has failed. It is only when the joints are truly crumbling, the mortar has weathered well back beyond the face of the brick thereby allowing water to penetrate and the bricks are in danger of becoming loose that repointing becomes a necessity.

When undertaking repointing it is absolutely vital that the mortar used in the joints between the bricks is at least as permeable and soft as the existing mortar and less so than the bricks themselves. Using a hard cement-rich mortar to repoint an old wall of soft bricks can cause a great deal of damage and actually accelerates decay. Moisture is trapped within the bricks

which become saturated, the water freezes and as a result the bricks will spall and crack. Sometimes it may be necessary to remove previously applied hard cement pointing in order to save brickwork from further deterioration.

Pointing mortar mixes for use on older buildings should be very carefully considered as they need to match the original mix. A mix of 1 cement, 1 lime and 6 sand, for example, is quite a hard mix and in the vast majority of cases the amount of cement should be reduced or not included at all.

To prepare the joint, the old mortar should be raked out to at least 25mm and never to a depth less than the width of the joint. This work should be done by hand. Don't use power tools, such as disc grinders, as they damage the bricks and leave the joint wider than they should be and make it impossible to match the existing. The raked out joints should be wetted with clean water before re-pointing to prevent the dry bricks and existing mortar drawing water out of the new mortar thus weakening the mix. Repointing should not be carried out in cold weather because frost can damage the new work.

Because the mortar joints actually make up such a large proportion of the surface of the wall it has a major effect on its appearance and condition. Many brick structures have been

spoilt by non-matching pointing repairs or by the whole face of a wall being repaired in an inappropriate manner.

Any existing original pointing should be looked at very carefully and its appearance should be matched as closely as possible in any repair work. It is especially important that pointing repairs to terraced, semi-detached and groups of buildings exactly matches the original in order to maintain the unity of the group.

Traditional lime mortars appear quite white or a very light yellow compared to that very grey colour of cement based mortars. Where joints have widened because the edges of the brick (the arrises) have weathered and rounded off, the mortar face should be kept back so that the original joint width is maintained.

Virtually all the old brick walls in the District were finished with a flush joint. 'Bucket handle', recessed or 'weather struck' pointing are not appropriate on most historic buildings. The latter two particularly so as they are both modern techniques which draw attention to the joints because the shadows create a harsh grid-like effect. Where 'tuck' pointing, 'penny round' or any other historically important pointing is evident on an existing wall, it is very important that it is not lost and repairs should be carried out to match by someone experienced in carrying out this specialist work, (see illustrations opposite).

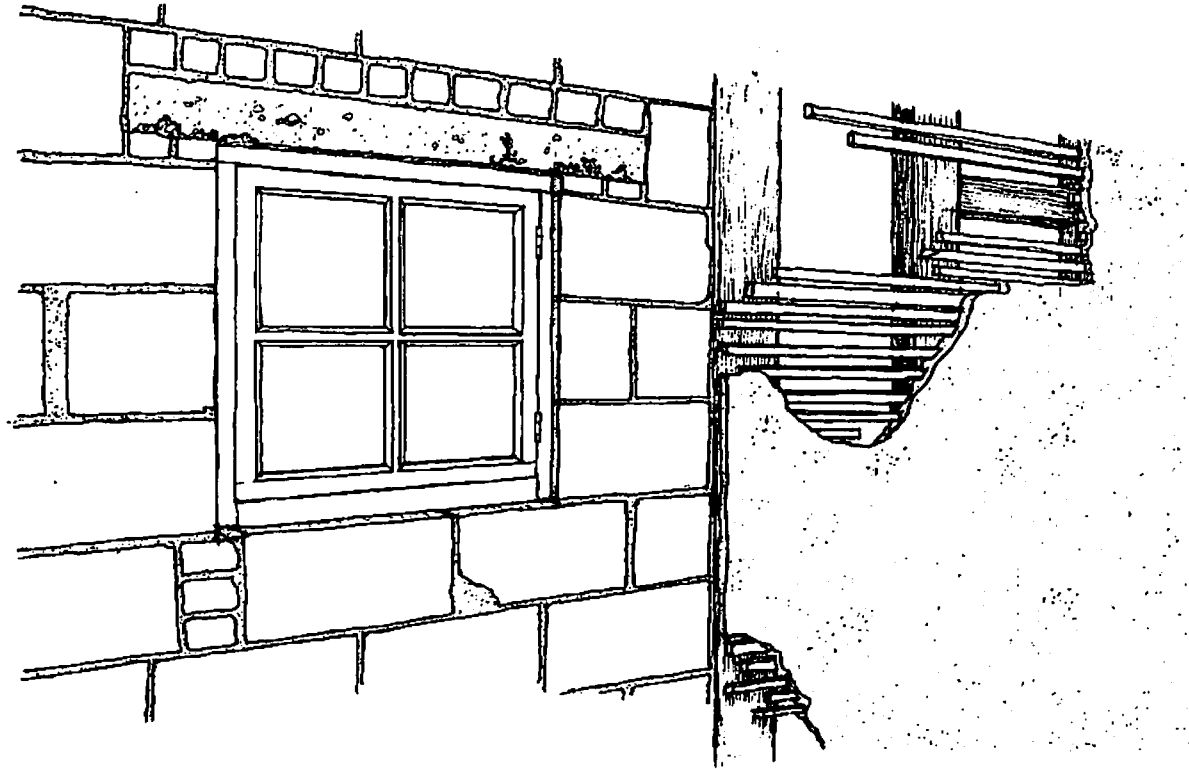
## SECTION 2 – REPAIRING HISTORIC BUILDINGS

### *Repairing Flint Walls.*



*This inappropriate patch repair, using a strong cement mortar, has spoilt this old flint wall and is very likely to have caused long term damage.*

### *Replacing wattle and daub or clay lump.*



*Replacing timber framing, wattle and daub, or clay lump with blockwork, concrete lintels, etc., will, in many cases, be an unacceptable alteration to an historic building. In every instance such work would adversely affect the building's architectural and historic significance.*

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## 2.7 FLINT, WATTLE AND DAUB AND CLAY LUMP

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### Repairing Flint

Repairing flint work is a skilled craft and getting the right sort of specialist advice is essential for correctly assessing the extent of any problems and the measures necessary to solve them. If there appears to be a structural problem with a flint wall, if the stones have become loose or if the pointing has badly weathered, then it is best to seek advice from an architect, surveyor or structural engineer who is experienced in dealing with historic structures. They will be able to recommend craftsmen who can restore flint work to the required standard.

Although flint is an impervious and hard material it does not need a very strong mortar mix. If a strong mortar is used then shrinkage cracking will occur around all the flints allowing water to get in. Flint walls should be repointed to match existing work. Unfortunately some flint walls have been spoilt in the past by being repaired with hard cement pointing, sometimes finished with a heavy, weatherstruck joint.

### Wattle and Daub Repairs and Replacements

Wattle and daub is an important vernacular form of construction but it is becoming more and more a rarity. It is particularly suspectable when alterations and modernisation work is undertaken because if disturbed it is likely to just fall apart. However, if wattle and daub infill panels are properly maintained they could last indefinitely.

It is absolutely essential that water must not be allowed to penetrate the protective outer surface otherwise it will deteriorate very quickly. When this has happened in the past panels which are no longer any good have sometimes been replaced with brickwork or, more recently, blockwork. Timber frames have, as a consequence, often become distorted by the insertion of these heavy, rigid substitutes.

It is perfectly possible to repair or replace deteriorated areas of wattle and daub and advice can be obtained from the Society for the Protection of Ancient Buildings who have produced an excellent technical pamphlet. (The S.P.A.B. pamphlet gives examples of traditional and modern methods of repair and replacement, see Appendix 4).

**When undertaking repairs to a Listed building, consent is almost certainly going to be required for the removal of decayed wattle and daub panels, especially if it is proposed that they should be replaced with a substitute material.** In any event it is strongly advised that anyone contemplating work which will disturb existing wattle and daub panels in any historic building should first seek advice from the Planning Authority.

In situations where it is accepted that repair or renewal of the wattle and daub is not a

reasonable course of action, then a modern lightweight infill of an insulation quilt or rigid insulating board is usually the preferred option. However, the visual implications of using plaster board on internal surfaces should be carefully considered because its finished appearance, even with a skim coat of plaster, is very different to old lime plastered wattle and daub.

### Clay Lump Repairs and Replacement

Like wattle and daub the retention and repair of existing clay lump construction is very important from an architectural and historic building point of view because it is becoming more and more of a rarity within the Region.

The structural integrity of clay lump will remain intact as long as it is properly protected from water ingress and damp penetration. The proper repair and maintenance of the rendered and tarred finishes is therefore vital. Where clay lump has deteriorated to such an extent that it has to be replaced, this should be done with new or reconstituted old clay lump prepared in the traditional manner. **This type of repair will normally be a requirement for any Listed building and buildings or structures within the curtilage of a Listed building.** Advice is available from the Planning Department.

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## SECTION 2 – REPAIRING HISTORIC BUILDINGS

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### Render and Plaster Repairs

As with all vernacular building methods and finishes, old plasterwork, either externally and internally, with or without ornament, should be seen as an important aspect of a building's historic character. Renderings vary in terms of their mixes and method of fixing, but generally lime based renderings built up in two or more applications on wooden laths were the most widespread vernacular method of finishing off timber framed buildings.

Most failures of old renderings are the result of water penetration resulting from a lack of, or inappropriate, maintenance. Sometimes excessive structural movement or structural problems in the wall behind the render can also cause the render to fail.

Using the wrong methods or materials to correct failures often actually contributes to the deterioration of plaster work and on no account should strong cement rich mixes be used to repair or replace old lime based plaster finishes on an historic building. **Listed Building Consent will normally be required for such works on Listed buildings.**

Some historic buildings which were re-rendered after the 19th Century were actually covered with a strong cement render, after Portland cement became widely available.

Often the render took the form of pebbledash. The surface of this render may appear sound, apart from a few cracks, but this would be sufficient to allow moisture to penetrate and get behind it. The dense impervious nature of the material would then mean the evaporation would be inhibited thereby very likely causing major deterioration of the fabric of the building, particularly the timber components. This type of dense rendering also has a tendency to cease to adhere to its backing because of its lack of flexibility. In some respects this can be beneficial because it means that it may not be too problematic to remove and be replaced with a more suitable lime based render.

The flexibility and other qualities of a lime based render means that if adequately maintained there should not be any need to remove all existing render on an historic building and patch repairs or rectifying physical detachment from the backing can be easily achieved. Screws and washers, wire ties or other mechanical fixings can be used to re-secure loose areas of plaster. The Society for the Protection of Ancient Buildings provides useful information on the repair and retention of historic renders, as do some other organizations, (see Appendix 4).

Wherever possible therefore, existing areas of old lime based render should be retained. There will however, be some cases where the

extent of failure of the render means that wholesale renewal appears to be the only solution, especially if extensive repairs to the structure behind the render are found to be essential. Economics sometimes also favours this solution since it can be cheaper to carry out complete stripping than to undertake extensive patching. Complete stripping invariably involves loss of much historic fabric; render, timber laths, often wattle and daub infill will all be destroyed. Economics should not, therefore, be the only determining factor.

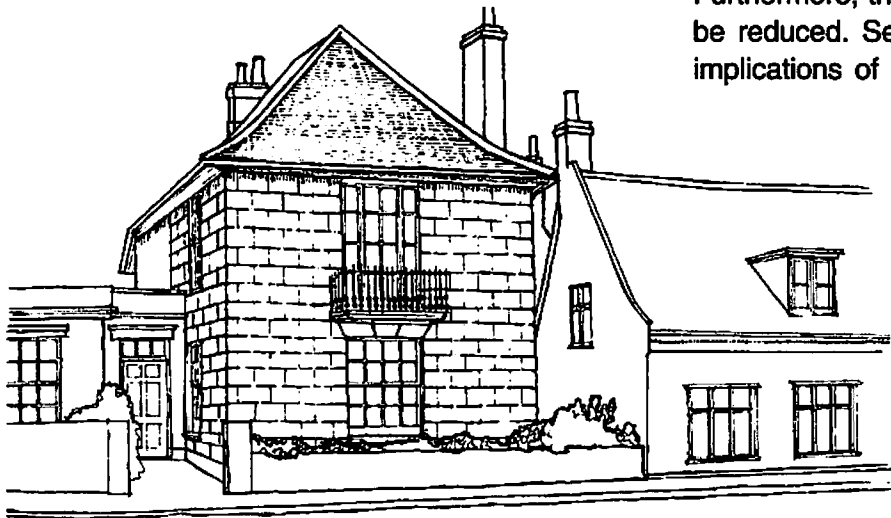
Areas of stripped the render should be replaced in the traditional manner ideally with riven timber laths. Where this is not practicable, alloy expanded metal lathing with a breather type felt backing and sawn timber battens may be an acceptable substitute. **Listed Building Consent may be required for such work on a Listed building.**

The loss of early internal finishes should be avoided. Elaborate decorative effects are obviously of value but plain vernacular finishes are also historically very important. How often is a traditional timber lath and plaster finish lost when a property is renovated and modernised? Also, the visual implications of using plaster board on interior surfaces should be very carefully considered because its finished appearance, even with a skim coat of plaster, is very different to an old lime plastered wall.

## 2.8 RENDER AND PLASTER

When undertaking repairs to old internal plasterwork care should be taken not to unwittingly destroy valuable wall paintings or designs which have been covered over (and preserved) by subsequent layers of limewash, plaster or later studwork. It is surprising how often seemingly unimportant buildings reveal formerly unknown treasures.

Repairs to decorative external plaster should be carried out to match the existing. Where areas of important plasterwork need attention, specialist advice should be sought and contact should be made with the Planning Authority. Decorative and pargetted detailing which cannot be retained in situ should be reinstated in any replacement plasterwork.



Care should be taken with applying new decorative effects to an existing historic building. Unless clear historical evidence exists that the building was previously decorated, (and that is not necessarily justification for reinstatement), the retention of a simple, plain traditional finish is, in most cases, by far the most appropriate course of action.

The removal of the render on a timber framed building in order to expose the framework underneath is not something to be encouraged. Firstly, and importantly, when a frame which has been protected is freshly exposed it is likely to react by developing signs of movement, weakening the joints between the infill and the frame and allowing the weather to penetrate.

Furthermore, the insulating properties may also be reduced. Secondly, there are the aesthetic implications of exposing deteriorated studwork

*This early 18<sup>th</sup> Century house is part timber framed with stucco rendering decorated with 'V' jointed rustication.*

and infilling or attempting to display timber framing which was designed and constructed with the intention that it was going to be covered up. **With Listed buildings consent would be required for this sort of alteration.**

### **Colour Washes and Paint Finishes**

For early vernacular buildings limewash is the traditional means of finishing off and protecting rendered and exposed timber framed structures. Although different types of modern exterior paints are readily available, their physical effects on the performance of a building of traditional construction is unpredictable and their use can often cause problems, especially wity moisture. Their finished appearance is also very different and often detrimental to the character of historic buildings.

**Listed Building Consent will be necessary for repainting Listed buildings if the works affect their special character. Such works would include the use of inappropriate materials and colours.**

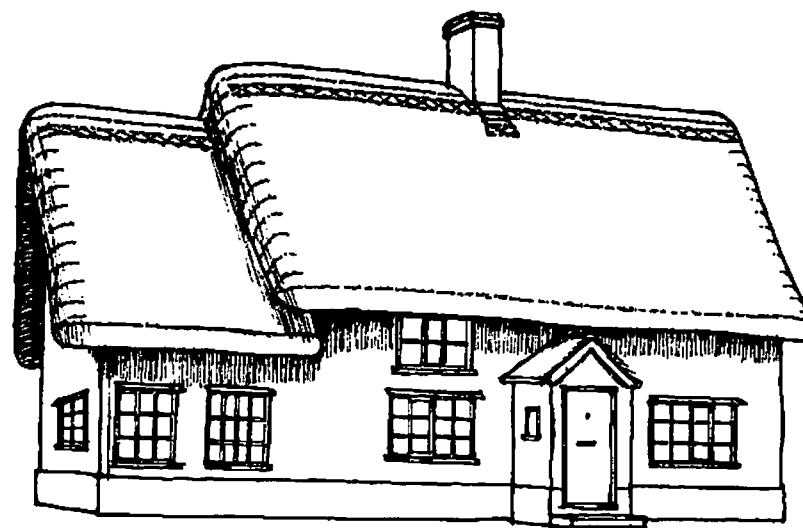
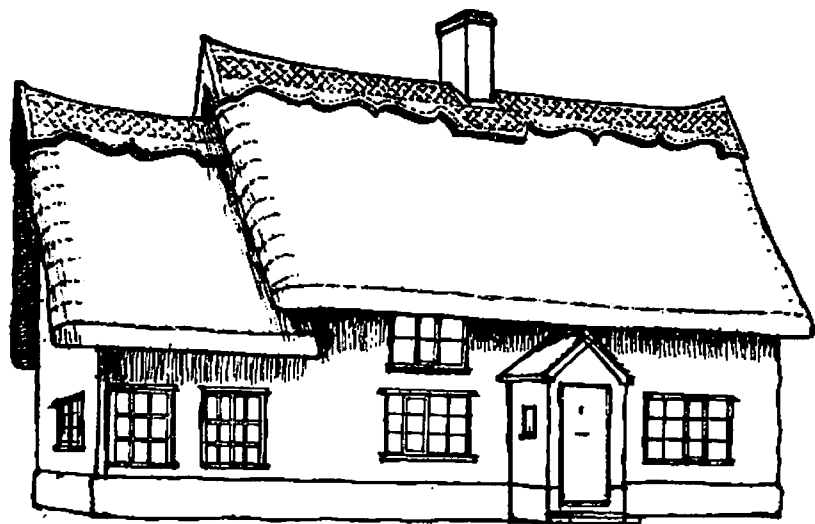
Numerous mixes are suggested for preparing limewash and for adding traditional coloured pigments and its preparation and application requires a degree of technical knowledge in order to ensure its suitability and reliability. The Society for the Protection of Ancient Buildings has published information on this important subject, (see Appendix 4).

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## SECTION 2 – REPAIRING HISTORIC BUILDINGS

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### *Thatched roofs.*



*A raised block ridge (as illustrated left) is not necessary on a long straw thatched roof, nor is it a traditional feature on such roofs in the Area. The historic tradition of the use of a simple flush ridge (right) on a long straw thatched roof will therefore be encouraged.*

## 2.9 ROOF REPAIRS

### Thatch

Thatched roofs are an extremely important feature on a number of historic buildings within the District and it is essential that as many as possible are preserved. Also, for practical reasons a change from thatch to tiles or slates is not recommended because it very often requires significant alterations to be undertaken to the structure and detailing of the roof.

When roofs are rethatched this should normally be done in the same material, although a change from water reed to long straw will be encouraged where appropriate. This is because over the years there has been a gradual move away from long straw which at one time was much more widespread in the Area.

There appears to be various reasons for this change, including problems in the past with the availability of good long straw suitable for thatching as opposed to ready supply of water reed, the longer life expectancy of water reed and a lack of appreciation about traditional forms of thatch and their aesthetic differences.

**If buildings are Listed, Listed Building Consent will be required for any change to a thatched roof which affects the character of the building, including a change from one type of thatch to another.** Normally consent will not be forthcoming for the replacement of

long straw with another type of thatch unless such a change can be fully justified on historic building grounds.

When a thatched roof needs repair it is often unnecessary to completely strip a roof and rethatch, although the replacement of long straw with water reed does necessitate this rather drastic action. Stripping a roof of all its thatch can involve the loss of important historical and archeological evidence because some parts of existing thatched roofs date back to Medieval times. Instead, the removal of decayed material and patching with new straw or reed as and when required enables the lifetime of the thatch to be extended.

Signs that repairs may be necessary include damp patches, mould and moss growth which indicates that the thatch is holding water. Others include bird and vermin causing dislodgement, holes and loose areas of thatch netting. Vertical lines in the thatch show that courses of straw or reed are rotten, and hazel stays which are standing proud or are loose are also signs that failure is occurring.

Ridges, verges, valleys, eaves and the area of thatch around dormer windows and chimneys are all locations where the thatch is more likely to fail and should be regularly checked.

Assessing the remaining life of thatch is difficult, although knowing the history of the thatch, when things were done and who did it, is particularly useful. Consulting the original thatcher is always advisable. If this is not possible, another member of the Master Thatchers' Association should be contacted. When rethatching has to take place consideration should be given to improving fire precaution measures.

A raised ridge, often with elaborate patterns, on thatched buildings has become common place, although they are not traditional on long straw roofs. The patterned ridge, which many thatchers decorate as their trade mark, arose from reed thatching because reed could not be bent over the ridge. Long straw roofs in the Area had a flush ridge which enhanced the soft, simple, more rounded appearance of the whole roof. These roofs are an important feature of East Anglia's traditional buildings and as such the historic tradition of the use of a simple flush ridge with long straw thatch will be encouraged

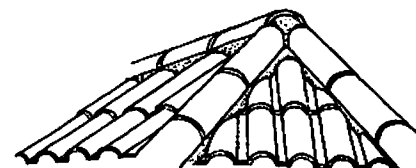
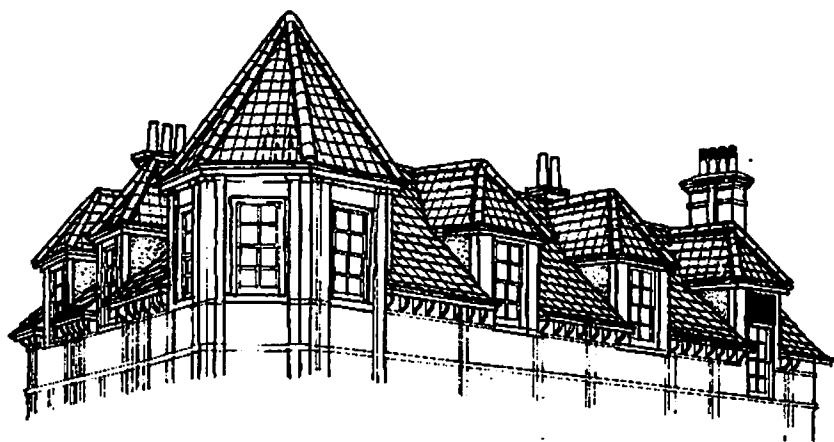
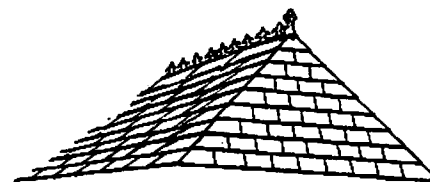
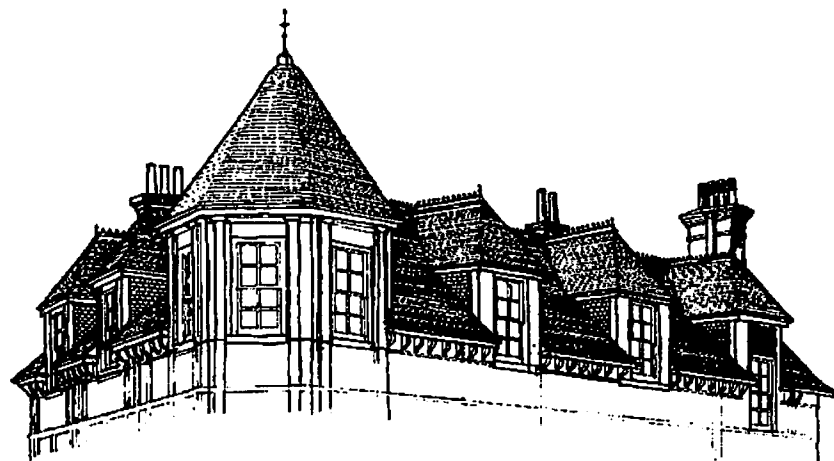
Unless justified on historic building grounds the use of a raised ridge on a long straw roof should be avoided. **On Listed buildings the introduction of a raised ridge on a long straw thatch roof which previously did not have one will not normally be given consent.**

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## SECTION 2 – REPAIRING HISTORIC BUILDINGS

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### *Repairing tiled and slated roofs.*



*The design of the roof of most old buildings, the materials used and their details, make an important contribution to the architectural quality and historic interest of the building. Unfortunately many have been altered by having the original roof covering removed and replaced with inappropriate modern tiles. Often this has involved the loss of important details and decorative features, as has happened in the example illustrated above. Top left, original plain tiled roof, top right, details over dormers. Below, new roof of heavy profiled concrete tiles.*



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## 2.9 ROOF REPAIRS

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### **Tiles and slates**

If a tiled or slated roof requires attention it is advisable to consult a professional surveyor or architect experienced in historic building matters rather than relying solely on the view of builder or roofing contractor. Beware of the unscrupulous who may claim the existing roof covering is no longer any good. In many instances the loss of the original tiles or slates is not necessary and it is often quite possible and usually cheaper just to have the roof relayed.

**Planning Permission will sometimes be required for any change to the roof of a building including a change in the type of material. If the building is Listed then Listed Building Consent will almost certainly be required.**

Old clay plain tiles and pantiles and natural slates are quite valuable on the second hand market. This is because they are an attractive and extremely durable material with a long life if properly installed and maintained. The weathering properties of these natural materials means that their appearance actually improves with age.

Failure of a clay tiled or slate roof is most frequently due to rotting tiling battens, pegs or fixing nails rather than the material itself and in most instances a large proportion of tiles or slates can be salvaged for re-use.

If additional slates and tiles are required because some of the originals have been damaged or lost these can often be made up with secondhand. It is very important though, to obtain the correct size, profile, colour and texture to match the original. If some new materials have to be used it will often be preferable to confine them to less prominent roof slopes and to use what can be salvaged from the existing tiles or slates on the principle elevations.

If appropriate salvaged materials are not available it is generally best to choose new supplies of a colour which matches the original when it was new, since these will probably weather to match. A colour which may be closer initially to the weathered tile could weather to a completely different shade. The original colour of tile can be ascertained from its underside.

Most slate roofs in the District are Welsh slate, so sourcing new slates to match need not be a problem. New hand made clay tiles are suitable for retiling most old tiled roofs although on some properties, for example unlisted buildings, or on ancillary structures, a good quality machine made clay tile could be appropriate.

On grounds of both appearance and sound building practice, owners of older properties are advised against replacing slate and clay tiled

roofs with concrete tiles or any other inappropriate artificial material.

Natural slates and clay tiles are very often a fundamental part of the design and the character and appearance of an older building and therefore any change of material, especially to heavily profiled concrete tiles, can have a drastic effect. Alternative materials may save on initial outlay but they may not suit the pitch of the roof, they are likely to be less durable and importantly, they are very likely to devalue the property compared to if it had retained the original roof covering.

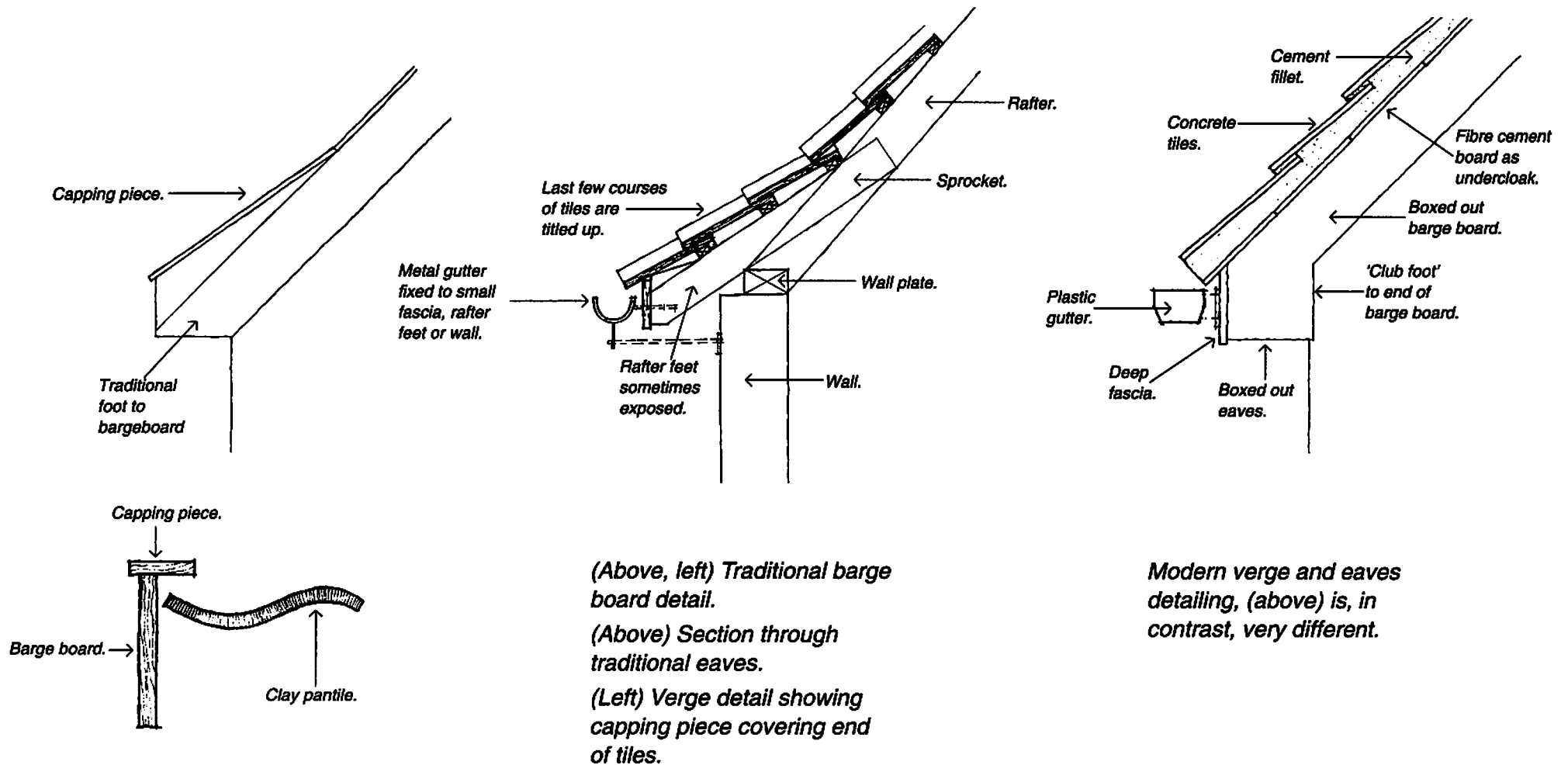
Artificial slates have been available for a while now but they vary in quality and appearance. Furthermore, like all other artificial materials they have unpredictable weathering properties and unlike natural materials their appearance deteriorates with age. If they have to be used the choice of type and manufacturer should be considered very carefully.

The colours of concrete tiles can fade substantially within a few years. They are also considerably heavier than slates and are often much heavier than clay tiles and the supporting roof structure may need to be reinforced to take the heavier load. It has been known for the weight of the concrete tiles to cause distortion of the roof structure especially where it had

## SECTION 2 – REPAIRING HISTORIC BUILDINGS

### Repairing tiled and slated roofs.

The use of barge boards, capping pieces, and timber sprockets at eaves are important local vernacular details which should be retained when carrying out roof repairs. Traditional features should not be replaced with inappropriate modern detailing.



## 2.9 ROOF REPAIRS

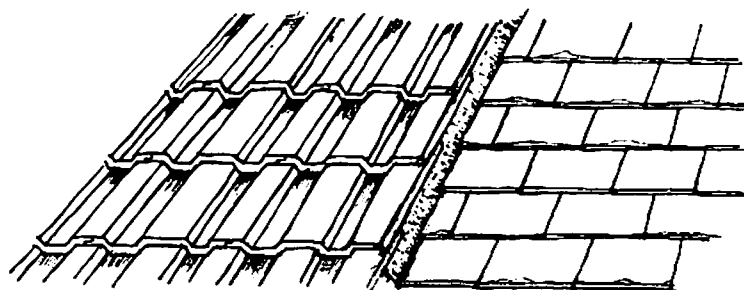
originally only been intended to carry the lesser weight of slates. Problems may also occur in the supporting walls if a significantly greater load is placed upon them, particularly at window openings where fractures can occur, (see illustrations right).

A point of detail which can lead to trouble in the future is the junction between different roof coverings on adjoining properties. The common practice of a cement joint between the two materials is likely to lead to rain penetration if the cement cracks or falls away and as the junction normally occurs over party walls the adjoining property can also be affected.

Traditional and vernacular details on existing roofs, including any decorative features, should be retained or replicated when repairs are carried out. The traditional eaves and verge details of the Area are particularly important, especially the local techniques of finishing off the verge of gabled roofs with barge boards and capping pieces and tilting the last two or three rows of tiles at the eaves level.

Often old roofs have no underfelt or the felt needs replacing. If new felt is provided then it is very important to retain or provide adequate ventilation to the roof space especially if insulation is added. On most old roofs it is advisable to use one of the "breathable" types of roofing felt which are now available.

*(Right) Ill considered modernisation, including re-roofing with heavy concrete tiles, can have disastrous effects both visually and structurally.*



*(Left) On terraces and semi-detached properties the use of different roof coverings can cause problems at junctions. The common practice of a cement fillet is a very poor detail.*

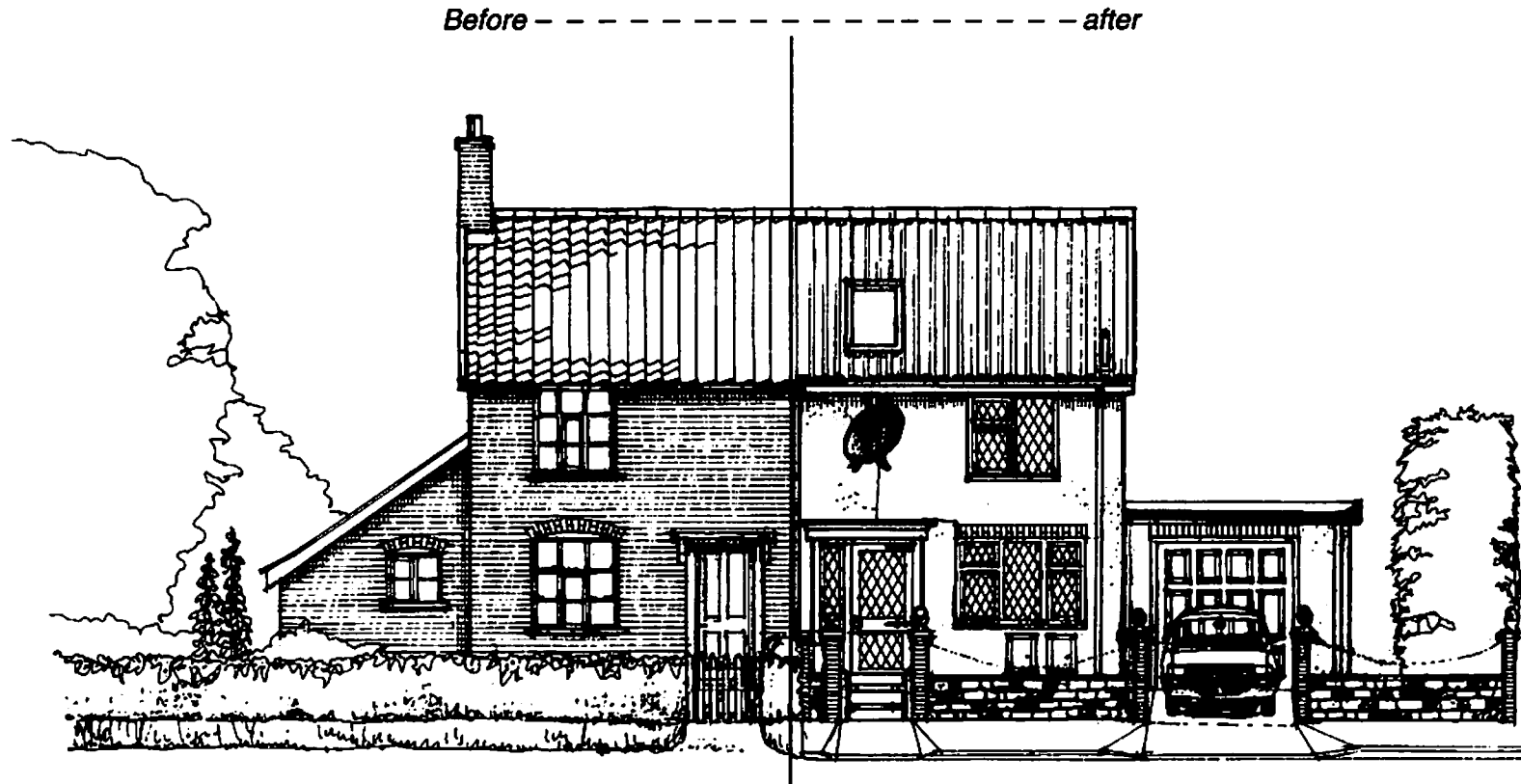
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## SECTION 3 – ARCHITECTURAL DETAILING – REPAIRS AND ALTERATIONS

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*The importance of architectural details.*

*Once lost they are usually gone forever.....*



*The architectural character and historic significance of old buildings can be completely destroyed by inappropriate renovations and modernisation. Such alterations can be undertaken in a relatively short time by one enthusiastic, but misguided owner, or can be a slow process carried out over many years by subsequent owners all wishing to adapt the property in some way in order to suit their personal preferences or circumstances.*

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## 3.1 THE IMPORTANCE OF ARCHITECTURAL DETAILS

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Although the more basic the structure the less likely they were to have fine detailing, very few examples of domestic vernacular buildings were entirely without any form of architectural adornment. The pace of change and innovation though, was very gradual and architectural fashions took a long time to filter down from the main population centres to the remoter areas.

Due to the time lag caused by slow communications and the natural caution of vernacular designers, an innovation was often introduced into the District's remoter villages long after it had passed out of fashion in the more urban parts of the Country. As a result, trends developed unique variations and often the architectural details used were redefined and amended to suit local needs and tastes.

The introduction of pattern books, however, extended the resources of local designers and builders. This, together with mass production techniques, a wider range of building materials and faster and cheaper transport, meant that by the middle of the 19th Century, the true vernacular traditions of the Area were no longer pursued. This makes what has survived today so important.

Whether just practical, or placed on a building for purely ornamental purposes (or a combination of both) the detailing on historic

buildings is an essential part of their character and architectural and historic significance. Sometimes the detailing is original, sometimes it has been added later. It may represent a higher degree of craftsmanship illustrating the wealth of the owner or may it be evidence that a simple building has been soundly constructed. Sometimes, on single buildings, there was a gradation of quality, style and detailing and use of materials from the front of the property to that on the sides and at the rear.

Whatever the case, the building will suffer if these vernacular and decorative details are not retained and kept in good repair. Elements such as carved timbers, mouldings in wood and plaster, decorative stone, moulded or shaped brickwork, metalwork, old glass, a special paint scheme, unusual terracotta work or chimney stacks, all fit into this category.

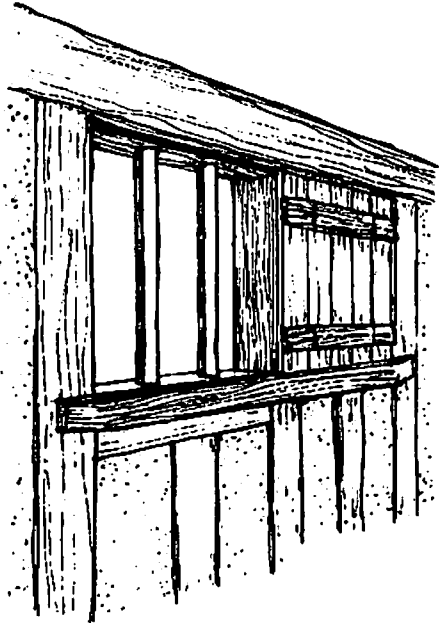
Also important are other features and ancillary structures which contribute significantly to the external appearance and setting of old buildings, such as old boundary walls with traditional copings, railings, gates, original or old paving and edging to pathways, stone steps, boot scrapers etc. All these should be retained and not altered. Nor should any changes or additions be made to the setting of the historic building if they are going to be out of keeping.

Repair or reinstatement of all these important features may sometimes be difficult because specialised techniques are often involved and it may seem easier and cheaper to remove or replace with a modern substitute. However, there are now many specialist craftsmen and suppliers around and finding someone to undertake the work is often not as difficult as first thought. It should also be remembered that the proper repair or reinstatement of important details on historic buildings invariably safeguards (and often enhances) its value on the property market.

**Listed Building Consent will be required for the alteration or removal of any important architectural or historic feature on a Listed building.**

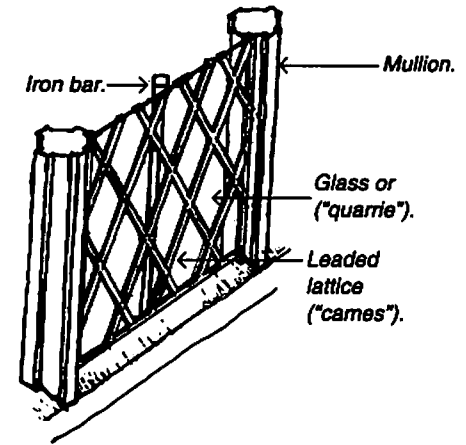
# SECTION 3 – ARCHITECTURAL DETAILING – REPAIRS AND ALTERATIONS

## Early windows.



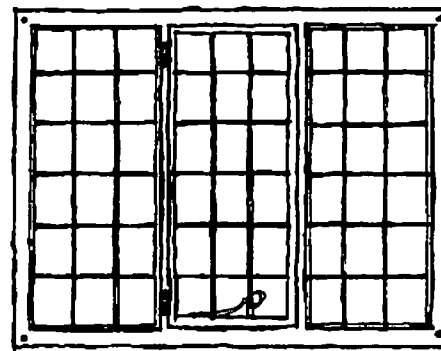
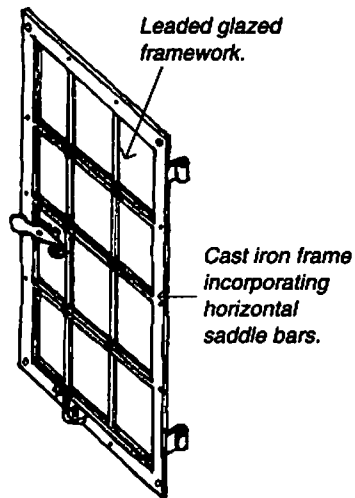
(Left) An example of an early unglazed mullion window in a timber framed building with a horizontal sliding wooden shutter.

(Below) Common mullion profiles.

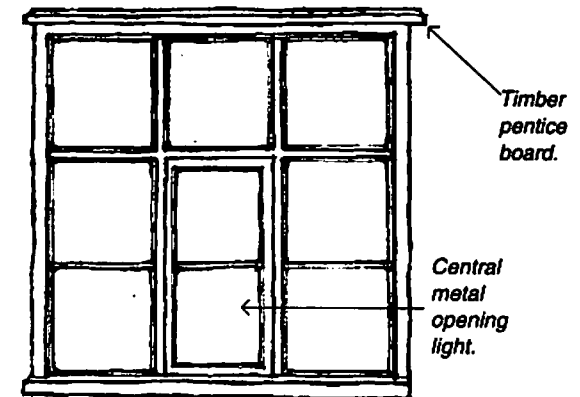


Glazing was added by wiring leaded lattices to the mullions. Sometimes iron bars were added.

By the end of the 17<sup>th</sup> century rectangular leaded lights were becoming more common. The leaded framework was often attached to hinged cast iron frames which incorporated saddle bars.



A three light casement window circa 1700.



The traditional nine pane timber window is an important feature of the Suffolk vernacular. Many are fitted with metal opening lights.

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## 3.2 WINDOWS

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On any building the fenestration, i.e. the arrangement, form and appearance of openings, makes an extremely important contribution to its overall character and appearance. With historic buildings, in particular, original and other interesting or historic windows should be retained and repaired in order that the building's special architectural and historic importance is preserved.

Windows do vary though, in their historic importance, quality and appropriateness. As a general guide any window which predates the First World War will have some inherent historic importance, although original windows in some later 20th century buildings, (the buildings which form part of the holiday village in Thorpeness for example), can also be of architectural and historic significance. So great care should be taken when considering window repairs or replacement on any old or architecturally interesting building.

### Historical Development

Very early windows in timber framed buildings were basically square openings in the frame itself subdivided by vertical wooden mullions with no glazing. Wooden sliding shutters sometimes provided some protection and these ran horizontally in grooves in the head and cill members. Evidence of the existence of these shutters remains in a number of old Suffolk buildings.

Wooden mullions were square but set on the diagonal to appear 'diamond shaped' (which were better for allowing the light in). Later on rectangular shapes with decorative scalloped corners appeared and then ovolo – moulded mullions became common because they were designed for attaching leaded frames for glazing. On important buildings, such as churches and large manor houses which were built out of masonry, windows were constructed with stone and brick mullions. On other buildings wooden mullions followed the same general line as those made out of stone but had flimsier sections and details.

The glazing of windows corresponded with the development of proper chimney stacks. Glass in windows did not become common before the latter part of the 16th Century for the more important buildings in the Area and it was not until the late 17th Century that glazed windows in smaller houses became commonplace.

The size of the pane of glass in early windows was restricted by the difficulties associated with making a large piece of flat glass. Early glass was cut from blown discs (Crown glass) and these small diamond or lozenged shaped ('quarries') were set within strips of lead ('comes'). In timber mullioned windows the glazed lattices were nailed to the mullions and frame sides and wired to thin round metal

stays. In brick and stone mullioned windows the lattices were wired to iron bars.

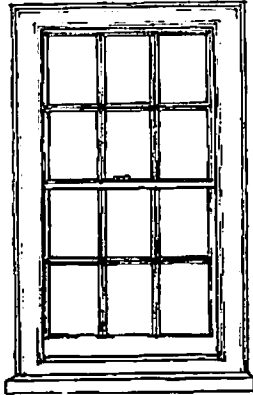
By the end of the 17th Century larger rectangular leaded lights became more common as blown cylinder glass became more widely available. Also, during the 17th Century the appearance of windows became more vertical with separate frames. Horizontal timber transoms and secondary glazing bars were also being introduced. Three light windows consisting of two fixed lights either side of an opening side hung casement became common place in vernacular buildings.

In East Anglia throughout the 18th and early 19th Centuries, the six and nine light window became very common, especially in timber framed buildings in Suffolk. The latter configuration in particular, now forms a relatively unique and extremely important characteristic of the Area's vernacular architecture.

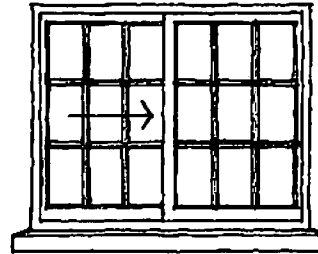
From the late 17th Century onwards many timber framed windows were fitted with metal opening lights. The earlier versions had leaded lights fixed to saddle bars, the later ones had the glazing fitted directly to the metal frame. Local blacksmiths made these frames using wrought iron but they also used some quite sophisticated metal alloys some of which had the appearance of galvanised steel.

## SECTION 3 – ARCHITECTURAL DETAILING – REPAIRS AND ALTERATIONS

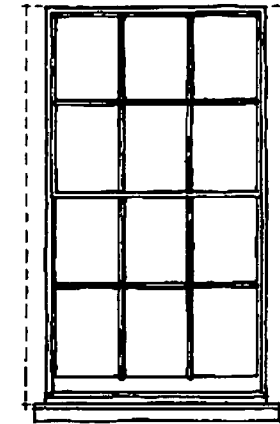
### Sash windows.



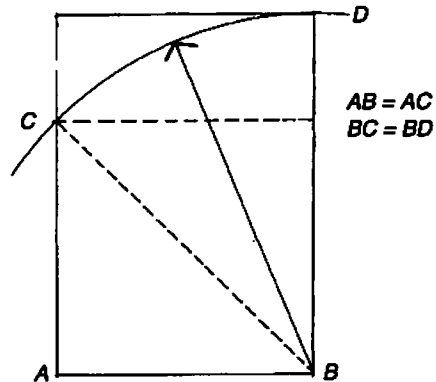
Early sliding sash windows had thick glazing bars and small panes of glass.



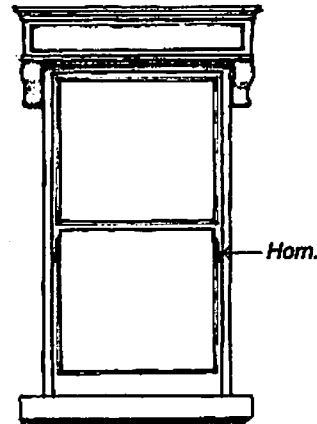
A horizontal or 'Yorkshire' sliding sash window



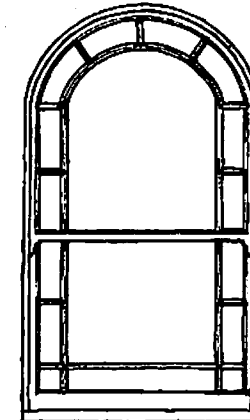
During the 18<sup>th</sup> century sash frames and glazing bars became thinner, panes of glass larger and sash boxes were often recessed behind brickwork.



The satisfactory proportions of most old sash windows was based upon the above formula, which is often called the "Golden Section".



Victorian windows were able to have larger panes of glass and incorporated the characteristics 'horn' detail at the bottom of the upper sash.



Later sash windows were also produced with decorative frames and glazing bars.



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## 3.2 WINDOWS

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On early timber framed buildings mullions were inserted directly into the head and sill members which formed the structural opening. Later on window openings were provided with a separate, initially fairly heavy, timber subframe and over the years these were often set quite well forward so that the window was flush with or even projected slightly from the face of the plaster finish. The head of the window being weathered by a timber pentice board.

Sliding sash windows first appeared during the late 17th Century and during the 18th and 19th Centuries they became the most popular type of window. Most sash windows were vertically sliding double hung, although in the earliest examples the windows were only single hung (i.e. only the lower light moved up and down being held open by wedges or balanced by weights).

The horizontal or "Yorkshire" sliding sash window was also an early form but it did continue to be used on some buildings within the District well into the 19th Century. Their existence is also an important part of the Area's vernacular heritage.

Sash windows were usually made up with six panes over six, although there were many variations. Whilst earlier versions had small square panes with heavy glazing bars, most later examples emphasised the vertical

proportions of the window. As the 18th Century progressed, the manufacture of larger panes of glass became easier and as glazing bars became thinner, the graceful proportions and delicate detailing of the tall Georgian sash window developed. By the 19th Century it was possible for each sash to have one single large pane of glass, although in many instances decorative glazing bars were still introduced. Mass produced Victorian sash windows generally reverted back to larger sections for frames and glazing bars. They also incorporated the characteristic "horn" detail at the bottom of the upper sash (in order to increase the strength of the frame).

Most sash windows were made out of wood, although metal framed sashes and glazing bars had been used as early as the second half of the 18th Century in order to achieve an extremely thin section which was very fashionable at the time.

During the latter part of the 18th Century and during the whole of the 19th Century, windows, particularly sash windows and their surrounds, were sometimes highly decorated. The popularity of Greek, Gothic and other "revivalist" styles led to many buildings being designed with very attractive fenestrations and it is important these should be retained or reinstated wherever possible.

### Window Repairs

Unfortunately, the essential quality and historic importance of many old buildings in the Area has been substantially undermined by the loss of original or historically important windows and the installation of inappropriate replacements.

Repairing original or older windows is far more preferable to installing replacements not just for historical or aesthetic reasons but because it is very often a more cost effective measure. Indeed, it is becoming more and more recognized that properties which retain architecturally important features, such as original windows, are actually worth more than those which have been inappropriately "modernized".

It should not be automatically assumed that the installation of replacement windows is the only alternative when existing windows show signs of deterioration or failure. Properly maintained and repaired old timber windows will last a very long time, as will most metal ones. (The wood used in the construction of older windows is generally far superior to that used in modern replacements.)

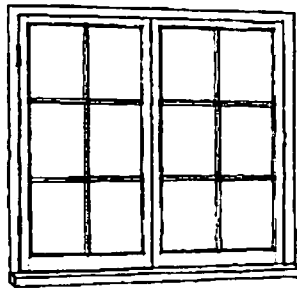
If a window requires attention it is quite often easy for a joiner or blacksmith to carry out suitable repairs. Windows which do not close properly, which are just draughty or rattle, stick

## SECTION 3 – ARCHITECTURAL DETAILING – REPAIRS AND ALTERATIONS

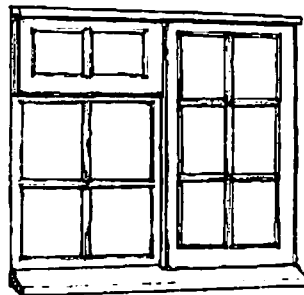
### Replacement windows.



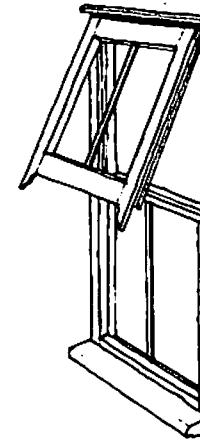
The character of this historic building is, in part, very much derived from its fenestration and the appearance and detailing of its different styles and type of window. Although being installed at different times, most of them are historically significant and should therefore be retained.



Most traditional casement timber windows have opening lights which are flush fitting. Fixed lights were designed to match the opening lights, so all panes of glass were the same size.



Virtually all new standard timber casement windows are designed with opening lights which overlap the frame. The size of the panes of glass also varies. As a result most modern windows have very unsatisfactory proportions.

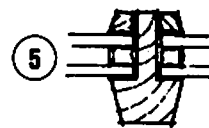


(Above) This example of a standard modern timber window is designed to appear similar to a traditional sliding sash window, but in fact is very different, especially when it is open!

(Right) ① to ④ Typical Georgian glazing bars.

⑤ An example of the sort of crudely detailed glazing bar that is normally used on modern standard timber windows.

⑥ Most modern uP.V.C. windows have false glazing bars stuck in between the double glazed unit.



## 3.2 WINDOWS

or let in excessive noise may only require a general overhaul. Both sash and casement windows can be improved by the addition of modern sealing systems which will alleviate all these problems. There are companies which specialize in refurbishing and draught proofing old sash windows at a very reasonable cost when compared to the price of installing replacement windows. Also, the installation of secondary glazing behind the original windows can achieve the benefits of double glazing at a fraction of the cost of replacements without adversely affecting the external appearance of the building. (The glazing bars should line through with the existing).

Most windows with areas of rot or decay may be able to be repaired without being removed from the building. In some cases, when the deterioration is bad, the whole window can be taken out and rebuilt using a combination of new and salvaged components (e.g. original metal frames and opening lights can often be cleaned up, repaired and reused).

When repairing old windows make sure that the old glass is not lost because historically it can be very important and is much more attractive than modern flat plate glass. Horticultural glass could be an appropriate modern substitute and used in repairs. Windows should be reglazed using traditional linseed oil putty. Unless

replacing like for like, timber beading should be used because it increases the apparent thickness of glazing bars.

### **Replacement Windows**

Sometimes when the deterioration is very bad the whole window may need to be replaced. **Planning Permission is often required for replacing windows and almost certainly Listed Building Consent will be required if the building is Listed.**

Replacements should, in most cases, match exactly the windows which have been removed. However, when replacing a window which was not appropriate anyway, careful consideration should be given to what would be historically and architecturally correct for the building.

Quite a few historic buildings have more than one type or style of window and in many cases these windows now form an important part of its architectural and historic character and significance. In these circumstances the temptations to "tidy up" the facade and get all the windows to match should be resisted. In other situations, for example on unified groups or terraces, or buildings with symmetrical facades, it is very important that all windows do match.

When choosing replacement windows look at the original or older windows on the same building or similar ones in the vicinity. Note the proportions, how the windows are set into the

openings in relation to the face of the wall, the way in which they open, the division of panes, the shape and size of the frames and the glazing bars. It is important that these details are all 'correct' in any new windows if the architectural integrity and historic importance of the building is not going to be undermined.

Often new windows can be made to match old ones exactly at a reasonable cost. Sometimes new windows can be made which incorporate double glazing. In other cases this may not be possible because of the changes that need to be made to the size and shape of the glazing bars. In such circumstances, secondary double glazing may be the answer.

Unfortunately, many manufacturers' standard ranges of timber windows (such as so called "Georgian" styles), although appearing superficially similar to traditional windows, are in reality very different. They are made up with different size panes of glass and the combination of opening and fixed lights within the window give them an unbalanced look which is often made worse when the window incorporates top hung fan lights. The profile of frames and glazing bars are also very different.

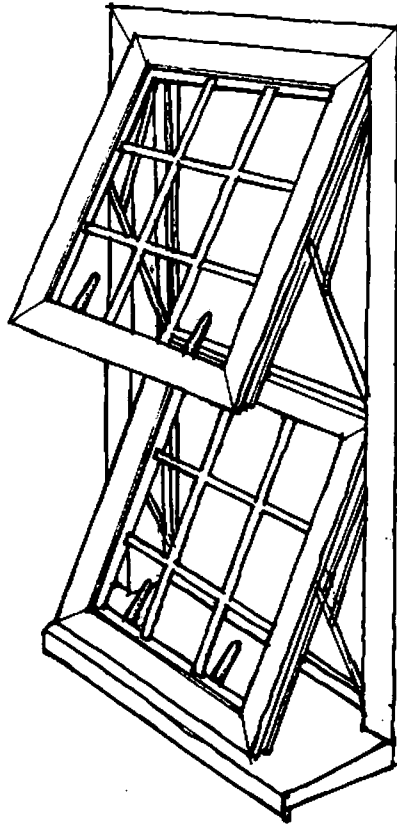
Furthermore, most older casement windows have flush fitting opening lights whereas on virtually all modern timber windows they overlap the frame. The difference, visually, is very marked. These sorts of modern windows

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## SECTION 3 – ARCHITECTURAL DETAILING – REPAIRS AND ALTERATIONS

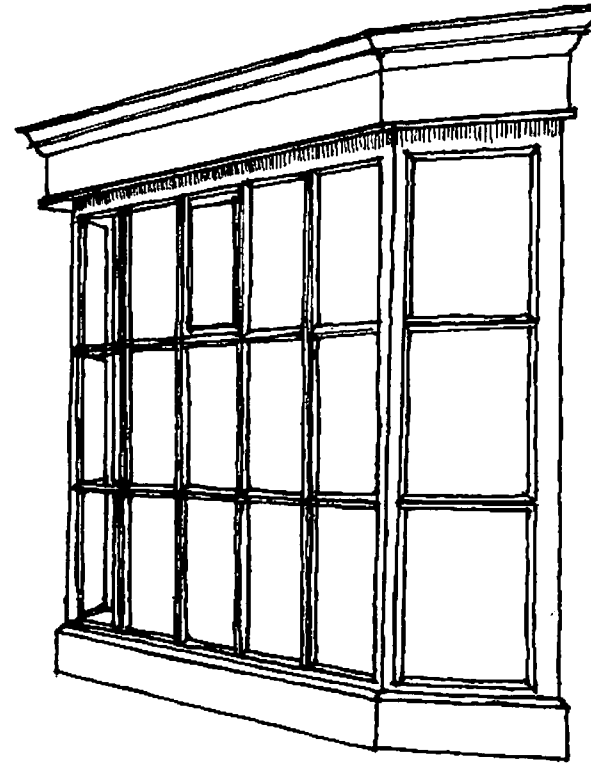
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*Replacement windows.*



*Some attempt is usually made to reflect the appearance of original windows in the design of plastic replacements. However, when so much is different (materials, finish, glazing bars, proportions, ironmongery etc.) they can only be, at best, a poor imitation.*

*Bay windows.*



*Although old bay windows (such as this example above) make an important contribution to the architectural character and historic significance of a number of historic buildings, the installation of badly detailed modern versions should be avoided.*

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## 3.2 WINDOWS

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always jar when installed in old vernacular buildings or in terraces, or groups of similar buildings which were originally designed with a traditional, balanced and harmonious pattern of fenestration. The problem is compounded when the shape or size of openings have to be changed so that standard windows can be fitted. This sort of work severely disrupts the original design of the building or group and invariably involves structural alterations and the loss of the original, often decorative, detailing around window openings.

The damaging effect of inappropriate replacement windows is often made worse when they are designed to open in a different way to the original windows on a building. Traditional vertical sliding sash windows for example, are often replaced with windows which, although superficially similar to those taken out, actually incorporate top hung opening lights. Especially when opened, their effect on the appearance of the building and the street scene generally, can be very unfortunate.

Modern made to measure plastic or aluminium replacements are also a very poor substitute for older windows as they fail dismally to match their traditional detailing and overall character and appearance. Those which claim to be of a traditional pattern or of a certain "classical" style are merely crude imitations.

Plastic windows in particular, have frames and glazing bars which are flat and wide and for technical and cost reasons they often incorporate large sheets of glass. When, in an attempt to provide some semblance of the original or an "olde worlde" character, false plastic glazing bars or 'lead' strips are stuck onto the glass or are inserted inside the double glazed unit, the overall effect is at best a deadening effect on the elevation but usually the result is an obvious sham.

Plastic and aluminium windows are also not entirely "maintenance free". Seals, catches and springs have a limited life. Repair can be difficult and sometimes impossible. Double glazing can eliminate draughts but complete draught exclusion is not advisable, especially in older buildings because it can lead to problems with condensation and dampness.

### **Bay Windows**

Traditional, well detailed bay windows form part of the established architectural character of the Area and where good examples exist every effort should be made to retain them in their original form. In some instances the existence of a large window or a bay window on the ground floor of an old property is evidence that it was once used as a shop. This is usually an important part of the history of the building and is another reason for these windows to be

retained. The installation of badly detailed modern versions should be avoided as they will only serve to substantially undermine the architectural and historic character of any historic building.

### **Painting and Staining Windows**

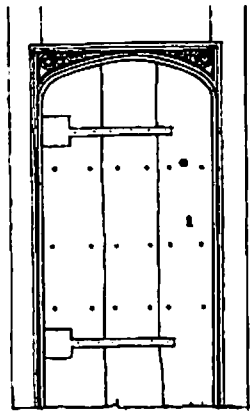
Brown stained softwood or varnished hardwood windows are becoming more common. However, as a painted finish is the traditional treatment on most older buildings their use, as well as being historically inappropriate, can appear particularly incongruous.

Furthermore, brown stained and varnished windows can have a discordant effect in locations where traditional buildings predominate. Not only do they undermine the visual unity in the area created by the widespread use of white paint but they can also clash with the colours of the orange/red of the old bricks and clay tiles and the traditional colour washes, (especially Suffolk pink!).

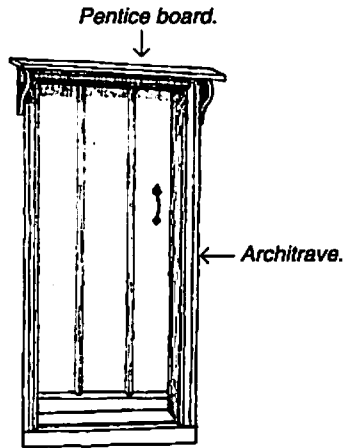
**Listed Building Consent will not therefore be given for the use of inappropriate modern stain finishes on Listed buildings. If hardwood windows are to be used then they will have to be given a traditional paint finish.**

# SECTION 3 – ARCHITECTURAL DETAILING – REPAIRS AND ALTERATIONS

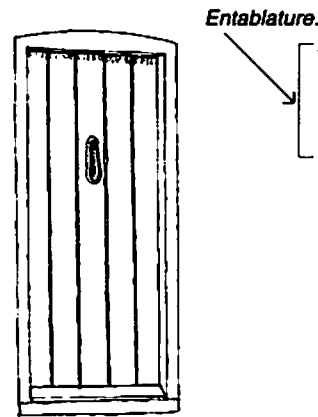
## Traditional doors.



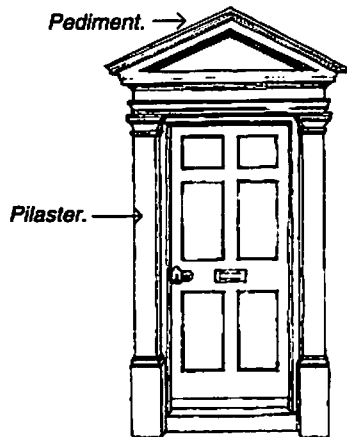
A late Medieval plank door. (Note the two centred arched top to the doorway).



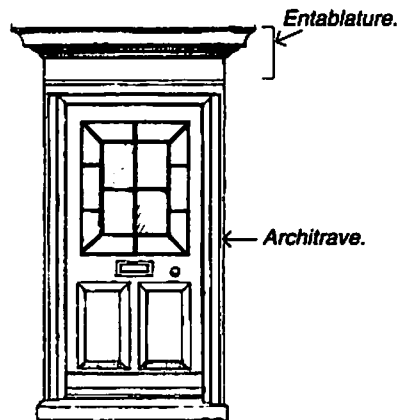
A vernacular plank door with vertical cover strips, pentice board and architraves.



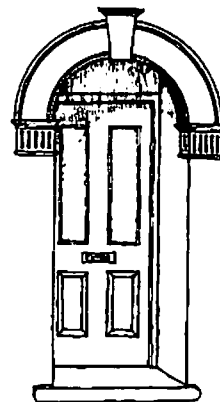
A 19<sup>th</sup> Century plank door in a rebated frame.



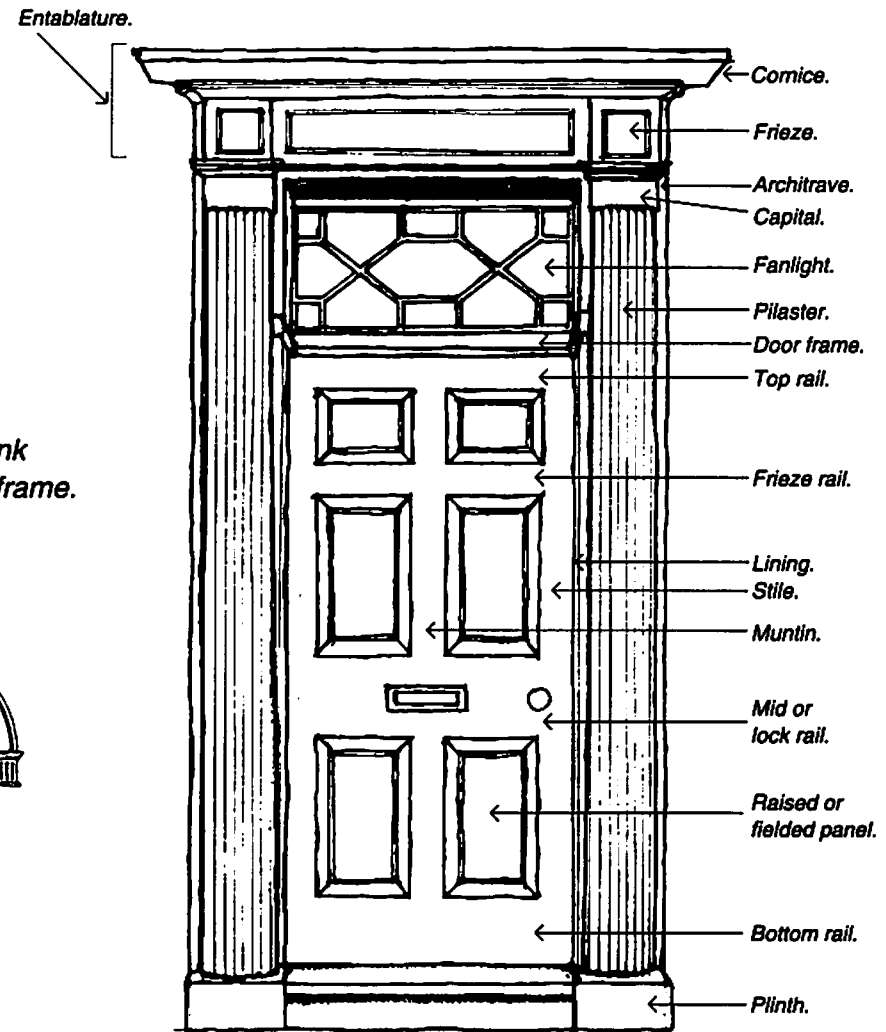
An 18<sup>th</sup> Century six panelled door and neo classical pedimented doorcase.



A 19<sup>th</sup> Century half glazed door, with ornate glazing bars, architraves and entablature.



A four panelled Victorian door within a recessed porch. The top two panels were often glazed.



Components of a Georgian door and doorcase.

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## 3.3 DOORS

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### Historical Development

Prior to the late 17th Century most doors were made up with vertical planks fixed together with horizontal ledges. Medieval doors are still fairly plentiful in Suffolk, especially in churches.

On the more basic buildings doors were made up with plain, simple planks, On the more elaborate structures the plank door was decorated with mouldings and carving. Early doors were hinged directly to the structure of the building rather than being hung on a door frame. The shape of the doorway often had a two centred arched top arched top (the Gothic influence was wide- spread in late-Medieval Suffolk).

The simple plank door remained in widespread use for vernacular buildings in Suffolk well into the 19th Century. However, by the mid-18th Century the panelled door was beginning to become the standard for most buildings of note.

Panelled doors are constructed with uprights (stiles) and horizontal members (rails), with panel infill in between. Panels were either recessed or raised ('fielded'), usually with chamfered edges. The number of panels varied but most Georgian doors had six panels whilst Victorian doors had four.

By the beginning of the 19th Century glass was

being fitted to the top two panels of doors to provide the hall with more light. Victorian doors were often half glazed, usually retaining the vertical sub-division. Sometimes attractive etched or coloured leaded glass was used.

Fanlights, glazed openings within the door frame above the door, first began to appear during the first part of the 18th Century and for well over 150 years the higher ceilings in many buildings constructed during the period allowed decorative effects of incorporating fanlights within the door surround to be pursued.

Doorcases, linings and canopies are an extremely attractive feature of many old buildings both in the Suffolk countryside and in the towns and villages. From the 17th to the mid-19th Century local craftsmen and designers attached a vast array of well constructed and detailed doorways to buildings and these important features are often a vital element in the architectural and townscape qualities of the Area.

Door furniture (both on external and internal doors), handrails, boot scrapers, etc., often made out of simple black painted wrought or cast iron, are other historically important features and original and interesting examples should all be retained.

### Repairing and Upgrading Doors

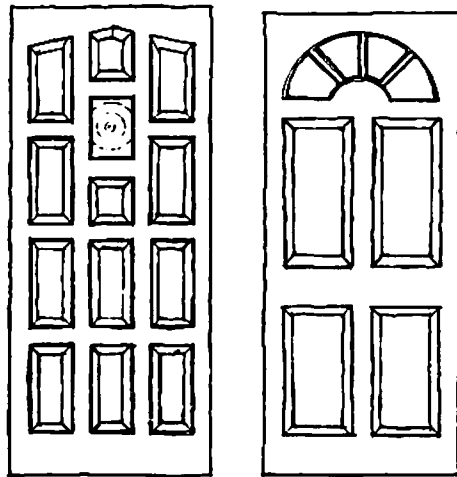
Doors provide a focal point on most buildings and on old buildings original and other interesting or historically important doors should be retained and repaired. **On Listed buildings, Listed Building Consent will often be required for changes to, or the replacement of, both external and internal doors. Planning Permission may also be required for alterations to exterior doors.**

Although repairs to doors which are badly damaged or decayed may appear difficult, expensive and time consuming, taking the trouble to get a repair job done by a joiner can actually work out cheaper than the cost of having a replacement fitted. Furthermore, original features or items of historic or architectural significance, such as doors and door surrounds, very often add considerable value to the building compared to those which have been fitted with modern replacements.

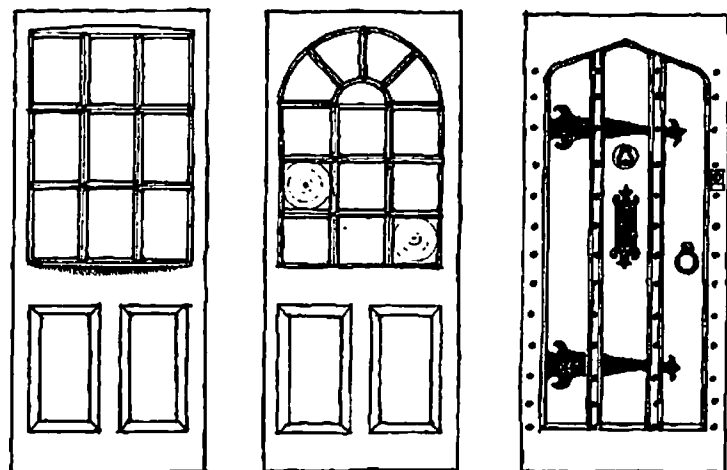
Doors and doorcases should be repainted every three to five years. Invariably this leads to a build up of paint which sooner or later will need to be removed if the door fails to shut properly or if the mouldings have become clogged with paint. Great care should be taken with removing the paint as blow torches and stripping solutions can severely damage the grain of the wood. Having old doors stripped by

## SECTION 3 – ARCHITECTURAL DETAILING – REPAIRS AND ALTERATIONS

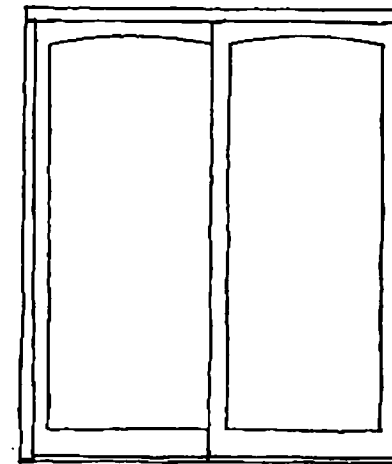
### *Replacement doors.*



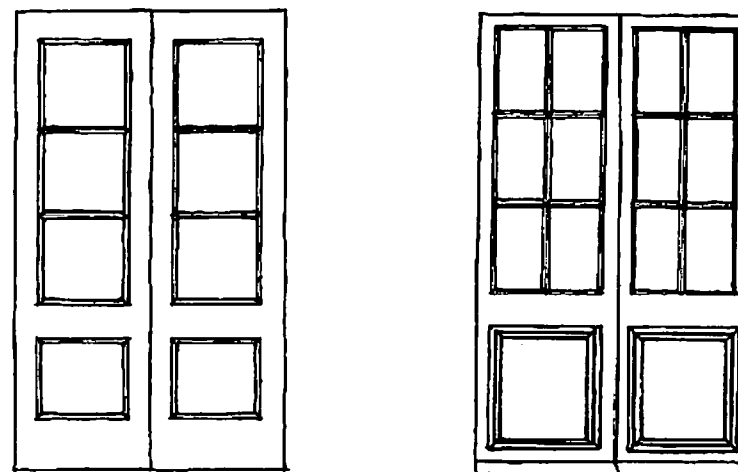
*(Above and below) Examples of modern doors which are inappropriate for use on historic buildings.*



*(Right) Modern sliding patio doors should not be installed on any historic buildings.*



*(Below) Two examples of traditional French windows.*





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## 3.3 DOORS

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being dipped in a tank of paint stripper can often completely ruin a perfectly good door.

New wood for repairing doors should be well seasoned if not it will cause the door to warp. Warped or sticking doors can be repaired by planing (best done by an experienced joiner), but before doing so check the hinges are fixed properly. The problem could be caused by loose screws. Draught proofing is common practice nowadays and important old doors which are draughty because they no longer fit quite right can be much improved by the addition of weather stripping.

When properly repaired doors should be repainted. Doors, especially very early examples, which were designed not to have a paint finish should not be painted but should be left with their original finish. Wood stain is a modern finish which is wholly inappropriate for use on historic buildings.

Sometimes, when historic buildings undergo a change of use, existing doors have to be upgraded in order to meet minimum fire resistant standards. Fortunately, many old doors are extremely well made and can meet the Regulations with only minor upgrade. Sometimes the thinner panels in doors can be split and a sheet of fire resistant material can be sandwiched inbetween. Intumescent paints

and strips, which expand to form a heat and smoke barrier, can also be used.

Covering an old door with sheets of fire resistant material, whilst effective, is aesthetically and architecturally very unsatisfactory and should be avoided. If self closing devices are required an invisible type fitted within the frame and rebated into the door is often preferable to using an obtrusive spring box closer at the top of the door.

### Replacement doors

Unfortunately, new doors and door surrounds which match the quality of those that were installed in historic buildings in the past can be difficult to find. Most standard modern substitutes are invariably inappropriate. If, therefore, replacement is unavoidable, the best options are to have a copy made of the original or to find a suitable alternative from a company specializing in architectural salvage.

Great care should be taken with "off the shelf" replacements as many of the now widely available "period" doors are poor designs which are based very loosely on historical styles. As such they are invariably inappropriate for use on historic buildings. Examples include "Tudor" doors with heavy framing, fake bolts and decorative strap hinges and "Georgian" styles with integral semi circular fanlights.

If a standard door has to be used then choose a door which is as close as possible to the style of the original. On many vernacular buildings a simple vertically boarded door will be the most appropriate. On later buildings, a painted panelled door should be considered (four or six panels depending upon the period and architectural style of the building). Unless originally designed with something more decorative, an over elaborate design will invariably be unsuitable.

Doors made out of unpainted imported hardwood or stained softwood are inappropriate on historic buildings as they are not traditional and will only serve to undermine architectural and historic character of the building.

Modern sliding patio doors should not be installed on any historic building. French windows of a traditional design are much more appropriate, although if a new opening is going to be created for them or an existing window removed, then this can involve the loss of historic fabric and adversely affect the character and appearance of the existing building. **Listed Building Consent will normally be required for the installation of a new or a replacement door on a Listed building.**

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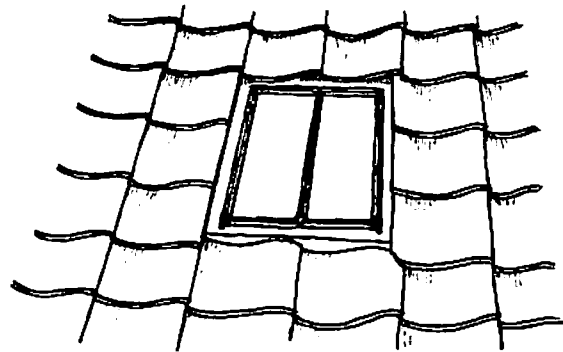
## SECTION 3 – ARCHITECTURAL DETAILING – REPAIRS AND ALTERATIONS

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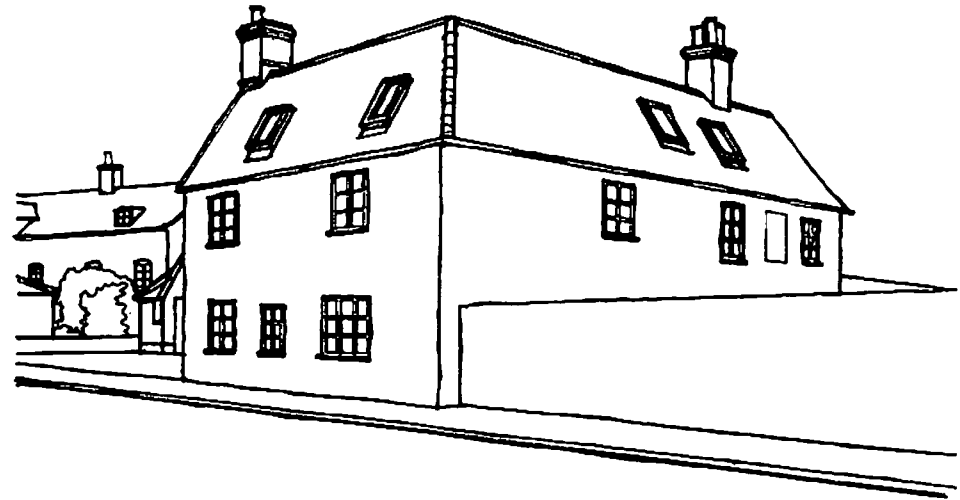
### *Alterations to roofs.*



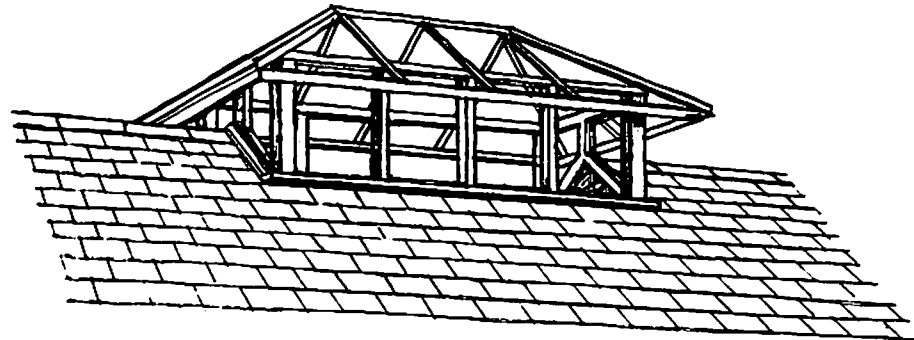
*Alterations and extensions at roof level can have a major impact upon the historic fabric of a building and can adversely effect both its appearance and its relationship with other properties.*



*When inserting a new roof light, reproductions of the traditional cast iron roof light (as shown above) are visually less disruptive than modern designs.*



*Roof lights can be very disruptive and incongruous additions to any historic building especially if they are large modern designs, located in a prominent positions.*



*This simple lantern light forms an attractive feature on a late Victorian outbuilding.*

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## 3.4 ROOFS

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### **Alterations to Roofs**

**Planning Permission may be required for changes to the external appearance of roofs or for the installation of new dormers or roof lights. On Listed buildings, Listed Building Consent will be required for these changes, together with any internal alterations.**

Alterations to the shape of the roof of any historic building can be particularly disruptive if not sensitively handled. Changes to the form, profile and finishes can all be detrimental, especially if they affect roofs of terraced, semi-detached or groups of similar buildings, or individual properties which were designed as a unified composition. Such changes will generally be resisted by the Local Planning Authority, as will the introduction of inappropriate dormers and rooflights.

The roofs of many older buildings are often important not just because they form part of the attractive appearance of the building but also because their construction is significant from an architectural and historical point of view. This is sometimes forgotten because the roof structure itself is hidden away.

Altering a roof to provide additional accommodation, or having to change it as a result of alterations to the supporting structure, or

because of an extension being built, can cause a great deal of disruption. Such works can involve the loss of the original form of construction, individual structural members (timber rafters, purlins etc.) and traditional carpentry. The impact and consequences of such changes when undertaking work should therefore be considered very carefully right from the outset.

It should also be borne in mind that the provision of additional accommodation within a roof space may necessitate the upgrading of staircases, doors, floors and ceilings in order to meet the requirements of the Building Regulations in relation to means of escape and fire resistance. These works can therefore prove very damaging not only to the roof but to the rest of the building as well.

### **Rooflights**

Although metal rooflights, together with other forms of patent glazing and lantern lights, have been used on buildings in the Area for well over two Centuries, they are a later innovation and are therefore not part of the true vernacular building tradition.

On many older buildings rooflights can be very disruptive and incongruous especially if they are large, grouped together or located in a prominent position. Rather than being incon-

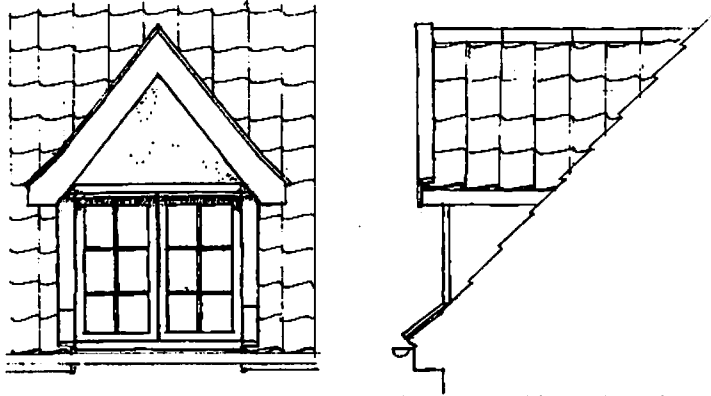
spicuous, rooflights which follow the slope of the roof have a tendency to catch the light and from certain view points they can prove to be very intrusive. Modern versions in particular, especially those with large areas of glass or those which are detailed so that they sit above the plane of the roof covering, are an inappropriate addition to most historic buildings.

Variations of the traditional Victorian cast iron rooflights are now available. These are detailed in such a way that the frame and glass ends up flush with the roof finish and they incorporate relatively small glazing units divided by glazing bars. On some older buildings a small rooflight of this type can prove reasonably sympathetic.

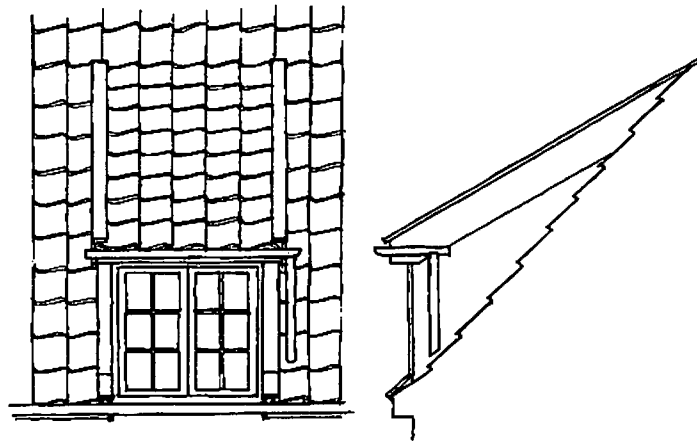
On some properties, especially Georgian Neo-classical styles and Victorian and Edwardian properties, traditional patent glazing and lantern lights form an integral part of the overall design and where they exist in their original form they should be retained and repaired. In certain instances it may be appropriate for such a feature to be added in a discreet location on these later types of historic building but their impact, design and detailing would need to be carefully considered.

## SECTION 3 – ARCHITECTURAL DETAILING – REPAIRS AND ALTERATIONS

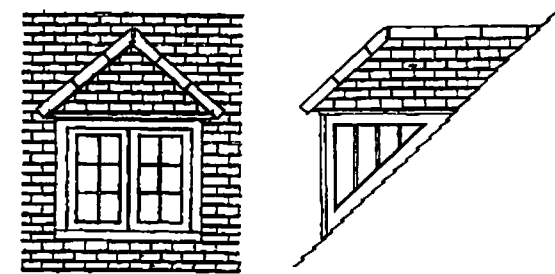
### *Dormer windows.*



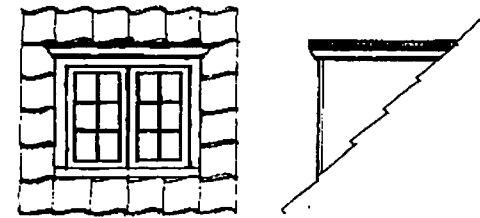
*A traditionally detailed gabled dormer. Note the shape of the barge boards and capping pieces, the position of the sill in relation to the eaves and the fact that the render on the cheeks is not carried round the front face of the dormer. Traditionally, the render was stopped against a timber cover strip or the back edge of a heavy window frame.*



*A wedge or 'cat-slide' dormer.*

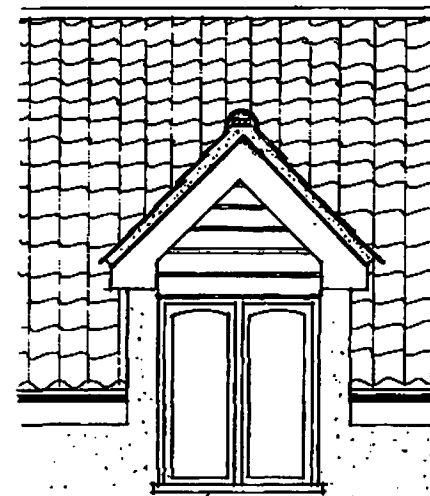


*A hipped roofed dormer.*



*A small flat roofed dormer with lead roof.*

*(Right) A crudely detailed dormer window like this would be wholly inappropriate on any historic building or an extension to one.*



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## 3.4 ROOFS

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### **Dormer Windows**

On vernacular buildings, roof spaces were lit by windows in gables or by dormer windows. Sloping rooflights, glazed lanterns, and patent glazing developed during the late Georgian and Victorian period.

Historically, within the District, the two most common types of dormer window were the wedge (or 'cat-slide') and the gabled. Dormers with hipped roofs and small leaded flat roofed dormers were also used, especially during the 18th and 19th Centuries.

On one and a half storey buildings in the Area dormers were traditionally constructed with the cill of the window built off the wall plate. On two and a half storey buildings dormers were placed further up the roof because the second floor was usually built off the tie beams in the roof.

The construction of new dormer windows on a historic building can have a major impact upon its character and appearance, especially if they are inappropriately sized, badly positioned or poorly designed and detailed. Furthermore, many buildings were designed in such a way that it is impossible to satisfactorily insert dormer windows to adequately light a roof space without undermining the appearance and architectural integrity of the building. For example, the form and proportions of many

traditional Suffolk farmhouses and cottages are such that even the most discretely positioned and proportioned dormer can ruin both the simplicity of its form and its architectural character.

In situations where a dormer can be inserted in a satisfactory manner it is important that its location, size, proportions and detailing is correct. In many instances they will need to be small and narrow with the thickness of the cheeks kept to a minimum. In all cases care should be taken with the eaves, verges and framing so that they do not appear too heavy or bulky.

Generally, dormers should not be placed too high up the roof slope. On one and a half storey buildings it will usually be necessary for the sills of dormers to be constructed so that they line up with the eaves, in the traditional manner. Designing them so that the cill ends up above or below the eaves line or so that there are courses of roof tiles below the sill, can in many instances, appear inappropriate.

The roof of a cat-slide dormer should not begin at ridge level. Traditionally they sprang from about one-third down the roof slope. Small flat roofed dormers can sometimes be appropriate but they should have carefully detailed leaded roofs. The use of roofing felt dressed over a

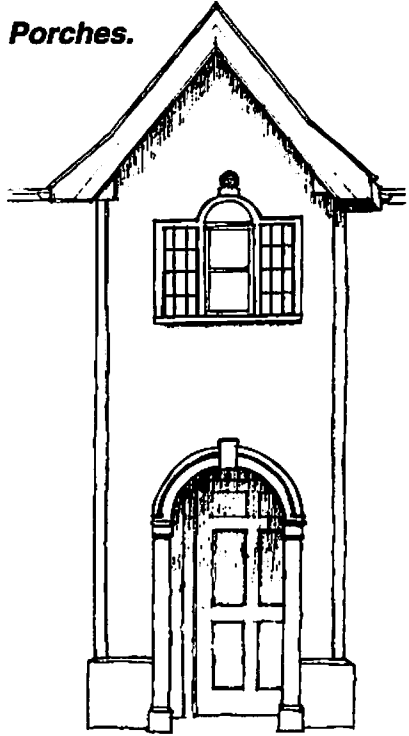
wooden fascia is always going to appear inappropriate. Rainwater gutters and down-pipes on dormers should be avoided if at all possible.

Cheeks of dormers were most often rendered, although the sides of small dormers, especially flat roofed versions, were sometimes leaded. Traditionally, neither the render nor the lead was taken around the front face of the dormer, instead it was stopped against a timber cover strip or the back edge of the window frame.

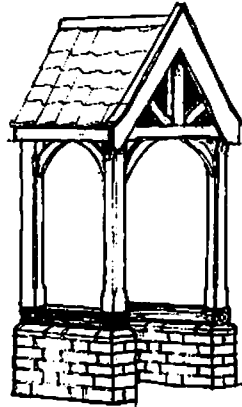
The use of horizontal or vertical boarding is not a common feature on dormers on the principal roofs of buildings but was sometimes used on ancillary extensions and outbuildings and on other timber framed structures. On later buildings the cheeks of dormers were sometimes glazed, (see illustrations opposite).

## SECTION 3 – ARCHITECTURAL DETAILING – REPAIRS AND ALTERATIONS

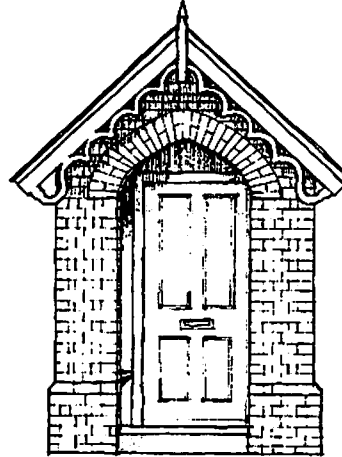
### *Porches.*



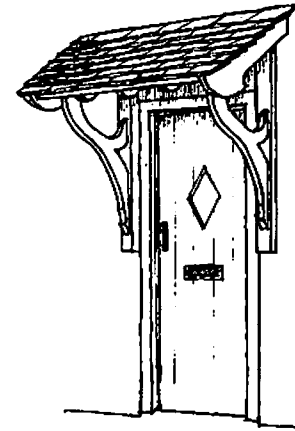
*Two storey porch circa 1600.*



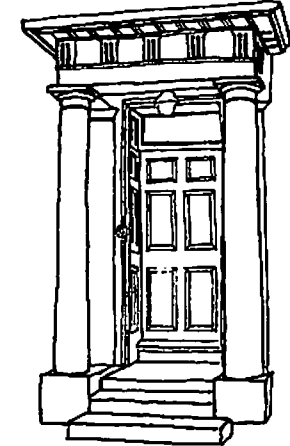
*A traditional open gabled canopy supported on posts.*



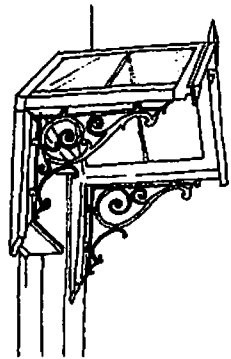
*A 19<sup>th</sup> Century brick porch with decorative barge boards.*



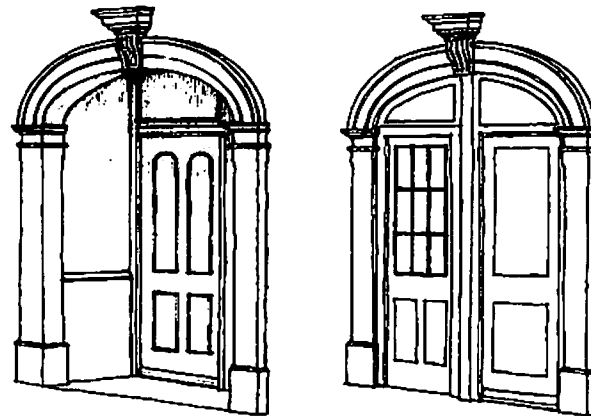
*A decorative lean-to canopy.*



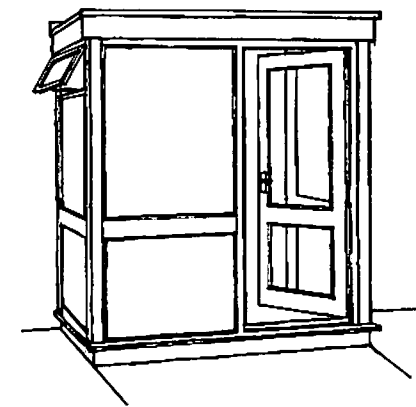
*An impressive Georgian portico.*



*A glazed canopy on decorative cast iron brackets.*



*Open recessed porches (left) should not be enclosed by the addition of screens across the front (right).*



*Modern enclosed porches are not an appropriate addition to any historic building.*

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## 3.5 PORCHES AND CANOPIES

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Porches on many vernacular buildings comprise relatively simple open gabled or lean-to roofs supported either on posts or brackets fixed to the wall. Sometimes the porch was enclosed on the sides and a door on the front was added. On other buildings some large, grand and decorative porches were erected. The tall, narrow porch was a feature of important Medieval buildings and in the Georgian and Victorian periods many buildings were constructed with prominent porches, especially those designed in Neo-classical, Gothic and other revivalist styles.

Where porches were an integral part of the original design on a historic building or where a later porch now contributes to a building's architectural and historic interest it is important that they are retained and repaired and not altered in an inappropriate manner.

Many other historic buildings though, were designed and constructed without a porch or canopy and because of their form and character the addition of such a feature would be detrimental to, and undermine their appearance and architectural integrity. Examples of the sort of buildings where it would be difficult to satisfactorily add a porch are the typical Suffolk rendered timber framed house, many of the Area's 18th and 19th Century small brick cottages and most of the buildings which

have Georgian frontages. Also, as porches tend to be a very prominent feature on any building, they can be particularly disruptive when added to one of a group or a terrace of similar properties.

The essential character of the Area's traditional timber framed buildings is derived not only from elements such as its rendered walls, steeply pitched roof and massive chimney stacks but also from the simplicity of its form and fenestration, especially its uncluttered front elevation. The addition of anything more than a simple timber pentice board would therefore do much to undermine this unique aspect of the Area's vernacular architectural tradition.

Likewise, the simple brick cottages and some of the later Georgian and early Victorian buildings in the Area were quite often designed with a relatively plain, uncluttered facade, consequently the addition of a canopy, or enclosed porch could be extremely detrimental.

Where a building has been designed with an open porch which is recessed back within the building (a feature of many of the Victorian and Edwardian houses in the Area) the temptation to convert this space into a draught lobby by constructing a screen across the front should be resisted. This is because the character and appearance of the property will invariably suffer

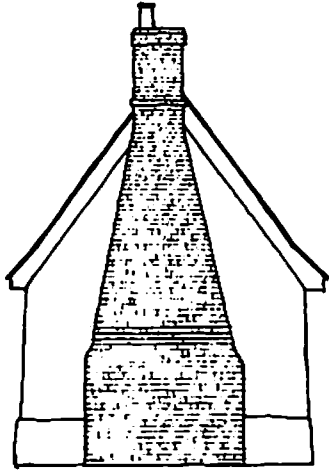
as addition of the screen has a flattening effect on the elevation of the building. It also invariably appears as something which has been added later as an afterthought.

As a general rule, where an external porch or an open canopy is to be erected on an old building, they should be kept small and simple and relate in a satisfactory way to the style of the building to which they are attached. A traditional open canopy or a small simple lean-to or pitched roofed enclosed porch are often the most suitable solutions. Modern enclosed glazed porches with flat roofs or "pseudo-Georgian" porticos, which are often crudely detailed, are wholly inappropriate on any historic building (especially those made out of aluminium or plastic).

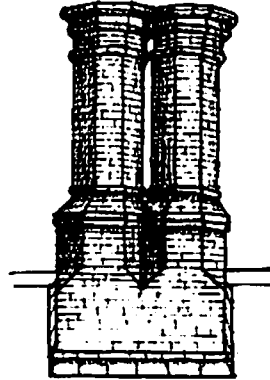
**Planning Permission may be required for the erection of a new porch or canopy. On Listed buildings consent will be required for a new porch or canopy and for most alterations to an existing one.**

## SECTION 3 – ARCHITECTURAL DETAILING – REPAIRS AND ALTERATIONS

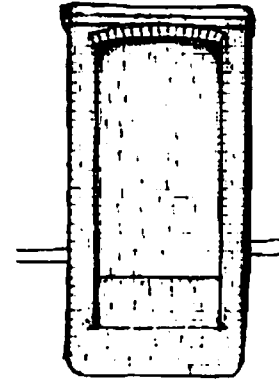
### Chimneys.



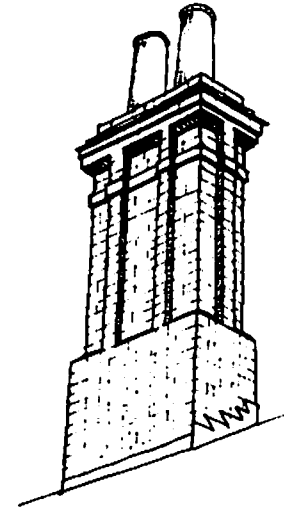
Many chimneys on vernacular buildings were massive structures.



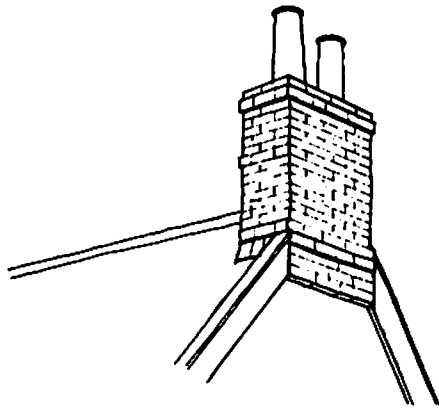
Decorative 17<sup>th</sup> Century chimney stacks.



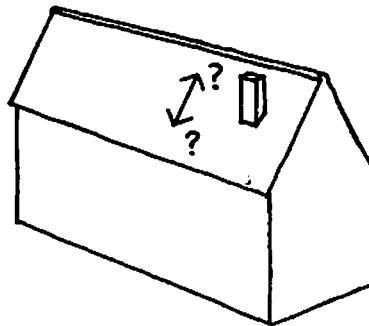
A plain rectangular chimney stack with recessed panels and corbelled cap (circa 1700).



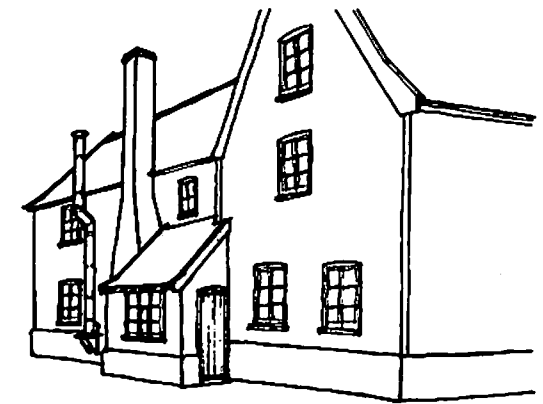
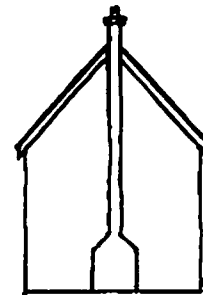
A decorative late Victorian chimney stack.



Where chimney stacks are located within the gable wall the tradition detail is for the stack to corbel out slightly to mask the ends of the barge board.



New brick chimneys on old buildings should follow the traditional forms. Single flue stacks will often appear too thin and weak (right) and placing them in the roof slope should normally be avoided (left).



Metal flues are inappropriate additions to most historic buildings.



## 3.6 CHIMNEYS

Chimneys are an extremely important feature of most historic buildings and are an attractive element in the traditional townscape of all the District's towns and villages.

Many early chimney stacks were massive structures. Decorative stacks (some highly decorative, with moulded, corbelled and carved brickwork) became the fashion during the late 16th Century and their construction required great skill and craftsmanship. During the 17th and 18th Centuries chimneys remained large but became plainer and it was not until the 19th Century that the Victorians revived the decorative chimney stack of early years. Chimney pots were an 18th Century invention.

Traditionally, chimneys within the roof were usually located centrally on the ridge line rather than on one side of the roof slope. They were also positioned so that their longer sides were parallel to the ridge. On gable ends the chimney was placed at right angles to the roof.

Chimney stacks located on external walls would either be expressed externally or project into the building. If expressed externally the stack had a substantial base which tapered using staggered or sloping brickwork or had a tile capping. Where a stack is located within a gable wall with barge boards, the traditional detail was for the bargeboards not to overlap the chimney, instead the chimney would corbel

out slightly to mask the ends of the bargeboards, (see illustrations opposite).

Original chimney stacks and others which were added later can contribute a great deal to a building's historic character and should be repaired and maintained even if they are presently not in use. Sometimes, through lack of proper maintenance, individual bricks may become loose or part of the stack may become unstable. There may be a temptation to take the stack down permanently or reduce it in height but this should be resisted as, in the vast majority of cases, such work will severely detract from the building's architectural and historic character.

Where chimneys in old buildings are defective the cause of the problem should be thoroughly investigated and possible solutions carefully considered. Unfortunately, in the past, many fine old chimneys have been unnecessarily demolished because little thought had been given to alternative, more sensitive remedies. The Society for the Protection of Ancient Buildings has produced a technical pamphlet on old chimneys which advises on such issues as structural stability, damp, smoking chimneys, fire risks and others, (see Appendix 4). Advice is also available from the Planning and Building Control Sections of the District Council's Planning and Leisure Department.

When there is clearly no alternative but to take a chimney down to a safe height it should be rebuilt to match the original. Features such as chimney pots and decorative brick detailing should be reinstated. Where they have been lost in the past the opportunity should be taken to re-introduce them.

Where new chimneys are proposed they should follow a traditional form and design and care should be taken over their positioning. As single flue chimney stacks usually appear too thin and weak it will often be necessary to thicken the construction.

Metal flues on historic buildings, which are sometimes erected as a result of installing wood burning stoves or traditional cooking ranges, are wholly inappropriate (unless as part of an alteration to, or the conversion of, an agricultural or industrial building).

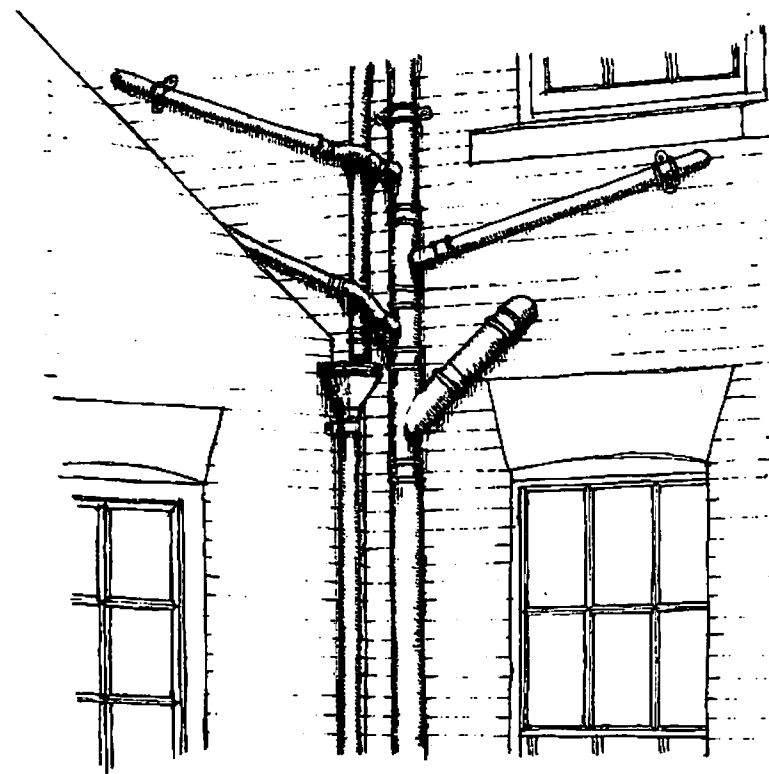
**Permission could be required for the demolition or alteration of an existing chimney or for the erection of a new one. Listed Building Consent will be required if the building is Listed.**

## SECTION 3 – ARCHITECTURAL DETAILING – REPAIRS AND ALTERATIONS

*Pipework and service connections.*



*External pipework, meter boxes and various other additions can disfigure otherwise attractive old buildings.*



*The installation of new bathrooms and kitchens in old buildings has unfortunately often led to this sort of thing happening.*

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## 3.7 PIPE WORK AND SERVICE CONNECTIONS

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### Rainwater Disposal

Old, often decorative rainwater gutters, hoppers and down pipes are an important feature of many historic buildings and every effort should be made to repair and retain them. Many of these are made out of cast iron or lead and it is perfectly possible for them to be repaired or to have those elements which are beyond repair replaced like with like.

If for some reason, lead or cast iron is not obtainable, aluminium sections are now available and this is a much better substitute than plastic. **Normally, Listed Building Consent will be required for the removal of original gutters and down pipes and their replacement with a different type.** On most historic buildings, modern standard plastic gutters and down pipes are inappropriate.

### Pipework

The appearance of many historic buildings has been undermined by inappropriate external pipework being installed. Over the years, as new bathrooms and kitchens have been put in, placing the necessary drainage pipework on the exterior of the building has often been the easiest option and little consideration appears to have been given to the effect that this has had on the external appearance of the property.

Great care should be taken when installing new

drainage pipework in any building. **With Listed Buildings the creation of facilities such as additional bathrooms will only be acceptable if the necessary pipework can satisfactorily be accommodated. Certainly what will not be acceptable is the erection of inappropriate plastic soil stacks and soil vent pipes on external walls or through the roof.**

Accommodating new pipework inside the property is often perfectly possible although on some buildings decorative plasterwork, old floors and other historic features may make this difficult. New methods of venting foul drainage systems means that having to place unsightly soil vent pipes above the roof is now not necessary in many instances.

### Service Connections

Modern additions such as service connections for gas, electricity, telephones or televisions can disfigure any building but they are particularly problematic on historic buildings. Likewise, solar panels, balanced flues for boilers, extract vents and burglar alarms on walls, modern vents for ventilating roof spaces and other additions to walls and roofs can all undermine the character and appearance of an otherwise attractive historic building. Great care should be taken therefore when such additions are considered or deemed necessary. **Listed Building**

**Consent will, in many instances, be required for work which involves these sorts of changes to a Listed building.**

In any event, owners should make sure they know exactly what installers are proposing before they carry out any works. Cables and pipes are run up the outside of a building, for example, often because the route is the most convenient or because it enables standard details to be used. Little or no account may be taken of how visually intrusive the work will be or whether there could be a better way to accommodate these services without making such an adverse impact.

**External meter boxes should be avoided on any historic building and in most cases on Listed buildings they will not be acceptable.** Meter boxes for gas supplies are now available which can be set in the ground. In most cases though, meters should be retained internally.

**Visually, satellite antennae are an incongruous and inappropriate addition to any historic building and Listed Building Consent and, in many cases, Planning Permission will be required for their installation.** Permission will be refused unless the receiver can be placed in a discreet location where its impact upon the appearance of the building and the street scene is minimal.

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## SECTION 4 – MAJOR ALTERATIONS AND EXTENSIONS

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### *Alteration and Extensions.*

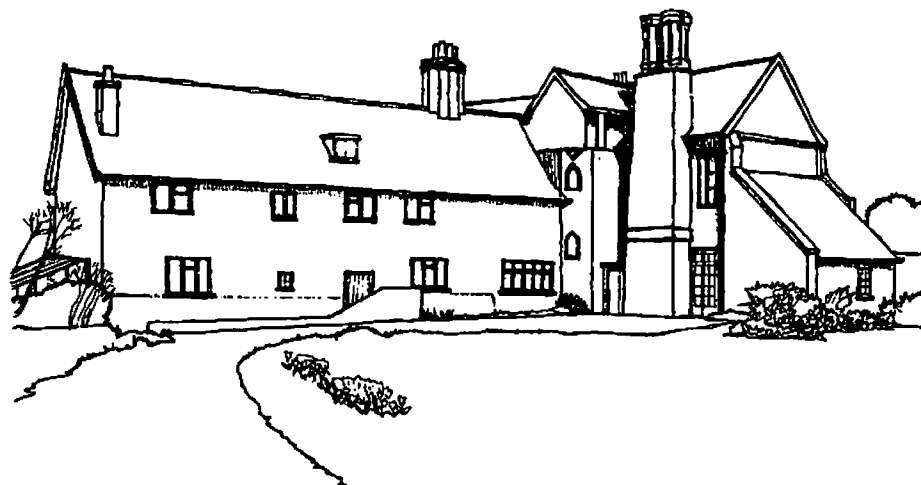
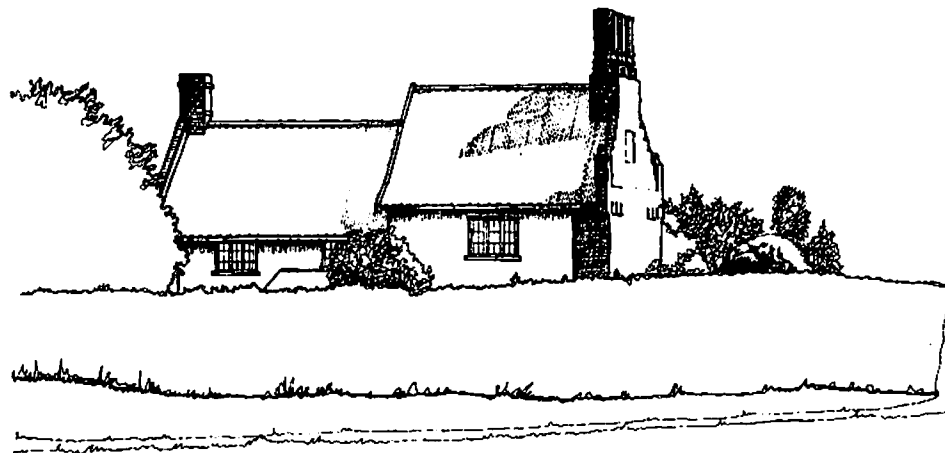


*Before carrying out any alterations or extensions to an historic building, it is important to ensure that the architectural and historic value of the property in its current form is properly researched and understood.*

*(Above) This fine Georgian house appears to have been little altered since it was first designed and built.*

*(Above right) The southern end of this Medieval farmhouse was rebuilt during the 16<sup>th</sup> Century, the roof was raised and an impressive brick gable end was added.*

*(Below right) This important moated 16<sup>th</sup> Century Manor house has undergone numerous changes over the years. Many of these changes are now, in themselves, of historic significance. Some, like the inappropriate 20th Century casement windows with fanlights, are not.*



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## 4.1 ALTERATIONS AND EXTENTIONS

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### **Before You Start**

In order to alter or extend an historic building in sympathetic manner it is important that the historic and architectural value of the property in its current form is properly understood. To begin with it should be remembered that with very few exceptions every building was initially conceived as a finished design, a fact which is more obvious in some buildings than with others. Many Georgian and Victorian properties for example, clearly read as finished compositions. It is easier to grasp the fact that any alteration, extension or minor change could undermine the historic significance and upset the balance of the design if not very sensitively handled.

Older buildings, such as surviving examples of vernacular timber framed houses, were similarly the product of a conscious design process. The impression that they developed from a haphazard throwing together of timber and plaster and have been so altered and "messed about with" in the past that their value is solely derived from their age and picturesqueness is very much a misconception. Most of these buildings, in order to last as long as they have, were very carefully designed and well built. Those which were just "thrown together" invariably fell down or were demolished years ago.

Another consideration should be the fact that

many older buildings which have survived to the present day are the result of a continuing evolutionary process which has spanned centuries. Subsequent changes that have taken place to the building may, to varying degrees, have obscured its origins but in many instances the changes should be seen as being of value in themselves. This is because they are illustrative of past developments in technology, the changes that have taken place in the economy of the Area and reflect the way that people lived in days gone by.

### **A Flexible Approach**

When faced with a building which has undergone change in the past, there is the temptation to take the view that a few more changes will not do any harm. This approach should be resisted. Owners should be aware of the significance and value of the property and should ideally view their occupancy as only a temporary phase which, in time, will itself form part of the history of the building. It is then more likely that something of value will be passed onto future generations. It must be remembered that once lost, historical evidence and items of historical importance cannot ever be replaced.

When considering alterations and extensions to old buildings a flexible approach should be adopted and compromises may be necessary.

This is because, whilst most historic buildings are capable of satisfactorily accommodating modern lifestyles and conveniences, they cannot be expected to be adapted everytime to suit the personal preferences, circumstances or tastes of all their different owners without their architectural and historic importance being undermined and eventually lost.

### **Statutory Approvals and Professional Advice**

Make sure you check with the Local Authority because you may need Planning Permission, Listed Building Consent, Conservation Area Consent or approval under the Building Regulations for certain alterations and extensions.

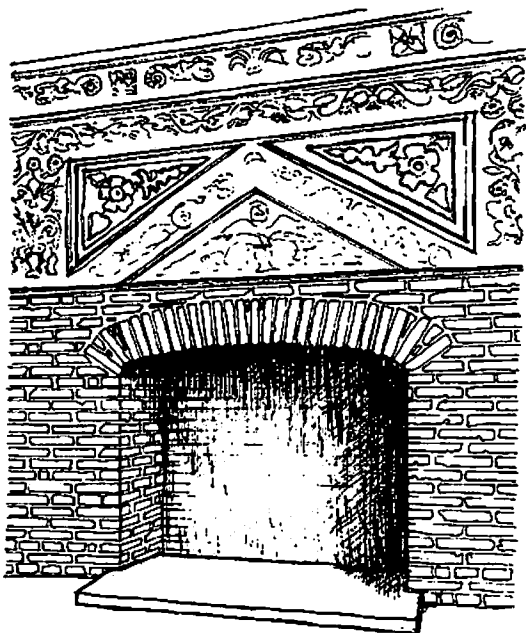
It is also very important that proper professional advice is sought and the Council's Design and Conservation Section is able to offer informal general advice preferably at an early stage so that time and money are not wasted on inappropriate proposals. If it is agreed in principle that some sort of change likely to prove acceptable then it is important that a well qualified agent who is experienced in historic buildings work is employed to provide detailed advice and to prepare drawings and specifications. A thorough historical analysis and survey of the building and a carefully considered and properly thought out set of proposals is certainly well worth investing in.



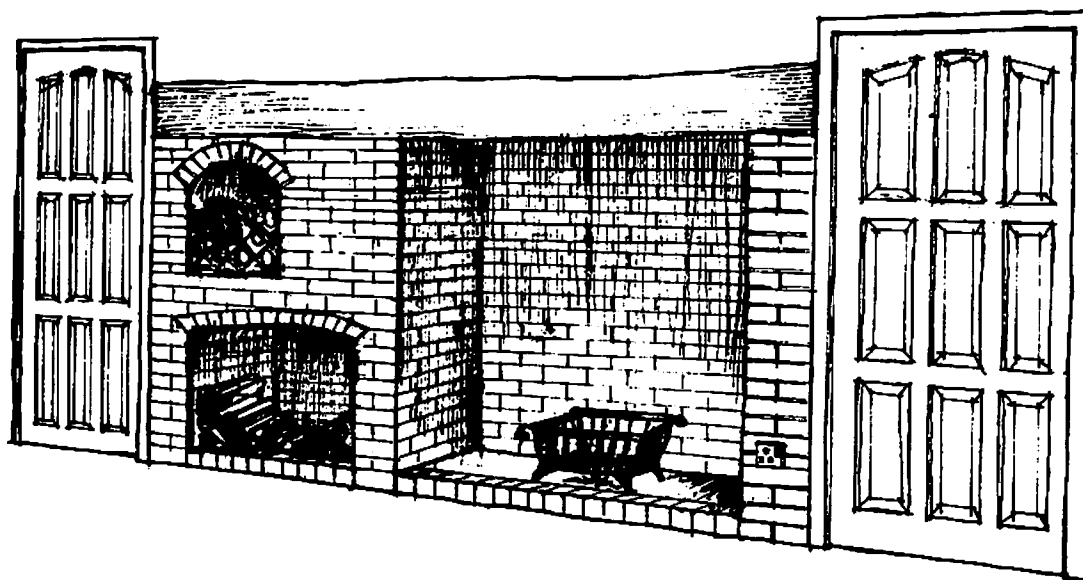
## SECTION 4 – MAJOR ALTERATIONS AND EXTENSIONS

### *Internal alterations.*

*When considering internal alterations it is not only important that features of architectural or historic interest are recognised and retained but also that when changes are made they are compatible with the character of the building.*



*This original 16<sup>th</sup> Century brick fireplace has a very fine overmantle made up of plaster panels decorated with floral motifs. It is an important feature of a Grade II\* Listed building.*



*This new pastiche "inglehook" fireplace with reclaimed oak beam and new "Tudor" style doors is not really going to be appropriate addition to many historic buildings. Especially if the building is Listed and its construction involves the loss of any historic fabric, or features of architectural or historic interest.*

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## 4.2 INTERNAL ALTERATIONS

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The interior of an old building is often considered to be of less importance than the exterior, however with most historic buildings, especially those which have not been over restored or altered or those which are Listed, the interior is of equal importance. In some cases the quality of the interior of a building may have actually been the main reason for it being Listed in the first place.

Problems with interiors occur when owners wish to alter the building to suit a 'life-style' which is not compatible with its existing character. The typical vernacular timber framed farmhouse for example, is composed of fairly small, usually underlit rooms, with steep narrow staircases and simple rustic finishes. Often, on both ground and upper floors one room provides access to the next (which can sometimes create very inconvenient sleeping arrangements!). It is completely at odds with the draught free, open plan, light and airy interiors, which some people prefer.

There are many points to consider when contemplating interior alterations and really only some examples can be covered here. Evidence of original or early plan forms should be respected and retained. The layout of a timber framed house which retains its Medieval plan form of an entrance next to the internal chimney with the staircase in the opposite

corner should not be altered. The original walls should not be removed to create larger rooms nor should studs or the infilling between them be removed in order to provide a more open plan environment.

The actual shape and proportions of rooms and their relationship with one another can often be a very important feature of particular type of historic building, for example the architect designed Neo-classical buildings of the 18th and 19th Centuries.

Staircases, ranging from winding staircases which occupy a cupboard like volume next to the chimney stack, to large, grandiose Georgian, Victorian and Edwardian structures, are all significant in their own way and should be retained even if their form and location does not suit current circumstances.

Fine later features should not be removed on the pretext that it is desirable to restore an interior back to what it may have been like previously. For example, innumerable good Georgian and Victorian fire places and surrounds have been lost in order to "open up" or create an inglenook, often necessitating the insertion of a new timber beam and refacing the side walls and fire back in brick to produce something that is nothing more than a modern pastiche.

Potentially valuable internal doors, panelling and cupboards should not be casually discarded without first making a proper assessment of their significance. For example, simple planked and ledged doors which may appear to be of little value can actually be over three hundred years old. Door furniture and old window catches and stays may also be very old or rare examples.

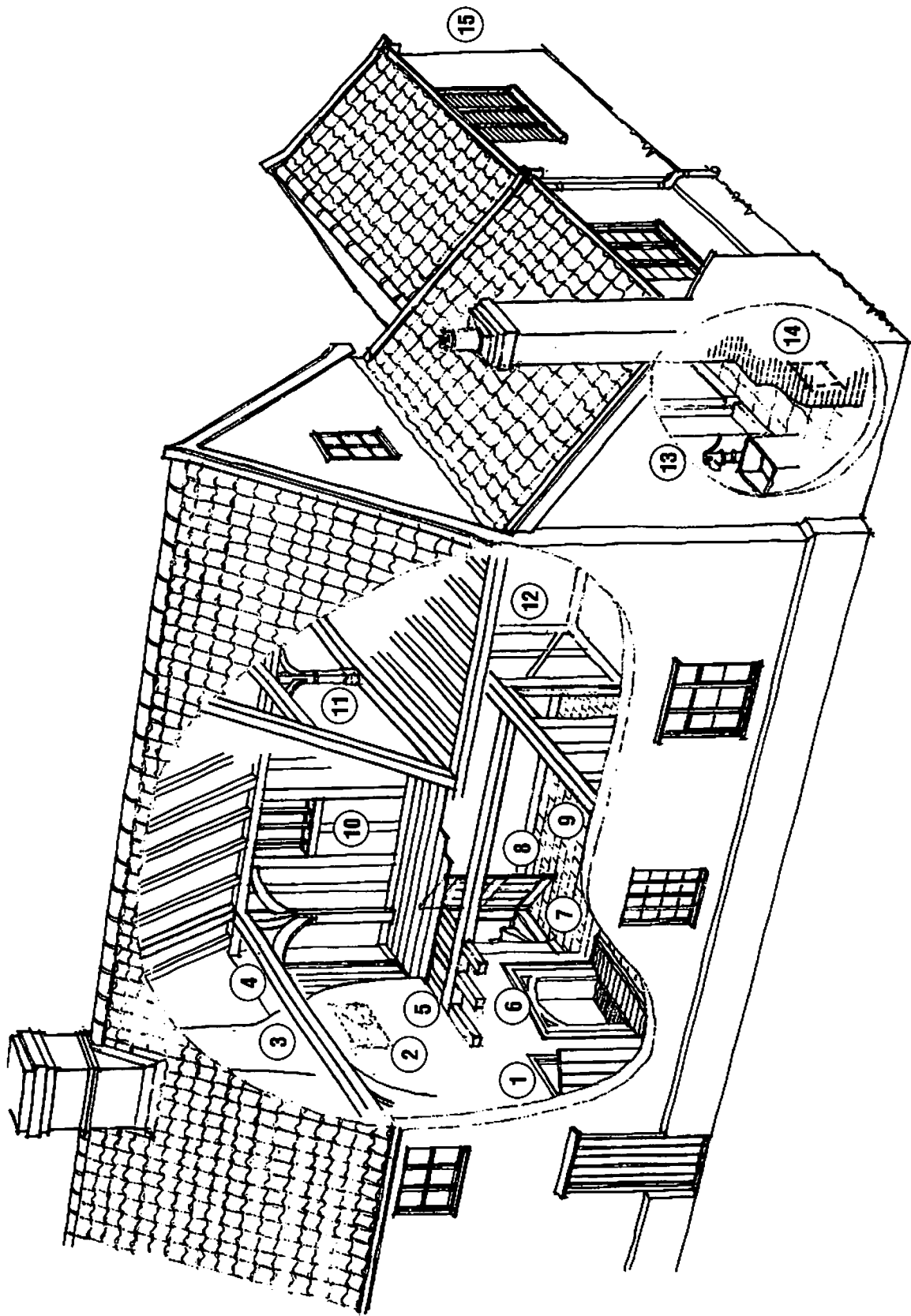
Old brick and pammet floors should either be retained insitu or relaid over a new damp – proof membrane. Historic artifacts such as scullery pumps and bread ovens should be kept and ancillary spaces such as ventilated pantries, game larders and dairy wings should not be altered to such a degree that all evidence of their former purpose is removed.

The installation of pipework, cabling and ductwork for central heating, new bathrooms kitchens etc., should be carefully sited in order to avoid damaging important finishes. Old timbers should not have holes drilled through them or have chasing channels cut into them.

**Listed Building Consent will be required for most internal alterations to Listed buildings.**

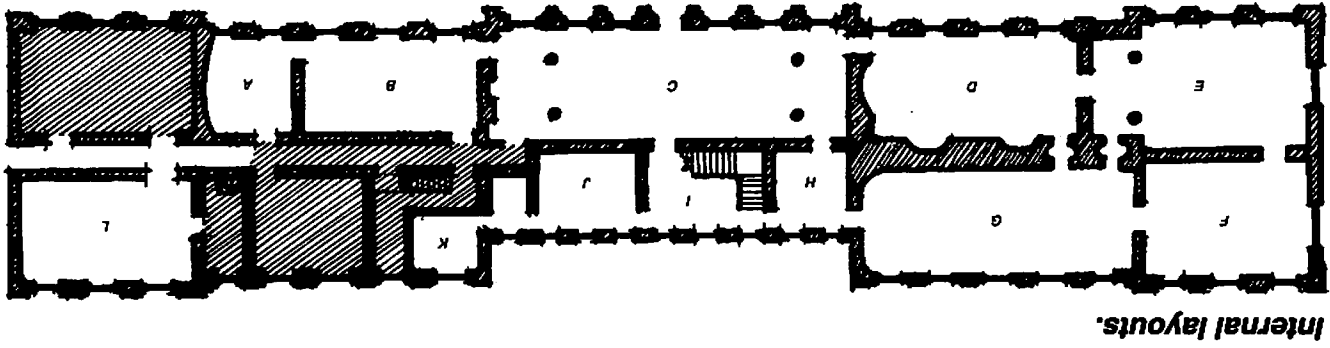
## SECTION 4 – MAJOR ALTERATIONS AND EXTENSIONS

Some examples of internal features of interest that can be found in an old Suffolk farmhouse.





## 4.2 INTERNAL ALTERATIONS



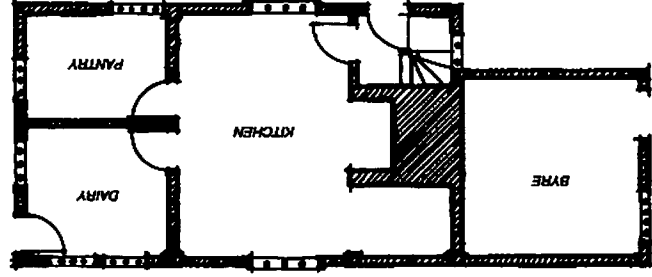
Heveningham Hall (1778) ground floor plan.

- A Print Room or Small Dining Room
- B Morning Room
- C Entrance Hall
- D Dining Room
- E Library
- F Drawing Room
- G Saloon
- H Etruscan Room
- I Staircase Hall
- J Smoking Room
- K Gun Room – exit to Garden
- L Old Kitchen

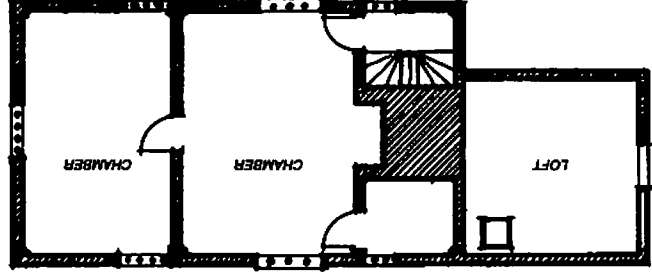
Source: Suffolk Houses by Eric Sandon

Sometimes the importance of the internal layout of a building, the relationship between the rooms and their shape and proportions remain clearly evident (as at Heveningham Hall, above).

Elsewhere, the building and its original layout can have been altered. Old farmhouses, for example, (like the one shown left), are likely to have developed into something very different over the Centuries. However, when undertaking any further work, any remaining evidence of the buildings origins should be respected and retained.



Farm house (circa 1550).  
Original ground floor plan (above),  
first floor plan (below).



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- Key.
- 1 Lobby (or baffle) entrance arrangement.
  - 2 Remains of wall paintings.
  - 3 Massive brick chimney stack.
  - 4 Early timber framing with carpentered and pegged joints.
  - 5 Timber floor supported on a spine beam with oak floorboards and lath and plaster ceilings.
  - 6 Stone fireplace.
  - 7 Winder staircase.
  - 8 Plank doors.
  - 9 Brick and pammet floors.
  - 10 Remains of mullion window.
  - 11 Crown post roof construction.
  - 12 Timber framed walls with lath and plaster and wattle and daub infill.
  - 13 Scullery pump.
  - 14 Bread oven and chimney.
  - 15 Dairy wing with internal fittings and windows with wooden louvers.

## SECTION 4 – MAJOR ALTERATIONS AND EXTENSIONS

### *Problems of extending.*

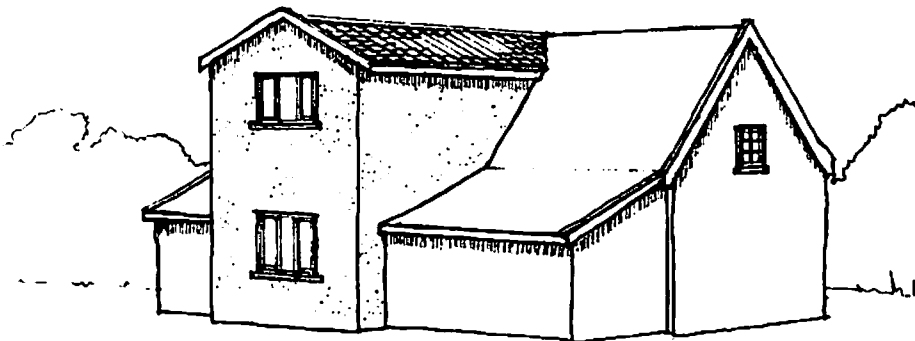


*Extending historic buildings in a satisfactory way can be an extremely difficult, if not an impossible task. These illustrations show examples of extensions which, in varying ways, have undermined the architectural and historic character of the original building.*

*(Above left) Although an attempt has been made to ensure that this extension is sympathetic, its construction has disrupted the original symmetry of this early 19<sup>th</sup> Century farmhouse. Materials and details were also not an exact match.*

*(Above) The design of this side extension, coupled with the changes to the fenestration on the existing building, has undermined the original design and appearance of this pair of houses.*

*(Left) This two storey extension, which projects beyond the single storey lean-to, is very disruptive and has dramatically changed the form and appearance of the existing building.*



## 4.3 EXTENTIONS – GENERAL PRINCIPLES

Building an extension onto any historic building can have a major impact upon not only its character and appearance but also its architectural and historic interest. This Section attempts to put forward some basic guidance and advice. It does not set out to provide a set of specific criteria which have to be met nor is it an exhaustive list of points to take into consideration. The issues which have to be taken into account and the implications of different proposals are often complex and far reaching so it is not appropriate to attempt to be too specific in this Document. Each case must be considered on its own individual merits.

### Problems of Extending

When considering whether, in principle, it would be appropriate to extend an historic building, it must be realised that there are many properties which, in pure architectural and historic buildings terms, it would be undesirable to extend. Many buildings have been Listed as an example of a particular historic building form and type. Any attempt to make them larger, no matter how well executed, can only serve to undermine their architectural and historic interest.

Furthermore, with any historic building the act of extending almost invariably leads to the loss of historic fabric and finishes. External walls are

covered up by the extension, new openings in walls are created or existing ones altered. Roofs are also often altered, their form, original structure and constructional detailing can all be affected.

Consideration should also be given to the fact that alterations to the exterior of a property will also affect its relationship with those along side and the street scene generally. Many an attractive neighbourhood has been spoilt by undesirable or intrusive alterations and extensions being carried out on individual buildings which show scant regard for the wider implications of such changes.

It is possible however, to alter and extend some historic buildings without harming their character and in certain instances the right sort of extension in an appropriate location may even improve the appearance of the building and the neighbourhood. In such circumstances, success depends upon achieving the right sort of balance between introducing something new, (and even modern in appearance), whilst respecting both the original design concept and the important characteristics of the existing building. Ideally, when completed, the finished building should retain all its historic significance and appear as a complete and harmonious whole, which does not look out of place with adjacent properties or its surroundings.



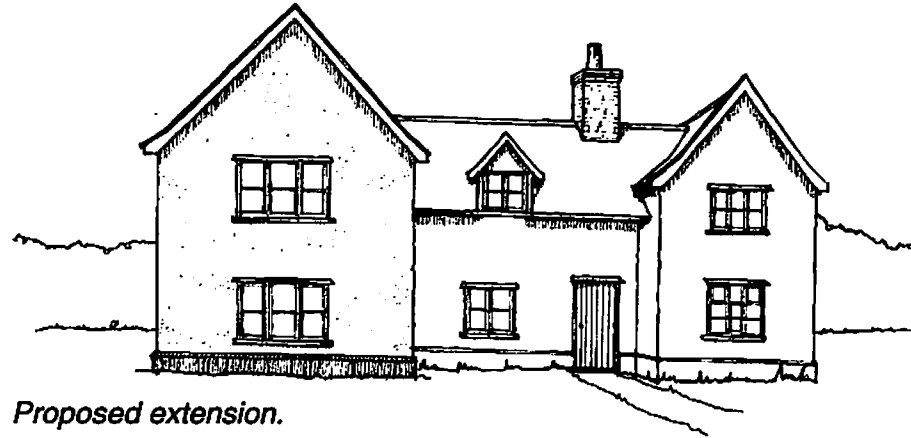
*Simple rear extensions have been added to these small Alms houses. Even though the form and detailing of the extensions is very sympathetic they have resulted in some of the original decorative finishes being covered up.*

## SECTION 4 – MAJOR ALTERATIONS AND EXTENSIONS

### *The size of extensions.*



*Existing cottage.*

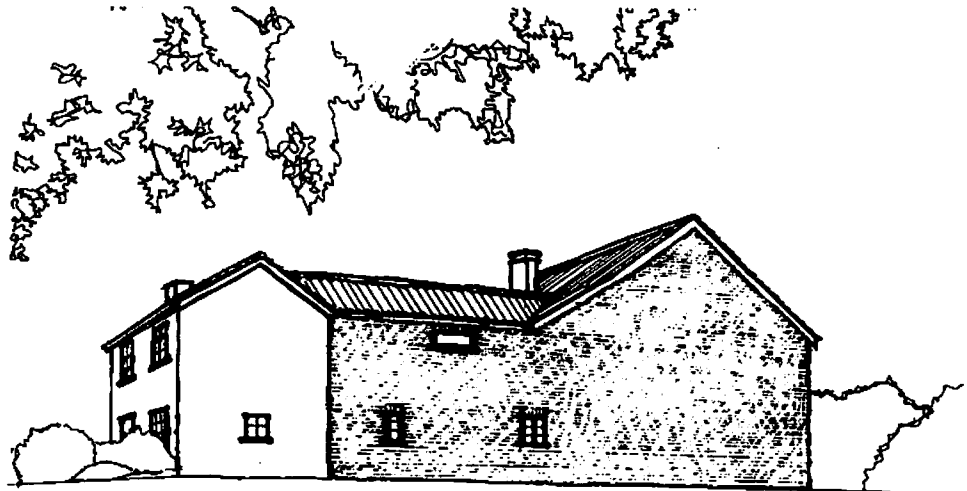


*Proposed extension.*

*The addition of a large cross-wing extension onto a small traditional cottage like this would have a major impact upon its character and appearance. It would also involve considerable loss of existing historic fabric. It is likely, therefore, that developments which involve this level of change will not be acceptable.*



*The size of this rear extension, its width, the higher eaves, shallower pitched roof and its relationship with the gable end of the original building, means that it has a form, size and scale which visually dominates this traditional Suffolk farmhouse. The modern detailing is also inappropriate.*



*This is clearly not a 'modest' extension to a small cottage!*

## 4.3 EXTENSIONS – GENERAL PRINCIPLES

### The Size of Extensions

The Suffolk Coastal Local Plan contains policies which seek to control inappropriate development in towns, villages and in the countryside. The Plan emphasises the fact that large extensions which adversely affect the character and appearance of historic buildings or their settings will not be permitted:

“in order for extensions to existing buildings to be acceptable, particularly on those which are considered to be architecturally and historically important, those located within a conservation area, or those that are Listed, the extension shall normally be visually ‘recessive’ and its size and design shall be such that the original building will remain the more dominant feature on the site;” (paragraph 2.8)

Outside settlements, in dispersed hamlets and in the countryside, the Plan also seeks to control the size of extensions to existing buildings (Policy LP32). This is not only to protect the character and appearance of buildings and the countryside generally but also to retain a range of dwelling sizes, particularly small dwellings which are available to meet local needs. Anything which amounts to more

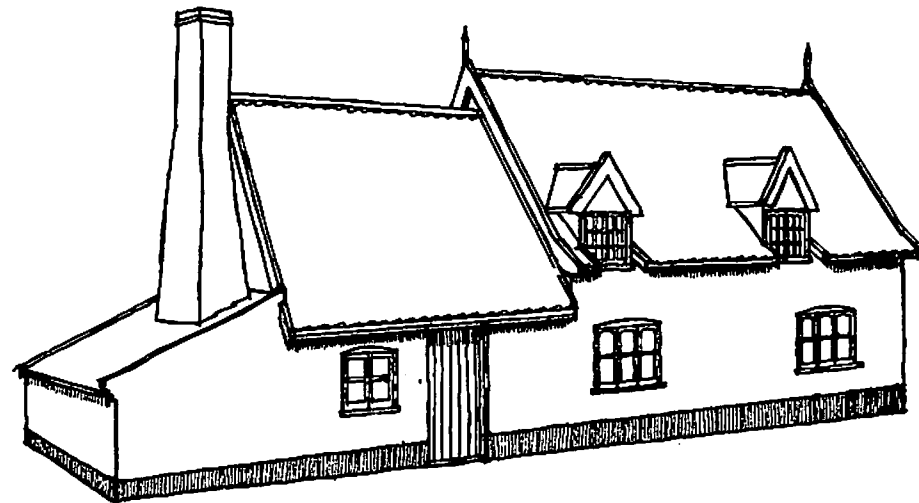
than a modest change in the size and appearance of a dwelling in the countryside is therefore likely to prove unacceptable.

What amounts to a ‘modest’ change will vary according to circumstances but clearly a 100% increase in floor space would not be a modest change and in the vast majority of cases only something considerably less than this will be acceptable.

The size of an extension, whilst inevitably being a very important consideration, may not always be the over-riding concern. The architectural and

historical character of the existing building and the scale, form, design and detailing and use of materials on both the existing building and the new work can all have an impact upon whether or not a particular extension is going to be appropriate.

Furthermore, the setting of an historic building is an important aspect of its character. The amount of accommodation relative to the plot size, therefore, can also be a determining factor. Proposals for extensions on existing buildings which create a cramped form of development will not be acceptable.

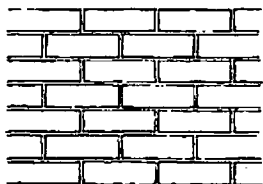


*Given the District Council's policies on the size of extensions, any addition to a cottage like this, (especially if it was a Listed building and located in the countryside) would need to be fully justified in historic building terms and clearly have to be small and very sensitively designed.*

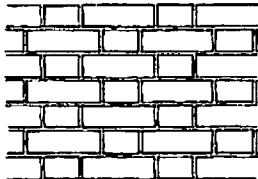
## SECTION 4 – MAJOR ALTERATIONS AND EXTENSIONS

### Materials and details.

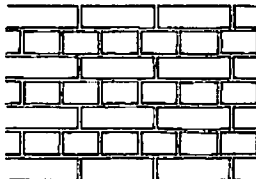
The use of traditional brick bonding is often going to be necessary on extensions to historic buildings.



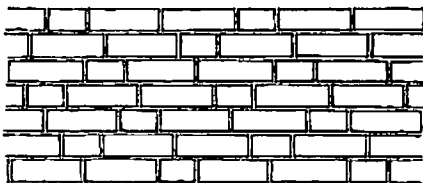
Stretcher bond appears markedly different to the more traditional bonds shown right and below.



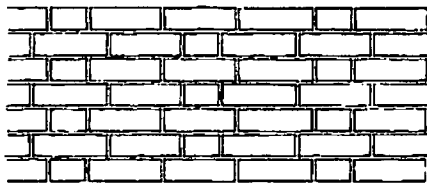
Flemish bond.



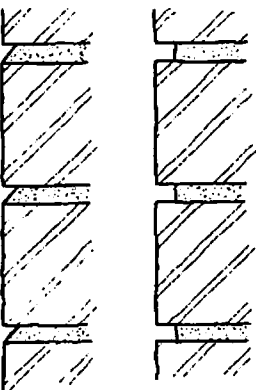
English bond.



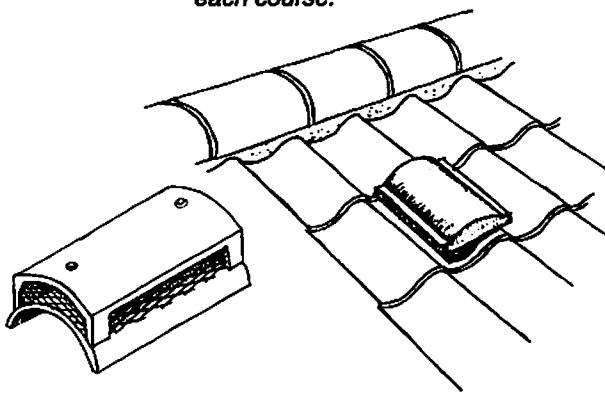
Monk bond has two stretchers to every header in each course.



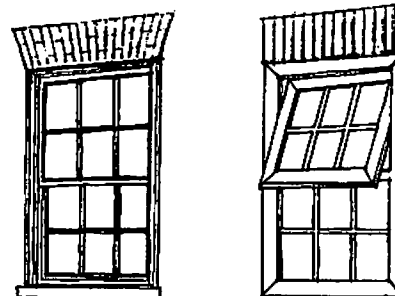
Flemish garden wall (or Sussex) bond has three stretchers to every header in each course.



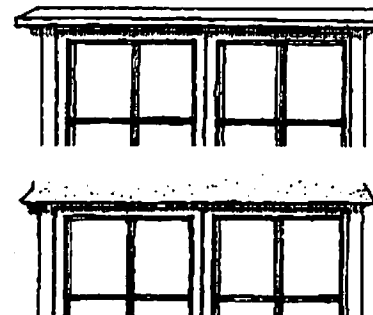
The use of weather struck (left) and recessed joints (right) will hardly ever be appropriate on any extension to an old building.



The use of intrusive modern eaves and ridge vents and tiles which incorporate unduly prominent integral vents should be avoided on historic buildings.



A crudely detailed top hung plastic or timber window with a brick soldier course over (as shown right) bears little resemblance to the traditional qualities of the vertical sliding sash window with an arch of shaped brick 'voussoirs' (shown on the left).



On rendered buildings the traditional detail at the window head is to render down to a pentice board (as shown above). The modern detail of forming a drip by thickening up the render (below) is almost always going to appear unsatisfactory.



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## 4.3 EXTENSIONS – GENERAL PRINCIPLES

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### Materials and Details

With very few exceptions, most historic buildings have some features and characteristics which would be extremely difficult to match or replicate in this day and age. This makes adding an extension onto them in an appropriate manner sometimes very difficult. Attempts to replicate the form, style, detailing and use of materials on the original building are often thwarted by the ageing process, cost, workmanship, modern building techniques, materials, regulations etc., which combine to make an identical match virtually impossible.

Despite the concerns expressed above, using the same materials and repeating the same details as on the original building is the most likely way of producing a successful extension on most historic buildings. With most Planning and Listed Building Consents it will be a condition that the materials and details used should match those on the existing building, to the Local Planning Authority's reasonable satisfaction. In all cases the match will need to be a very close one.

When attempting to match existing work it is essential that traditional techniques and detailing are adopted. Brickwork, for example, should be laid using not only the same size, colour and texture of brick but the bond, pointing and colour of the mortar should also be

matched. The use of stretcherbond with a hard, grey cement rich mortar and recessed or weatherstruck joints will hardly ever be appropriate on an extension to an old building. Similarly, a uniform hard, cement based render, especially if applied over blockwork, will contrast starkly with the undulations of a flexible lime based render facing to an old timber framed building.

If an exact match is not going to be practicable then in some circumstances a compromise solution may prove acceptable. With new brickwork on extensions to some unlisted properties or those outside conservation areas for example, a reasonable effect may be achieved by constructing the walls with a header inserted every second or third brick. This may be just enough to break up the regular pattern of stretcher bond. With a rendered extension a conscious attempt should be made not to achieve a completely flat finish by varying slightly the thickness of the plaster.

Roof finishes should normally be the same as on the existing roof and ridge tiles and the detailing on gables, hips and valleys should all match. Decorative features should also be repeated. Intrusive modern eaves and ridge vents should be avoided, as should tiles which incorporate integral vents. **In many instances, especially on Listed buildings, the use of such intrusive features will not be acceptable.**

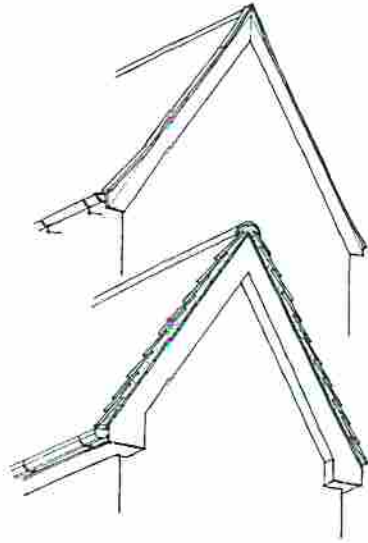
Windows used on an extension should normally be constructed using similar profiles, detailing and finishes, and the proportions should, in most cases, match those on the existing building. They should also open in the same manner. New windows will certainly not be acceptable for example, where they are designed to appear similar to existing casements or sliding sash windows but actually have top hung opening lights and false plastic glazing bars stuck onto or between the panes of sealed double glazed units.

The position of the window in relation to the face of the wall should also be the same, as should the detailing around the window opening. A straight brick soldier course on a steel lintel, for example, will certainly not satisfactorily match elegant 18<sup>th</sup> and 19<sup>th</sup> Century brick arches made up of rubbed bricks or purpose-made 'voussoirs'.

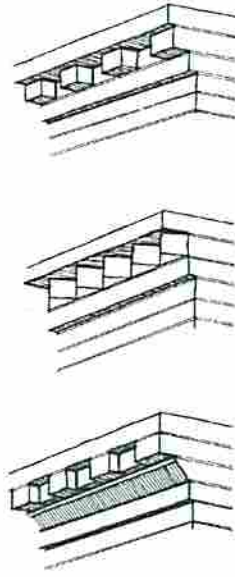
On rendered properties the traditional detail at the head of the window is to construct a pentice board and to render down to that. The modern detail of forming a drip by thickening up the render will almost always appear unsatisfactory.

## SECTION 4 – MAJOR ALTERATIONS AND EXTENSIONS

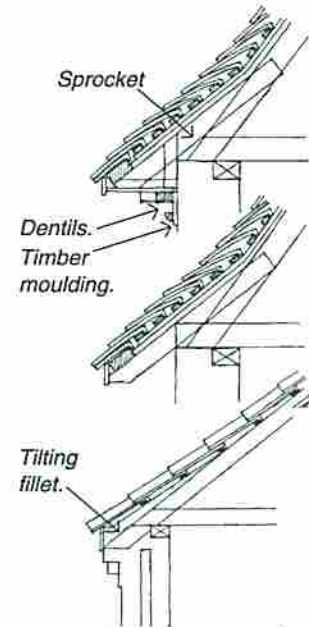
### Materials and details.



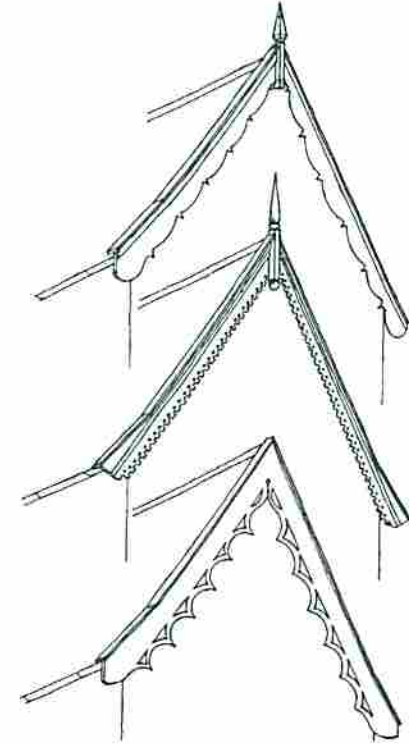
The traditional detailing on gables which incorporates barge boards and capping pieces (top) is very different to the details used on many modern buildings, (bottom).



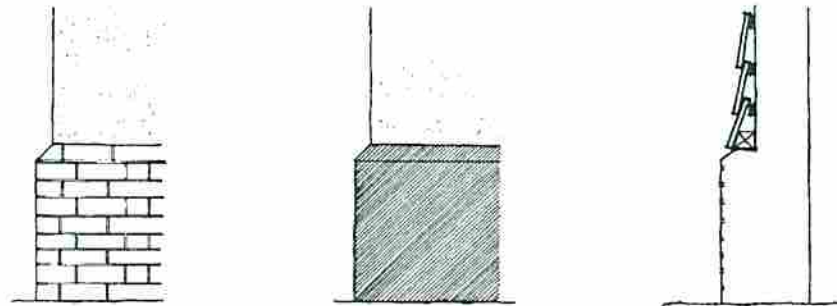
Traditional brick eaves detailing.



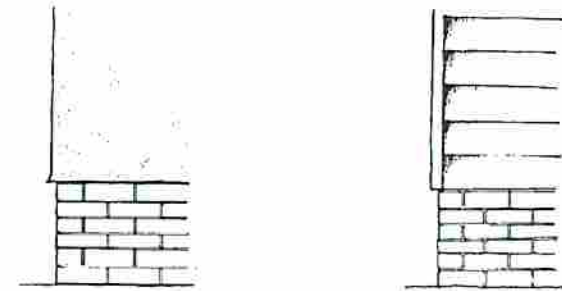
Three examples of traditional eaves detailing.



Traditional decorative barge boards should be used where appropriate.



The plinth on extensions to rendered and weatherboarded buildings should follow the traditional details.



The modern detail of render or boarding overlapping the brick plinth (as shown above), should be avoided.



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## 4.3 EXTENSIONS – GENERAL PRINCIPLES

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### **Materials and Details (continued)**

Often a significant difference between the appearance of an existing traditional building and an inappropriately detailed extension is the construction and finished appearance of the eaves and verges of the roofs. Many builders nowadays favour “boxed out” eaves and verges incorporating deep fascias and soffits because they are easy and cheap to construct. These, along with the bulky ‘clubfoot’ end to the bargeboard and the use of a cement fillet at the edge the tiles along the verge, appear very heavy and crude. Modern plastic gutters and downpipes compound the problem.

The detailing on most historic buildings is in contrast very different. Traditionally, builders constructed eaves without a deep fascia and often mounted gutters on metal brackets fixed directly to the wall or on exposed rafter feet. The junction between the roof slope and the walls of the building was, as a result, far less bulky and had a more refined appearance.

Sometimes traditional roofs were constructed with very little overhang at the eaves. Brick walls were corbelled out at the eaves and where a fascia was provided it was often fixed directly to the wall. Where eaves did incorporate an overhang, soffits were sometimes decorated with wooden or plaster dentils, mouldings and other classical motifs. In most

instances on traditional buildings a very elegant eaves line was achieved by laying the last few rows of tiles at a shallower angle using timber sprockets or a tilting fillet fixed to the rafters.

The local vernacular verge detail involves barge boards fixed close to the face of the gable wall, masking the edge of the tiles. This was topped with a timber capping piece which overlapped the tiles. Sometimes decorative barge boards were used and these form an attractive feature on many traditional buildings in the District. Extensions should incorporate the same detailing.

Dormer windows and rooflights can have a major impact upon the appearance of any extension, especially if they are too large, poorly designed or too numerous (see pages 74 and 75). Even if well detailed and of an appropriate size, it will often be necessary to restrict the number of dormer windows on any extension to one, at the most two, on any elevation. This is because they can be particularly prominent, visually disrupting the simple form of the roof and making the extension appear over dominant.

Many historic buildings incorporate projecting brick plinths at the base of external walls. Sometimes these have been rendered, often they are painted with black bitumen. Where

plinths exist, extensions should normally be designed with the same detail. On rendered extensions the modern practice of the render projecting beyond face of the brick plinth should be avoided.

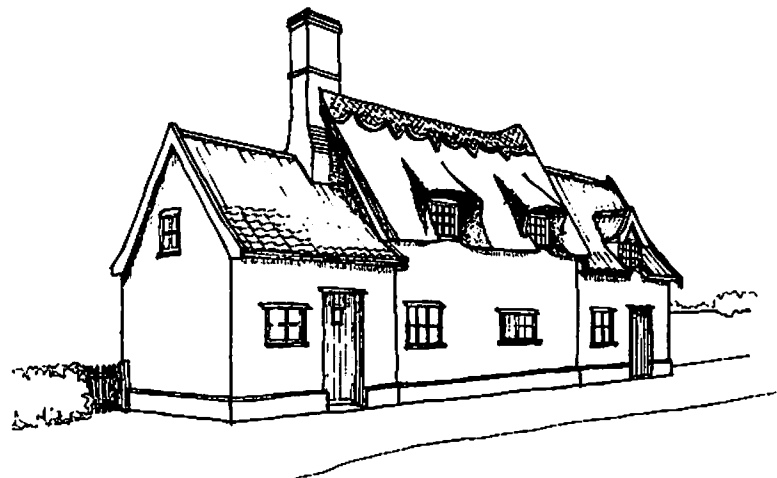
In certain instances, especially where an extension is designed to appear very much as an ancillary structure to the existing building, the use of weatherboarding may be desirable. In virtually all cases the boarding should be used in association with a projecting brick plinth.

## SECTION 4 – MAJOR ALTERATIONS AND EXTENSIONS

### *Extending individual buildings.*



*An example of a one and a half storey rear extension to a traditional brick cottage.*



*The right hand extension to this cottage is a recent addition. The size of the extension, its lower eaves and ridge line ensure that it has an appropriate scale. The materials and details chosen mean that the original cottage remains visually dominant.*



*This small cottage (shown left) has been extended at the rear (right). The hipped roof on the extension matches the one on the existing building. In order for such proposals to be acceptable it is important that the extension is kept to an appropriate scale and that there is no loss of important historic fabric on the existing building. (In this case the existing roof was in a bad state of repair and was of relatively recent construction. Little alteration was necessary to the existing external walls).*

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## 4.4 EXTENDING DIFFERENT TYPES OF BUILDING

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### Extending Individual Buildings

In the past the basic simple, narrow, rectangular form of the vernacular house in the District was often extended but in most cases it remained the dominant element in the composition. Attached were smaller additive forms such as lean-to extensions or smaller and lower pitched roof elements to the side or rear. In this way a sometimes quite large often irregular plan was covered by a series of separate pitched roof forms all linked together. This achieved not only visual unity but also helped to reduce the apparent size, scale and bulk of the whole building. It should be realised however, that a significant feature of these buildings is the fact that the proportion of accommodation provided on the upper floors is in most cases, relatively small.

On many historic properties a simple rear extension set at right angles to the existing building is likely to be the most acceptable solution, especially if the extension is designed with an eaves and ridge which is lower than the main building and if it has a narrower span. On a two-storey building, an extension comprising a storey and a half, perhaps incorporating a gable window or simple dormer to light the internal spaces, would have less of an impact than a full two-storeys. A single storey extension is often even better.

When a rear extension is to be located close to the sidewall of the existing building it is usually better to avoid lining the walls up. Setting the extension in by at least a brick and a half will provide a better detail and help reduce the scale and impact of the extension.

Sometimes a successful side extension can be created with a reduced width, lower eaves and ridge, which tucks under the verge of the existing roof so it reads as a visually separate abutting structure. Again the extension should normally be relatively narrow and its height should be kept as low as possible.

Historically, buildings were sometimes extended with the additional accommodation being formed by extending the existing building at the end and continuing the roof over at the same height. In other cases they were extended by the creation of a cross wing at one or both ends.

Although these forms of extension may be seen as setting a precedent for extending historic buildings in a similar manner today, they involve a considerable amount of alteration which will often fundamentally change the appearance, architectural character and historical significance of the building. Therefore, in many cases, especially with Listed buildings, such a dramatic change will not be acceptable.

Attempts have been made in the past to create a satisfactory extension by treating it as a visually separate although physically attached structure. The fact that many historic buildings are situated in close proximity to one another and their juxtaposition create very attractive compositions in both urban and rural situations has been the inspiration for this. The adoption of such an approach however, has very often failed as it has still markedly changed the character and appearance of the existing building.

Where the existing building is to be attached to a proposed extension with a smaller 'link' structure it is important to ensure the space between them is the right size. The form and proportions of the link is also important and a single-storey narrow structure is invariably the best solution. The 'minimal' glazed link is an option which has been adopted in some cases but care should be taken as this non-traditional element tends to read as a focal point (which is exactly opposite to the effect that is trying to be achieved). A two-storey 'link' almost always causes problems and, in most cases, will not be acceptable.

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## SECTION 4 – MAJOR ALTERATIONS AND EXTENSIONS

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### *Extending individual buildings.*



*Existing.*



*Cross wing extension.*

*Historically, buildings were sometimes extended with the new accommodation being built at one end and the roof carried over. Sometimes cross wings were added. As shown, right, such extensions can fundamentally alter the appearance, architectural character and historic significance of the existing building and will often, therefore, not be acceptable.*

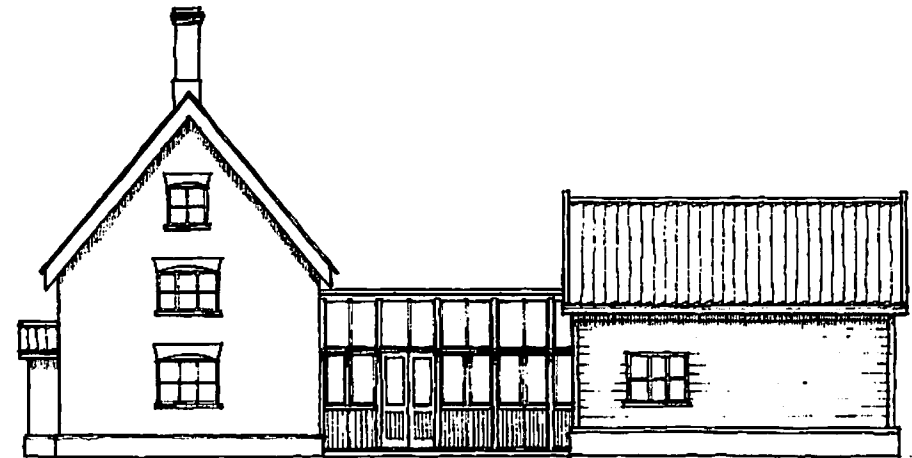


*'Lateral' extension.*

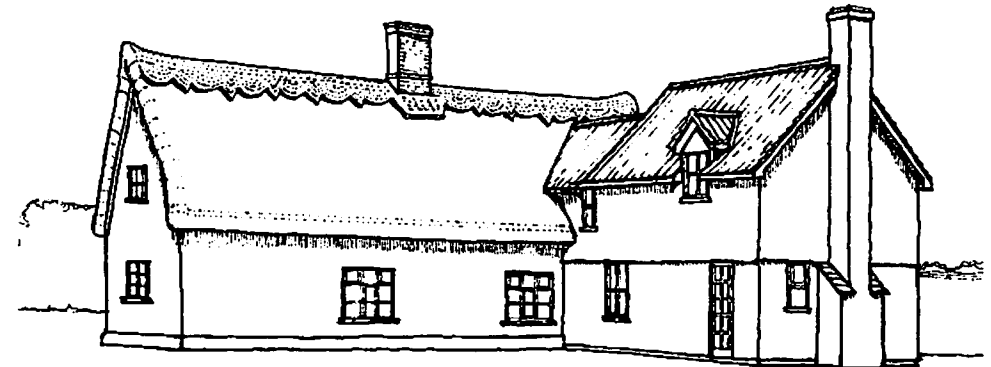
## 4.4 EXTENDING DIFFERENT TYPES OF BUILDING



*This is a rear view of a one and a half story side extension incorporating a traditional outshot. In some instances such a proposal may prove acceptable, but even a sensitive approach like this can still impinge upon the simple form and character of the existing farmhouse.*



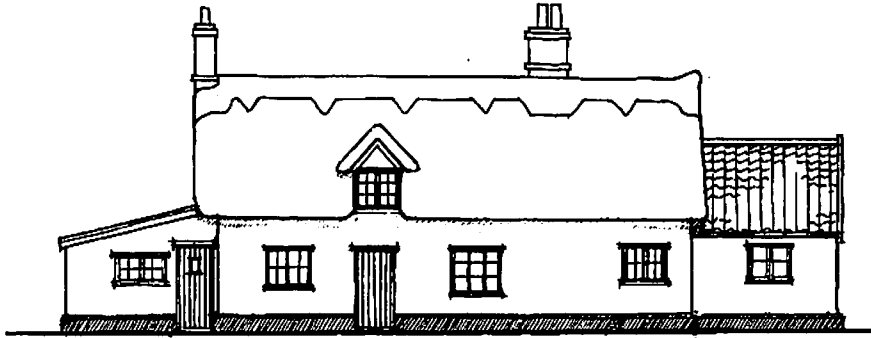
*Extensions which take the form of visually separate traditional outbuildings can sometimes be appropriate. In this case a single storey glazed structure forms the link to the extension. (Note: the 'outbuilding' does not have a brick chimney as it would undermine the overall effect).*



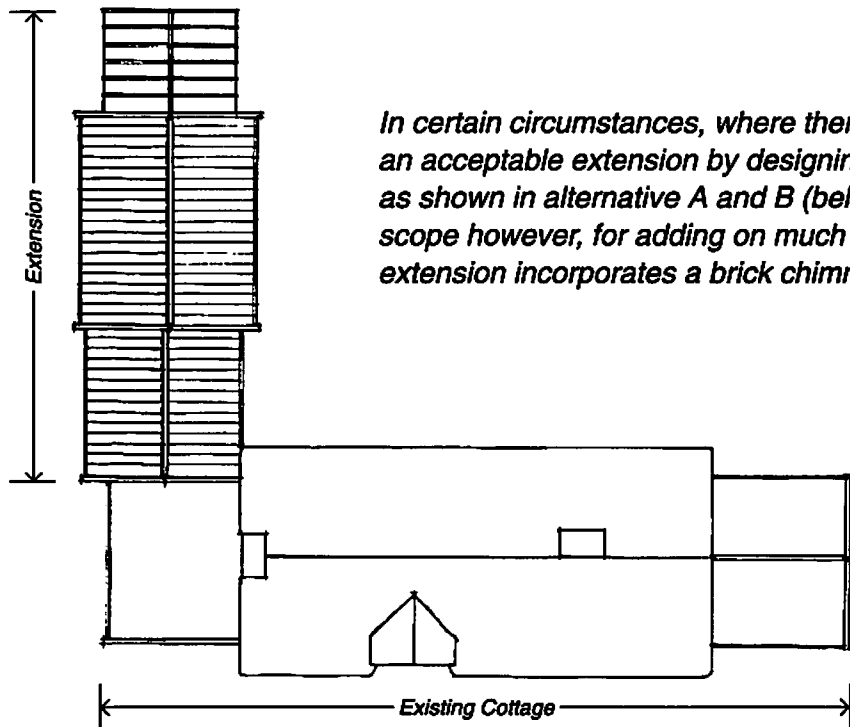
*This two storey extension is attached to a thatched farmhouse by a lower, narrower two storey link. Unfortunately, in this instance, the approach has not worked. The extension appears truncated, is too tall and is over-dominant. It has a non-traditional form and the modern detailing compounds the problem.*

## SECTION 4 – MAJOR ALTERATIONS AND EXTENSIONS

### *Extending individual buildings.*

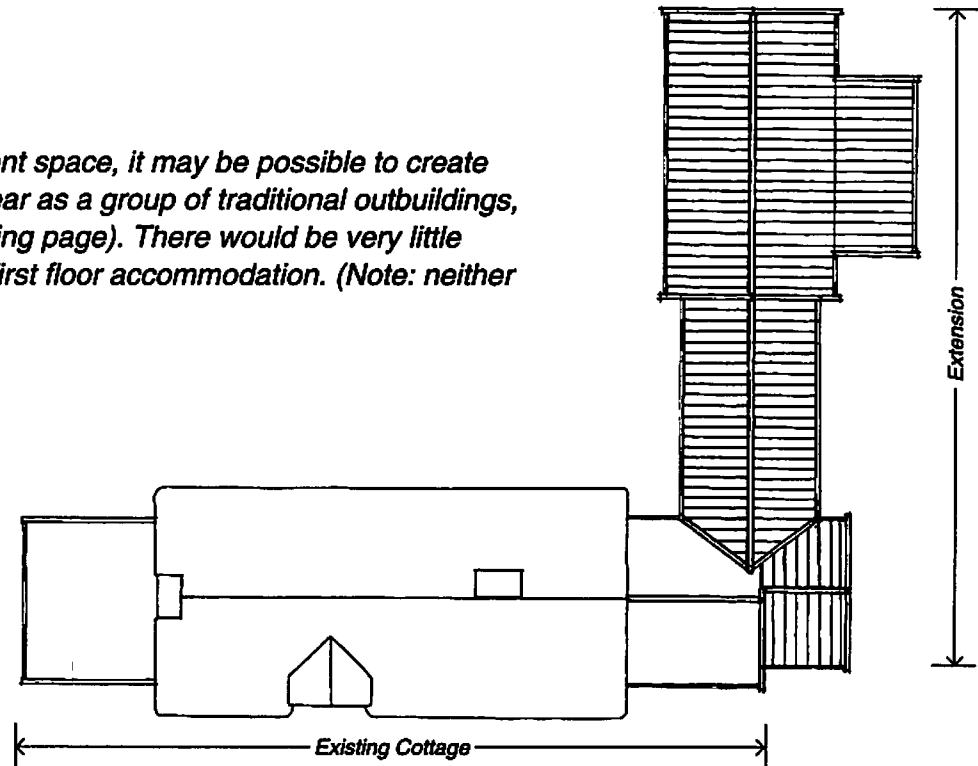


*In order for extensions to historic buildings to be acceptable it will often be important for the existing form and appearance of the building to be retained and for it to remain the dominant feature on the site. Also, any existing important historic features and fabric should not be adversely affected. This would certainly be the case with the sort of traditional vernacular cottage shown left.*



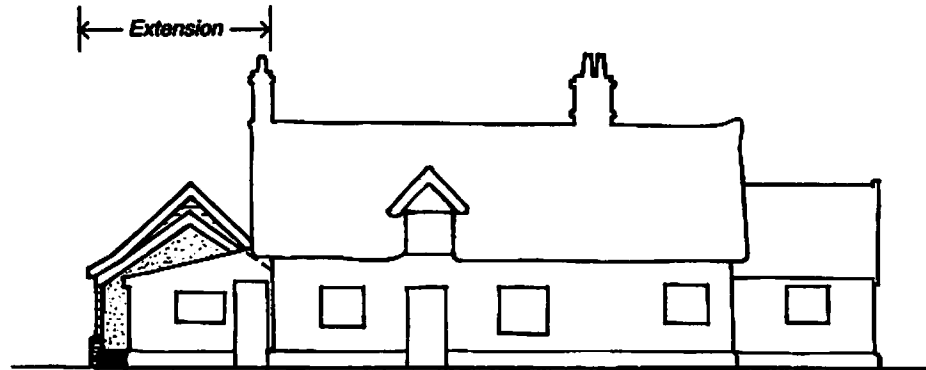
*Alternative A (plan).*

*In certain circumstances, where there is sufficient space, it may be possible to create an acceptable extension by designing it to appear as a group of traditional outbuildings, as shown in alternative A and B (below and facing page). There would be very little scope however, for adding on much additional first floor accommodation. (Note: neither extension incorporates a brick chimney stack).*

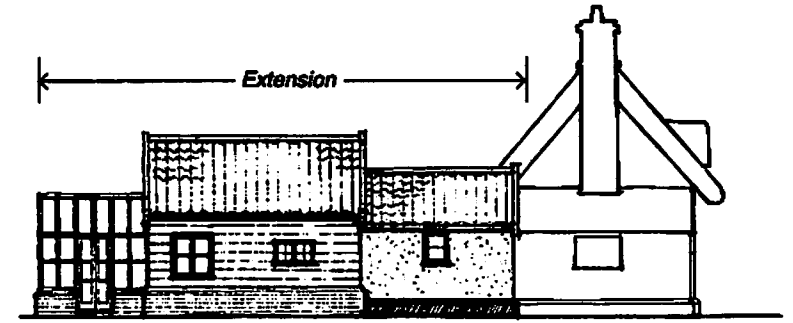


*Alternative B (plan).*

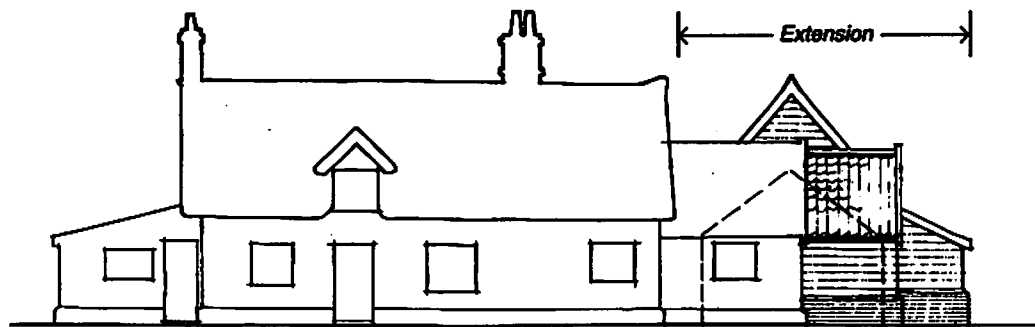
## 4.4 EXTENDING DIFFERENT TYPES OF BUILDING



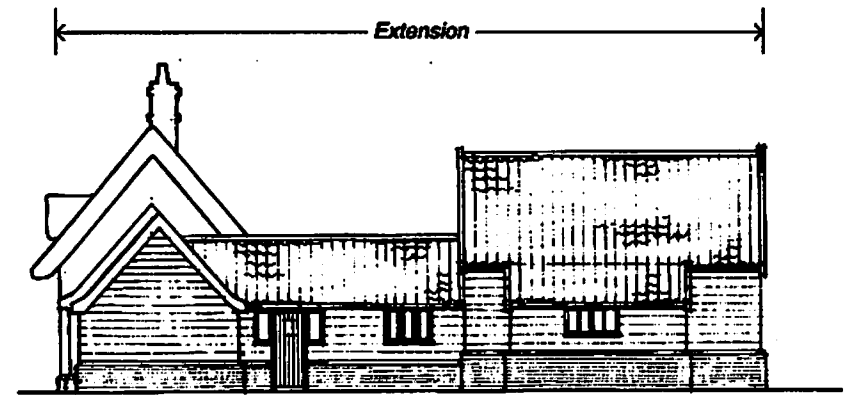
Alternative A - Front Elevation.



Alternative A - Side Elevation.



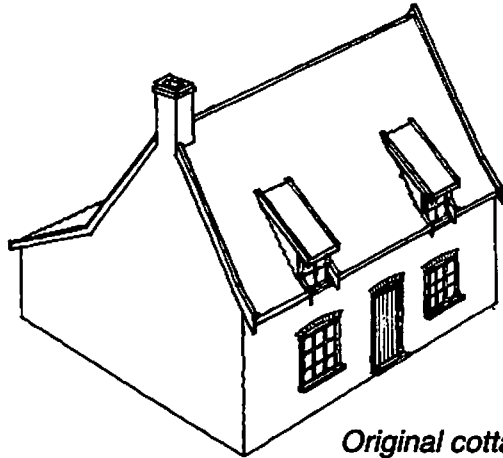
Alternative B - Front Elevation.



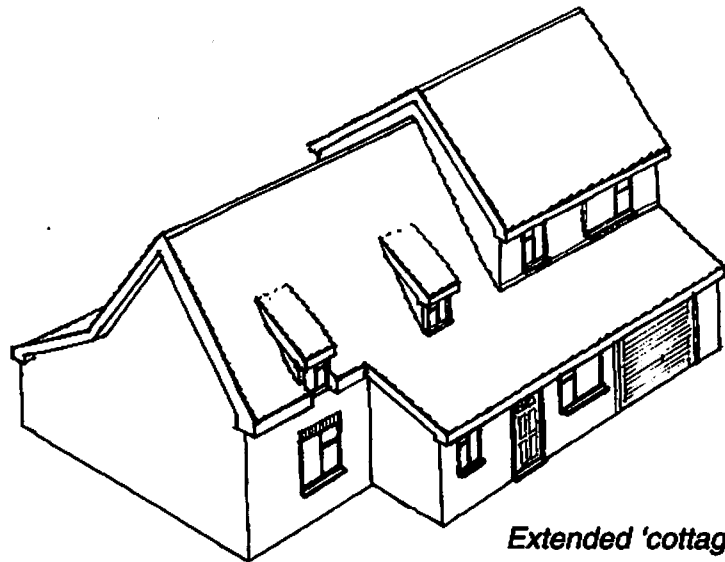
Alternative B - Side Elevation.

## SECTION 4 – MAJOR ALTERATIONS AND EXTENSIONS

### *Extending small dwellings.*



*Original cottage.*



*Extended 'cottage'.*

*Typically, many small cottages in the Area comprised just two small bedrooms on the first floor, two living rooms on the ground floor and a small kitchen extension at the side or rear. It may be argued that in this day and age it would not be unreasonable for significant changes to be made.*

*Extensions could include a porch (because the existing front door opens right into the living room), a new staircase (the existing winder staircase being too steep and narrow), a third, larger, bedroom, (because the existing ones are so small), an upstairs bathroom and a garage.*

*Such extensions may be added over a period of time or could be built all in one go. Either way, because of the size and scale of the additional accommodation it would be very easy for the original, simple cottage to be visually 'drowned' in extensions (as in the case illustrated left).*



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## 4.4 EXTENDING DIFFERENT TYPES OF BUILDING

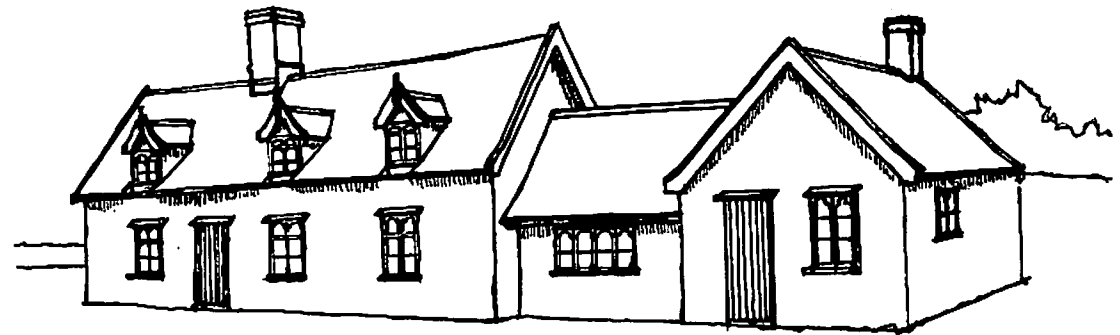
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### Small Dwellings

In both the towns and villages of the District and in the countryside there still survives a number of quite small historic buildings whose architectural character and significance is very much derived from their small size. Although some of these buildings may have been purpose built, for example gate lodges to country houses, most are small, rendered or brick vernacular cottages which have a very simple rectangular form, sometimes incorporating minimal side or lean-to rear extensions. Historically and architecturally, their form and construction and their smallness are particularly important factors – they are an important reminder of the economic and social conditions which used to exist in the Area.

These small dwellings are becoming a much rarer commodity because in recent years many have been bought up by people who have seen their existing size as affording a great deal of potential and scope for change and in many cases planning permission has been relatively easily forthcoming. As a result many have been substantially altered and extended to such an extent that their original form and their inherent character and interest has been completely lost. This makes those which do survive in something like their original form, much more important.

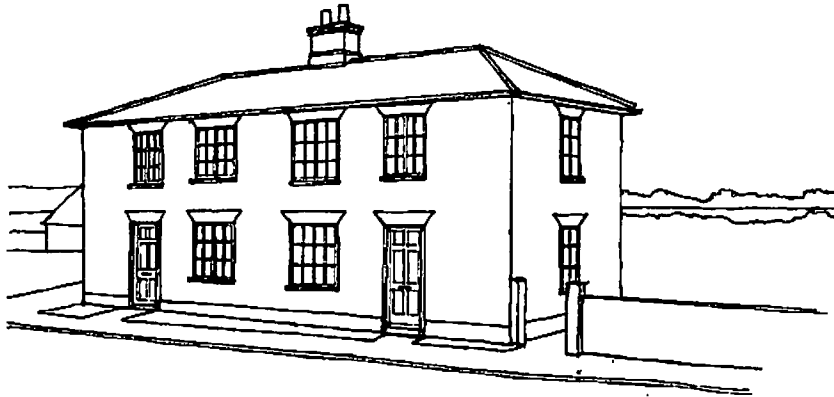
Whilst not wishing to force people in this day and age to live in cramped accommodation, these increasingly rare small cottages should not be seen as being suitable for major extensions and occupation by large families. The Local Planning Authority will therefore, where appropriate, seek to resist proposals for large extensions on such buildings, restricting them in most instances to single-storey only.



*A sensitively handled single storey side extension to a small one and a half storey cottage. Much larger though, and the extension could begin to compete visually with the original dwelling. In situations like this it is important that the existing dwelling remains the dominant feature on the site.*

## SECTION 4 – MAJOR ALTERATIONS AND EXTENTIONS

### *Extending semi-detached houses.*

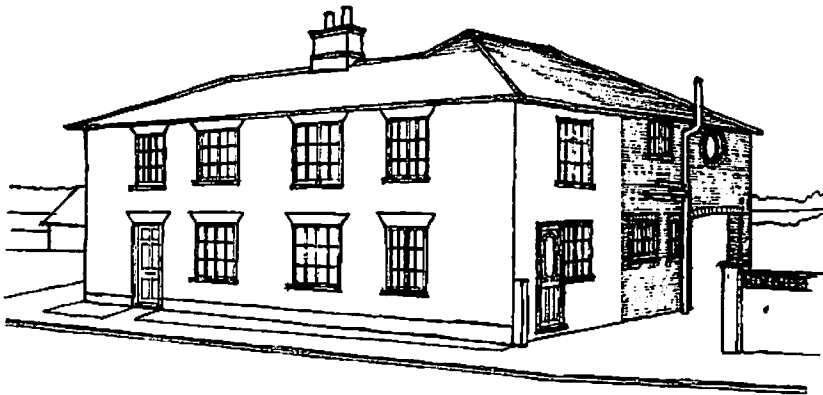


*(Left) An attractive pair of early 19th century cottages which have been extended in a rather unfortunate manner, as shown below.*

*(Below left) Two-storey extensions have been added at the rear. On one side, because the extension is wider than the existing building it has a higher ridge line.*

*(Below right) Both rear extensions are very large. They appear over scaled in relation to the existing building and they also have a poor relationship with one another. The detailing and materials that have been used compound the problem.*

*(Facing page) This combination of single storey and two storey extensions would have resulted in a much more sympathetic approach.*



## 4.4 EXTENDING DIFFERENT TYPES OF BUILDING

### Semi Detached and Similar Groups

Extensions to individual buildings which form one of a similar handed pair or part of a group can be particularly disruptive and harmful. With both types of property a front, side, rear or roof extension must be very carefully considered and designed in order not to disrupt the balance of the composition.

In virtually every case it will be necessary for the original property to remain the visually dominant one. The form of the extension should reflect and respect the size, scale and proportions of the existing building or group of buildings. In some instances, setting back the front wall of a side extension and perhaps

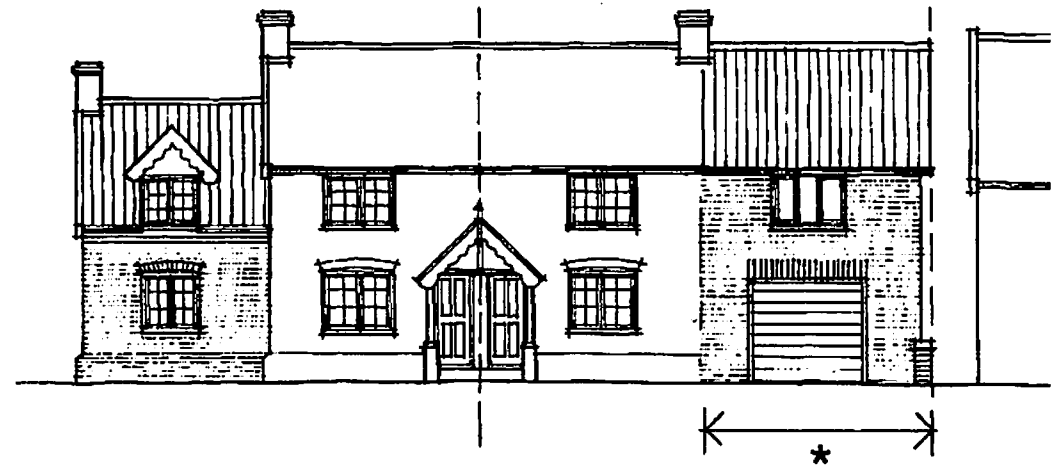
reducing the height of the ridge and eaves can often help achieve an appropriate scale. In other instances it may be necessary for an extension to be restricted to single-storey only or to be located around the back of the property.

It will always be necessary to ensure that the design of any extension which is to be the first on a pair or group is of an appropriate standard because it may well set the precedent which the others will have to follow if wishing to extend as well. Also in a street of similar semi-detached or detached houses, side extensions should not be built so close to the boundary as to create a 'terraced' effect.



*(Right) Extensions to semi-detached dwellings can be particularly disruptive. In this example, the left hand one and a half storey extension would often be considered to be a reasonable approach to extending both cottages. The extension shown on the right, however, due to its size and modern detailing would have an adverse impact upon the scale and character of the existing cottages and would not normally be acceptable.*

*\* Note: In certain situations, building extensions close to adjacent buildings will not be acceptable because it would have an undesirable 'terracing' effect in the street scene.*



## SECTION 4 – MAJOR ALTERATIONS AND EXTENSIONS

### Buildings with Symmetrical Facades

Extending buildings with a facade which has been designed as a symmetrical composition is especially problematic, particularly if it is also designed as a formal free standing building within a landscaped setting.

In some circumstances, where the building has been designed as a finished composition with the fenestration of not only the front and sides but also the rear being carefully designed, any extension is going to prove disruptive and therefore unacceptable.



*Extending a building with a symmetrical facade almost always changes its form and appearance to an unacceptable degree. In this instance the inclusion of an integral garage adds an over-dominant and inappropriate feature to the composition.*

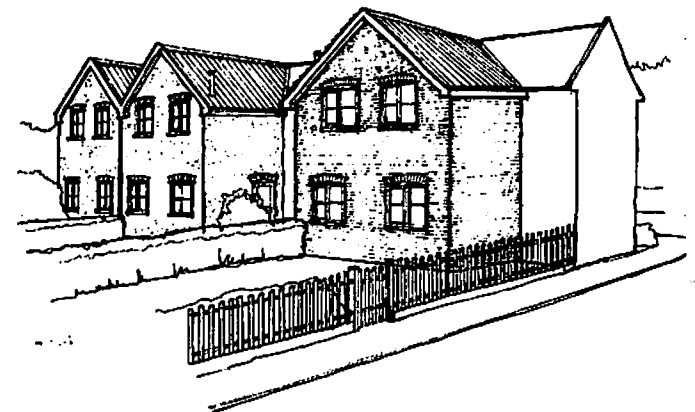
Many other buildings though, have a rear elevation or one side which is clearly of less importance than the front or other side. As a result there is likely to be more scope for extending. However, it will be necessary for the original building to remain visually dominant.

Side extensions to a building with a symmetrical front elevation can severely damage the architectural composition and in many cases even a small side extension, which is lower and well set back from the front wall, may still be too disruptive and unbalancing to prove acceptable.

### Terraces



*The two storey extensions shown below appear over dominant in relation to the modest scale of the original terrace (above). Whilst two storey extensions may have been acceptable, the ones which were built are actually wider than the terrace itself. A reduction in their width (perhaps with just a single room on each floor) would have produced a much more appropriate scale and form.*



## 4.4 EXTENDING DIFFERENT TYPES OF BUILDING

Throughout the District, both in urban and rural locations there exists numerous terraces of similar cottages and houses. Whether early terraces dating back to the 18th or even the 17th Century, or much later 19th Century Victorian Terraces, the character and appearance of such dwellings can be severely damaged by unsuitable front or rear extensions or additions to the flank wall of end of terrace properties. Alterations at roof level can also be very disruptive.

Extensions at the front of any house in a

terrace of similar properties should not be attempted. Sometimes it may appear to be possible to extend at the end of the terrace as there is enough room but in many cases it will be impossible to satisfactorily replicate the appearance and details of the existing terrace. If it is clear that a reasonable match will not be able to be achieved, or that the balance of the terrace will be disrupted by the addition of the extension, or that important details on the existing flank wall will be lost, then such proposals will be strongly resisted by the District Council.



*The inappropriate scale and form of this two storey rear extension means that it dominates the simple terrace of cottages.*

Although there may appear to be scope for extensions at the rear of many terraced properties, it may not always be possible to satisfactorily accommodate large two-storey projections, especially if each dwelling has a relatively narrow frontage.

Oversized rear extensions can disrupt the overall form of the terrace, especially if adjoining extensions are linked together or the scale of the extension is such that it competes visually with the terrace itself. In order to achieve a satisfactory form and scale of rear extension it may be necessary to restrict the width and the extent of the rear projection and to limit the height of the ridge and eaves. It may also be necessary to incorporate valley gutters between adjoining extensions in order to keep down the scale of the roof. The loss of gaps between adjoining extensions, leading to large new roofs being created and perhaps the incorporation of rooflights to light internal rooms will generally be resisted.

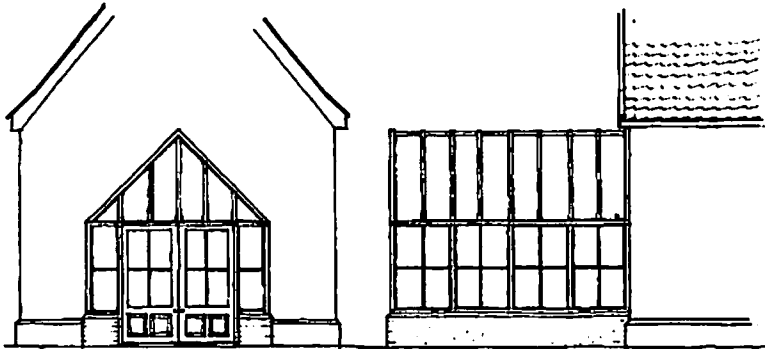
Converting two adjacent units of a terrace into one is sometimes possible although externally they will often still need to read as individual properties, involving the retention of the redundant front door. Internally, if the buildings are Listed, it may also be necessary to retain individual features such as party walls and both staircases.

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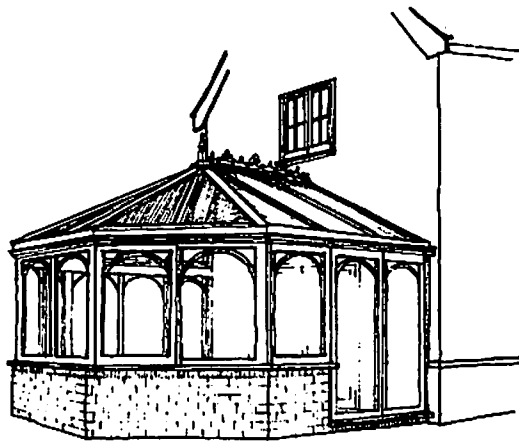
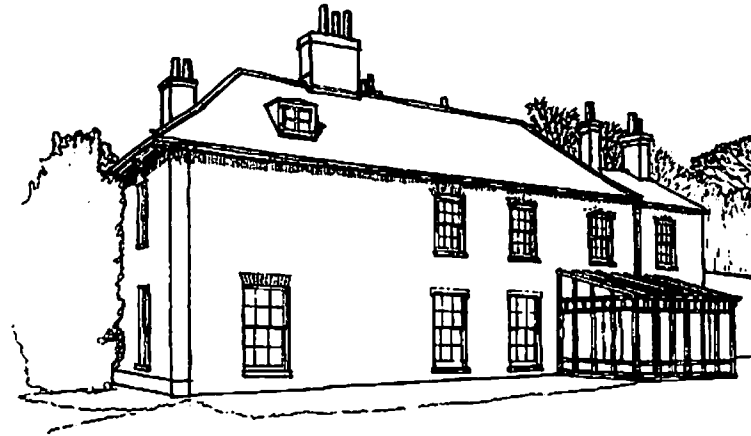
## SECTION 4 – MAJOR ALTERATIONS AND EXTENSIONS

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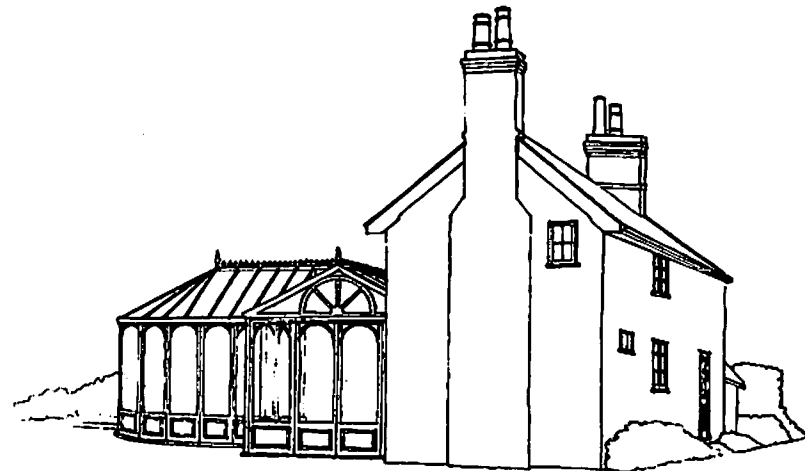
### *Conservatories*



*Simple rectangular white painted timber conservatories with gabled or lean-to roofs, like those shown above are likely to be the most appropriate type for most historic building.*



*Many standard 'period' conservatories are badly proportioned designs with flat, wide frames and glazing bars. Those with splayed ends and hipped roofs with translucent plastic sheeting are a particularly incongruous addition to any historic building.*



*This large, rather grandiose conservatory is an inappropriate extension which is out of scale and character with this small brick cottage.*

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## 4.5 CONSERVATORIES

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The addition of a conservatory to a house has become very popular, however, like any extension to an historic building great care should be taken over its location, form, design and use of materials.

Although there are many historic buildings which can satisfactorily accommodate a conservatory it is important that the style should be appropriate to the architectural and historic character of the building to which it is to be attached. There are many specialist conservatory manufacturers who supply a range of standard types and styles. However, many of these conservatories, including their "period" ranges, are poor designs based very loosely on historical styles and most are inappropriate for attaching to historic buildings. **Certainly they are unlikely to prove acceptable on Listed buildings.**

As a general rule, on most older buildings, a simple rectangular white painted timber conservatory with a lean-to or gabled pitched roof is likely to be the most appropriate. The form of the conservatory should be considered in the same light as adding a single-storey extension to the building in the traditional manner. Such extensions, often having a slightly shallower pitched roof than that of the main roof, were commonly located at the back or side of many vernacular and later buildings.

Problems do occur though, when the proposed conservatory is too large, the plan is too square, the form or roof of the conservatory is too complicated or it has to be adapted in some way to avoid first floor windows.

The detailed design of the conservatory is very important. A fair number of historic buildings, especially country houses, had conservatories (or Orangeries) attached to them. Typically, these were constructed out of white painted timber with thin wooden or metal glazing bars and small paned clear glass roofs, although there were also some rather grand structures which were built with other materials including brick, stone, plaster and metal.

The framework of supporting members for all these structures was invariably well proportioned and spaced closely together to give a pleasing vertical emphasis to the overall design. Transomes in the walls and doors were carefully positioned to retain this vertical emphasis. Where opening windows and fan lights were incorporated their proportions and the thickness of the frame of the opening lights were carefully designed so that they were relatively inconspicuous and did not disrupt the vertical rhythm of the supporting framework. Glazing bars in the roof were elegant and well proportioned.

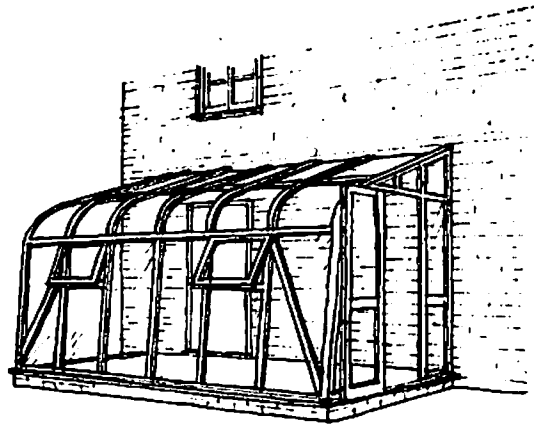
Most standard modern conservatories on the other hand are very different. Those made out of UPVC in particular do not replicate the pleasing details of traditional timber conservatories. Frames and glazing bars are flat and wide and are often spaced too far apart. The extra thickness added by the frame of the opening lights compounds the problem. Roofs are often made out of large sheets of translucent plastic sheeting with flat plastic coverstrips rather than thin, raised timber or metal glazing bars. Decorative features, such as plastic crested ridges, are sometimes incorporated but these invariably appear as an added on extra, their decorative effect contrasting starkly with the bland, utilitarian detailing of the rest of the structure.

Many standard conservatory designs incorporate splayed ends with hipped roofs. Although a feature sometimes found on original Victorian conservatories (which were very carefully designed and detailed in traditional materials), this form appears particularly incongruous on many of the Area's historic buildings and it should therefore be avoided.

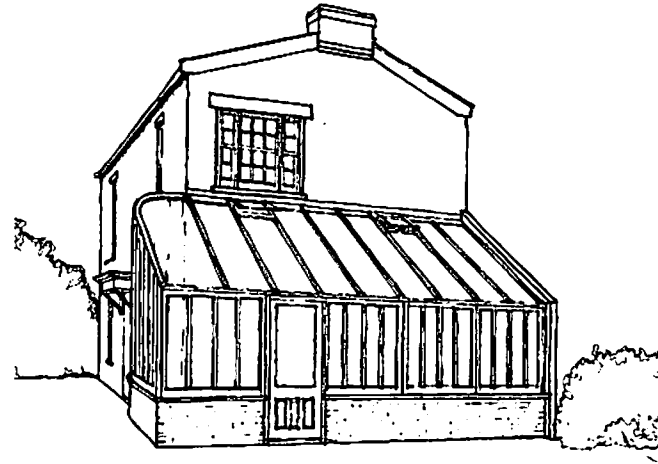
Standard conservatories made out of aluminium are also very often poor designs which would be inappropriate on historic buildings. Those which are constructed out of thin, spindly structural members are especially unfortunate

## SECTION 4 – MAJOR ALTERATIONS AND EXTENSIONS

### Conservatories



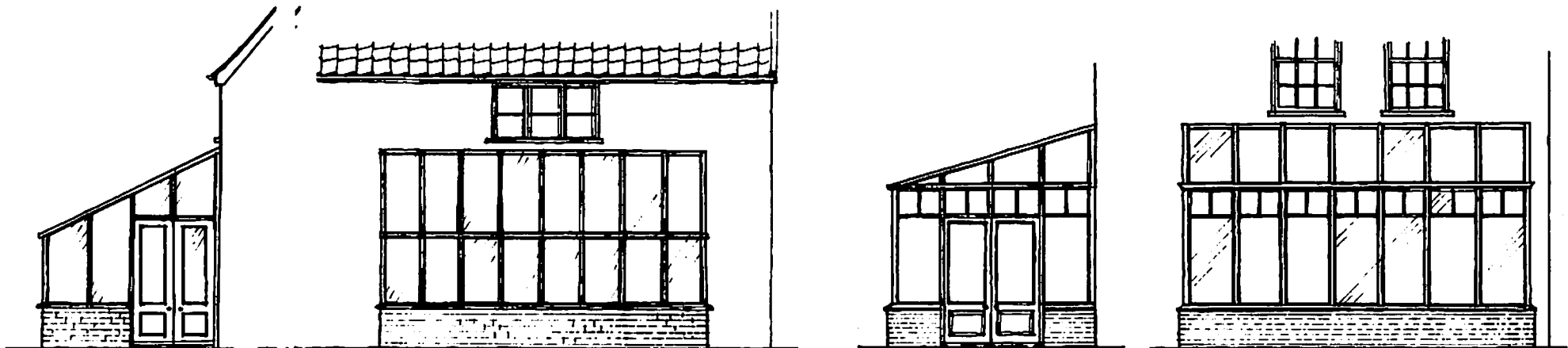
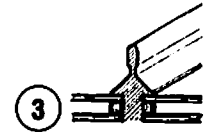
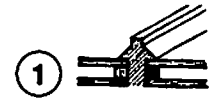
Modern conservatories, like the one shown above, are in most instances not an appropriate addition to an historic building.



Often, older conservatories incorporated attractive individual features like the curved end on the one shown above. Where appropriate, similar carefully designed traditional details could be incorporated into proposals for new conservatories on historic buildings.

Glazing bars on the roof of new conservatories on historic buildings should reflect the profile and character of traditional glazing bars –

① Timber and putty, ② moulded timber and ③ Metal. Flat wide cover strips in aluminium or plastic, ④ will not be acceptable in most instances.



Two examples of simple traditional lean-to conservatories. The one on the left with low eaves and steeper roof is likely to be more appropriate for Suffolk's vernacular buildings. The example shown right, with taller eaves, shallower roof and decorative glazing bars would relate better to the Area's Georgian and Victorian buildings.



## 4.5 CONSERVATORIES

as they have 'tacked on' insubstantial appearance. Although, surprisingly, there is an historical precedent for them, crude modern versions of conservatories with curved eaves should be avoided. Conservatories made out of unpainted hardwood and brown stained softwood are wholly inappropriate on any historic building.

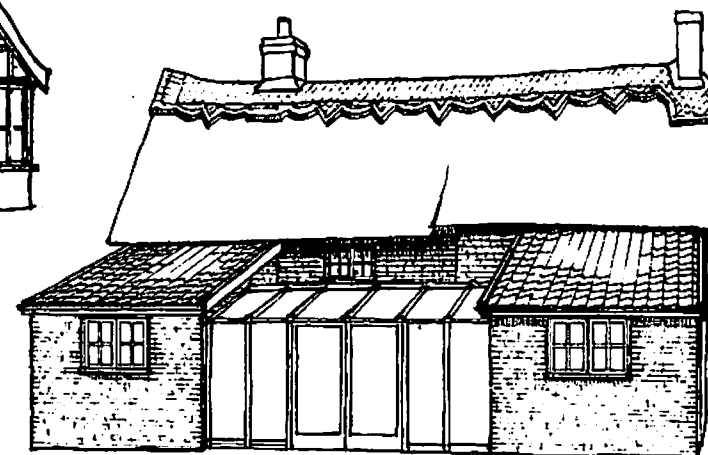
Many conservatories are built on dwarf brick walls. Normally this should match traditional brickwork in terms of colour, texture, bonding and pointing. Modern stretcher bond with weather struck joints in a grey cement mortar appears very different to old brickwork built out of flemish bond with flush lime mortar joints and invariably looks out of place.

As with any extension to an historic building, care should be taken not to lose any historic fabric. Where possible an existing doorway should be used to gain access to the conservatory and where an original or an historically important window falls within the conservatory it should be retained. Cutting through or the removal of timbers on a timber framed building (sole plates, studwork, braces etc.), should definitely be avoided, as should the loss of early brickwork, plaster, timber panelling and wattle and daub. **Such work on Listed buildings will require Listed Building Consent and will normally be resisted.**

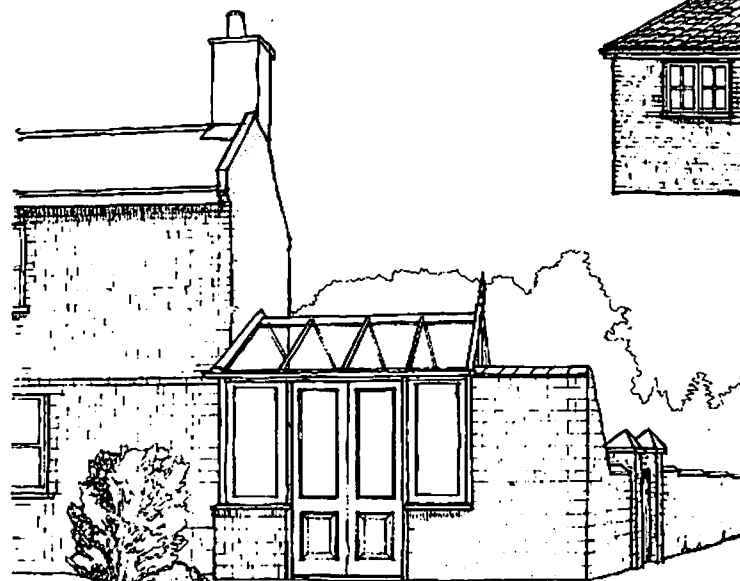


*Carefully designed, glazed extensions are far more appropriate on historic buildings than 'off the shelf' conservatories chosen from manufacturers standard ranges.*

*(Left) A traditional pantiled extension with glazing to the sides and the gable end.*



*(Above) A simple glazed link between two traditional lean-to extensions. The link replaced an inappropriate flat roofed extension.*



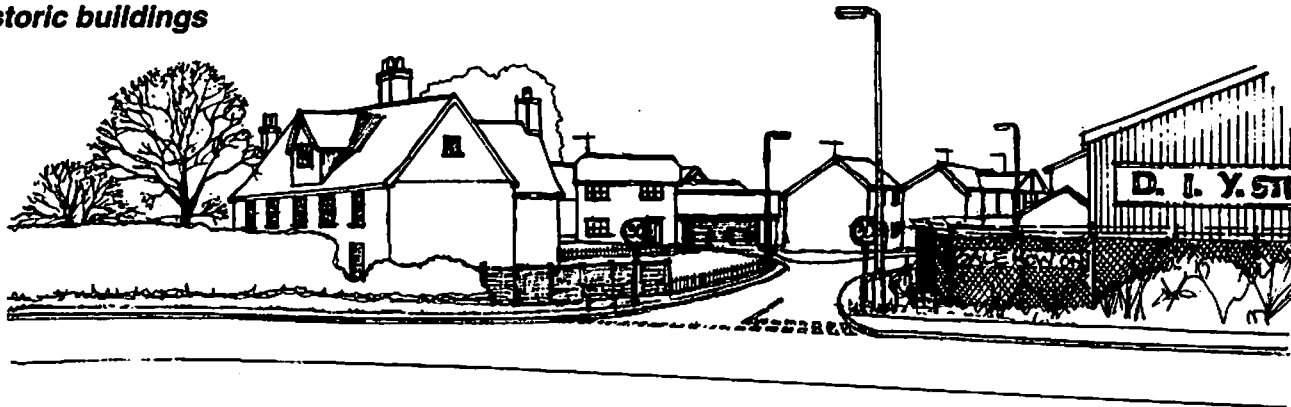
*(Left) This small garden room is attached to an old brick boundary wall.*

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## SECTION 4 – MAJOR ALTERATIONS AND EXTENSIONS

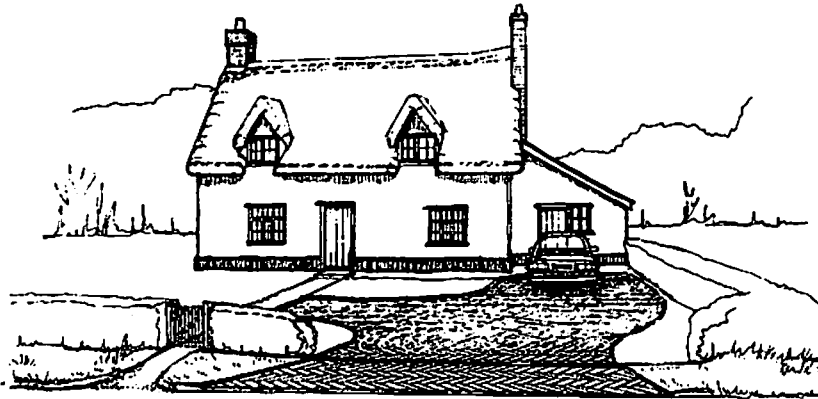
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### *The setting of historic buildings*

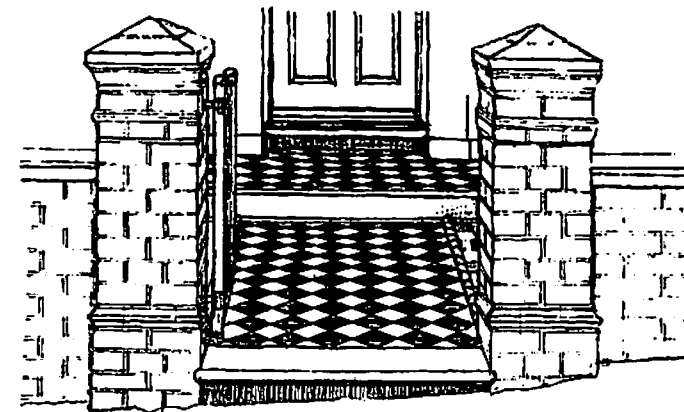


*The setting of any historic building makes an important contribution to its character and its architectural and historic importance. Poorly designed new development which fails to acknowledge the importance of the setting of an old building can therefore be extremely damaging.*

### *Paths and driveways*



*The creation of new driveways and hardstandings, together with alterations to existing ones, can have a major impact on the setting of an historic building. In most situations (as in the case above) the use of modern concrete block paving can be especially discordant.*



*Many older properties have attractive front paths and entrance details. Wherever possible these should be retained and repaired. The example above is a Victorian tiled path with clay edgings.*

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## 4.6 THE SETTING OF HISTORIC BUILDINGS

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### **Historic Buildings and their Surroundings**

The setting of an historic building contributes very much to its character. It is important to protect or to provide a setting which is appropriate to particular types of historic building taking into account their original and current use. A country house for example, would derive much of its character from grounds which were laid out to complement its design. A farmhouse has an appropriate setting if it is surrounded by open space and traditional outbuildings.

Unfortunately, the attractive appearance of many traditional buildings has been spoilt by new developments, such as new roads or housing estates, or new buildings with a non-traditional form being constructed alongside them.

The Council will resist development proposals which are out of scale and character with their surroundings and will attempt to ensure that the appearance and treatment of spaces between and around historic buildings is appropriate. Indeed, with Listed buildings, Local Planning Authorities have a statutory duty, when considering applications for developments which affect the setting of a Listed building, to have special regard to the desirability of preserving the setting of the building. (Sections 16 and 66 of the Planning [Listed Building and Conservation Areas] Act 1990).

### **Paths and Driveways**

Driveways and parking areas can also ruin the setting of an historic building if they become over dominant or are surfaced with an inappropriate finish. Historically, hard surfacing was selected according to the function of the space and the availability of materials. In the more important and heavily used areas stone flags and kerbs were imported to provide a smooth hard wearing surface for pedestrians, setts were laid to accommodate vehicular traffic, brick was used for informal paved areas in gardens and gravel was laid in areas with limited pedestrian or vehicular traffic. Where important old materials exist they should be retained or relayed because they are not only attractive but are also of historic significance.

There are many historic properties which are designed or situated in such a way that the construction of driveways and hardstandings are not possible without adversely affecting their setting. With many small houses, terraced and semi-detached properties, for example, the setting of the house and the character and appearance of the whole street could be severely damaged if the area in front of them was to be converted into car parking spaces. Similarly, the side and rear can also be adversely affected by gardens being transformed into parking areas. The Council will therefore resist such developments, particularly

where they would also have an impact upon the amenities of the adjoining occupiers.

Generally, where new driveways and hard standings are to be provided next to an historic building, a gravel finish (if necessary, a rolled bound-gravel on a proper sub-base) is likely to prove the most appropriate. In some locations a simple tarmac driveway without kerbs will be acceptable.

Concrete and clay block pavements for driveways, roads and footpaths are becoming increasingly popular, however, most designs are particularly inappropriate for traditional locations and when used alongside historic buildings they can appear especially discordant.

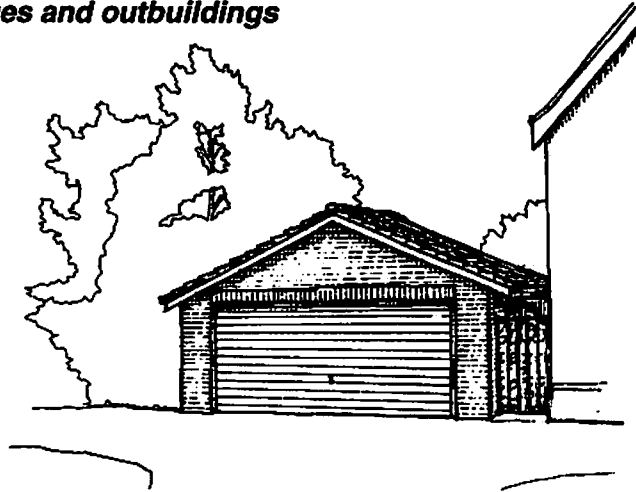
Many historic buildings, especially Georgian, Victorian and Edwardian properties were designed with very attractive frontages which incorporated decorative steps, railings and footpaths. Where these exist every effort should be made to retain or reinstate them. Particularly at risk in some areas are the attractive Victorian tiled front paths with their decorative edging.

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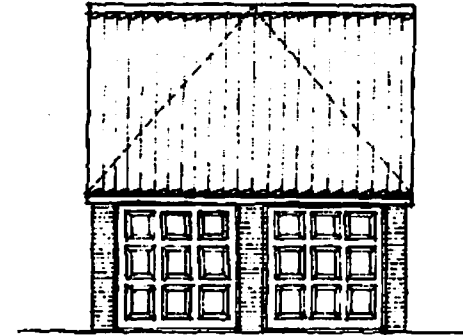
## SECTION 4 – MAJOR ALTERATIONS AND EXTENSIONS

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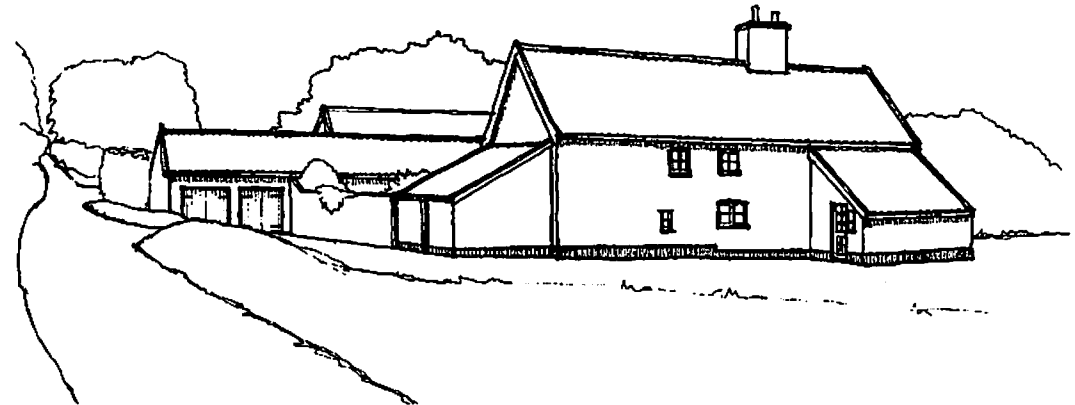
### *Garages and outbuildings*



*Large, poorly designed, modern garages are detrimental to the setting of any historic building. (Above) Those with a non-traditional form, wide openings and up and over doors with straight brick soldier courses over, are particularly discordant.*



*Even with a steeply pitched (or pyramid) roof and separate doors the design can still be inappropriate.*



*The provision of new garages and outbuildings alongside historic building need not be detrimental. There are numerous locations throughout the District where traditional outbuildings make an attractive contribution to the setting of an old building. Many of these are now used as garages.*

## 4.6 THE SETTING OF HISTORIC BUILDINGS

### Garages and Outbuildings

Too often in the past the setting of an old house has been severely compromised by the provision of large new detached garages and other ancillary buildings being built too close. Even when appropriately sited, structures which are poorly designed or those which are constructed out of unsympathetic materials can still be extremely detrimental.

The provision of garages and outbuildings alongside historic buildings however, need not necessarily be detrimental. There are many precedents throughout the District, in both rural and urban situations, where out-buildings of a traditional form, built with traditional materials, combine with the main buildings on the site to create very interesting and attractive compositions.

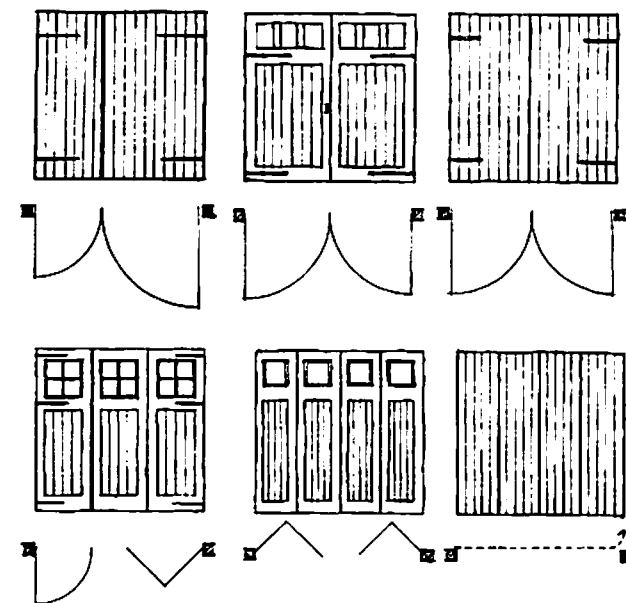
Due to their size and scale and the fact that they can be designed to appear as a simple extension or as a traditional out-building, single garages are far less of a problem than double garages. Double garages are difficult not only because of their size but also because they have a plan form which is usually close to a square. Placing a pitched roof over such a shape produces a structure with a truncated appearance which is made worse when it is combined with a wide opening and an up and over door. Often the width of a double garage is greater than that of a traditional outbuilding. In

many cases the span of a new double garage can also be as great, if not greater, than that of the house itself.

Sometimes hips rather than gables are used to reduce the bulk of the structure but this produces a pyramid roof. In some instances, for example alongside Victorian and Edwardian properties, this can sometimes form an attractive focal point, especially if the roof is finished with a decorative finial. However, in most situations, a pyramid roof will be inappropriate because as well as being a non-traditional roof form, it will also draw attention to itself and will compete visually with the other buildings on and around the site.

As long as the building does not become overdominant, it is often preferable to actually enlarge the structure of a double garage (perhaps by incorporating storage or a workshop area) which would then produce a building of more satisfactory proportions, reflecting the form and character of a traditional ancillary building or workshop. This effect can be further emphasised by using traditional materials and details. In most cases render should be avoided on new garages and outbuildings that are built alongside historic buildings. Traditionally, outbuildings were constructed with roofs of clay tiles or slates, walls of red or white brick or black boarding with a red brick plinth.

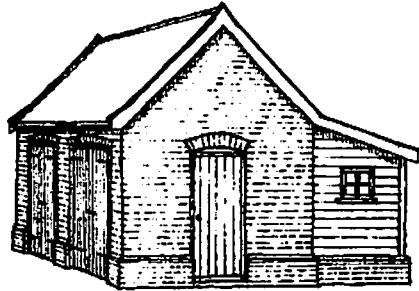
Inappropriate garage doors can be especially discordant. In almost every instance a pair of simple, wooden, vertically boarded garage doors, hung off traditional strap hinges, are going to be the best choice, although horizontal sliding or folding doors are also quite often sympathetic. Up and over plastic or metal garage doors, panelled and other similarly over decorative styles, should all be avoided.



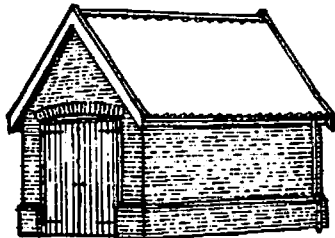
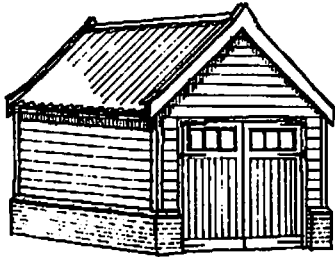
*Examples of doors that would be appropriate for traditional style garages and outbuildings.*

## SECTION 4 – MAJOR ALTERATIONS AND EXTENSIONS

### Garages and outbuildings



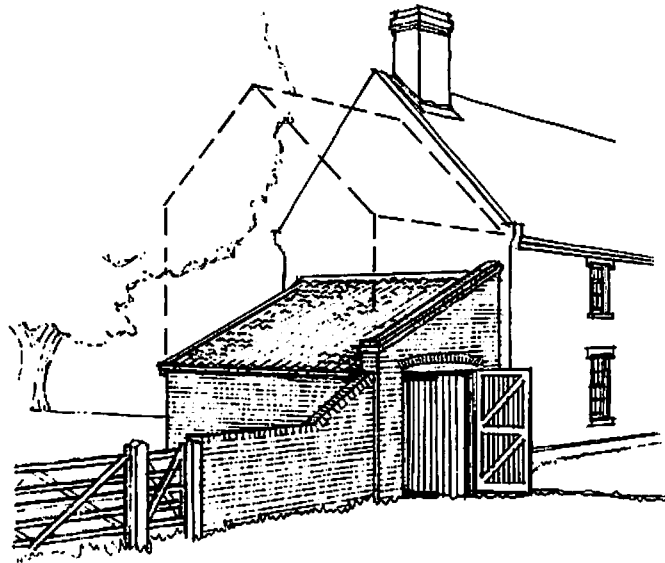
*(Above) A double garage incorporating a lean-to roof. A design like this can help reduce the scale of the building and create a more traditional form.*



*(Left) Simple, traditional designs for single garages. Brick, weatherboarding, slate and pantiles are the traditional materials used on the smaller outbuildings. Render and plain tiles are not so common.*



*(Above) These old, traditional, weatherboarded and pantiled outbuildings contribute to the setting of this attractive thatched cottage.*



*(Left) This lean-to garage reads as a continuation of an old brick boundary wall. Its traditional detailing and materials make it an appropriate feature in this location. A non-traditional two storey extension incorporating an integral garage in the form shown dotted, however, would not normally be acceptable.*

*(Right) Traditional outbuildings often had small storage areas at first floor level.*

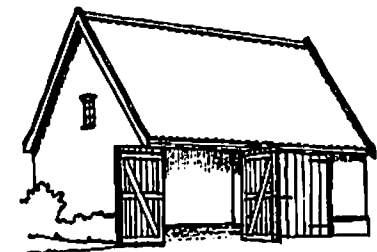
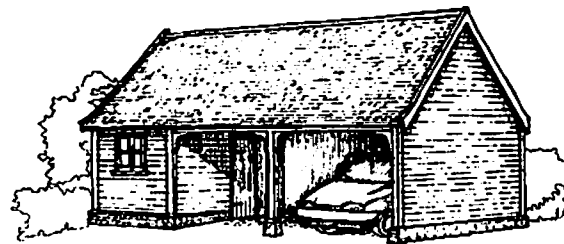
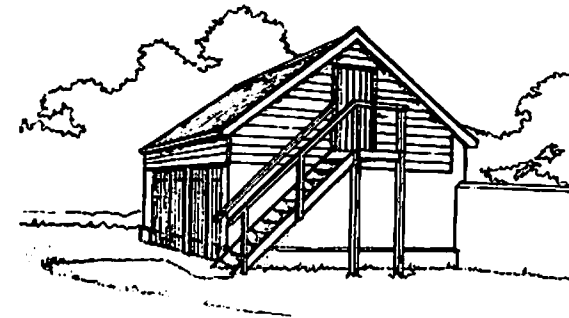
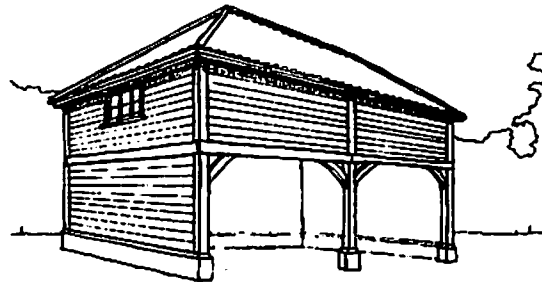
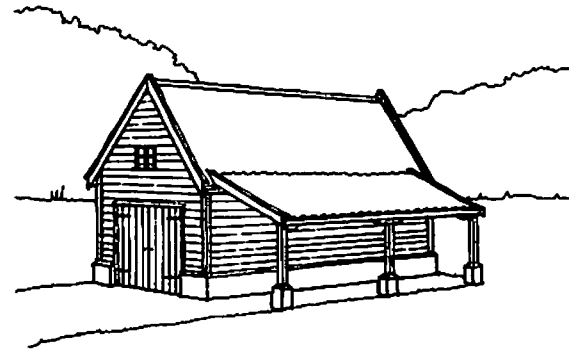
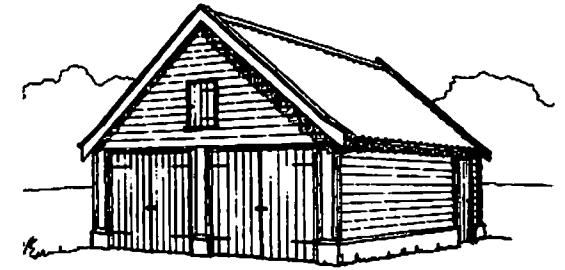
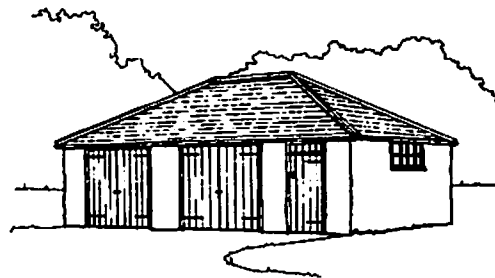


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## 4.6 THE SETTING OF HISTORIC BUILDINGS

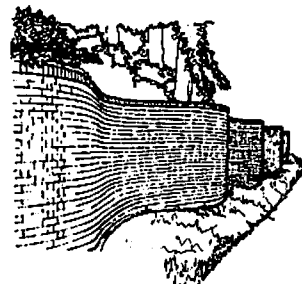
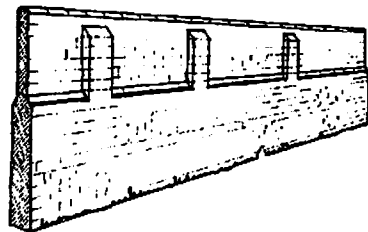
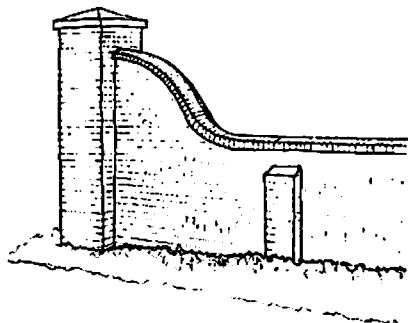
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*Many of the larger houses in the District and farm groups have traditional outbuildings which are now used as garages, stores and workshops. Some examples are shown below.*

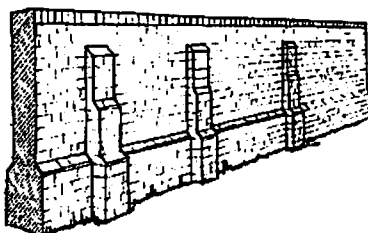
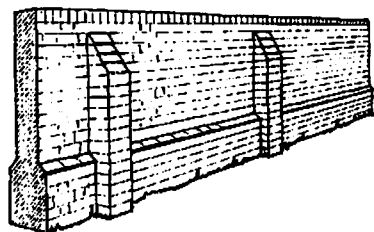


## SECTION 4 – MAJOR ALTERATIONS AND EXTENSIONS

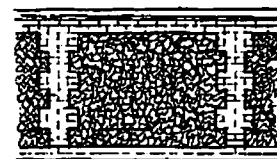
### Walls



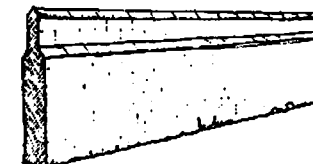
A random wall of brick and flint with a clay semi-circular coping.



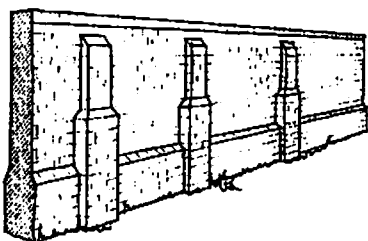
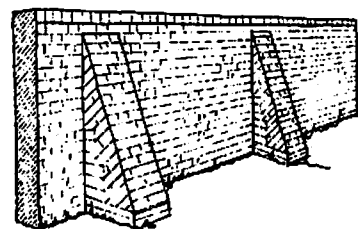
'Crinkle-Crankle' or serpentine wall.



A flint wall with brick dressings.



A simple traditional brick wall with cant bricks and a clay ridged coping.

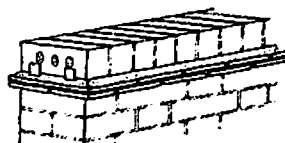


Stepping a wall down a slope has a jagged appearance and should be avoided.

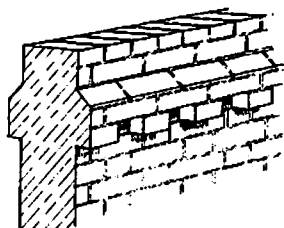
(Above) Traditionally, piers in walls were constructed as buttresses unless they were designed as a focal point or marked an entrance.



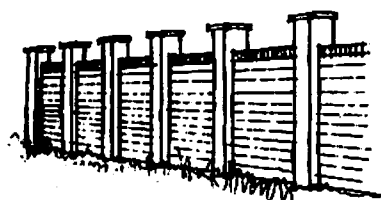
In the past walls were often built to follow the slope of the ground.



The use of a tile creasing is not a traditional feature (nor are the metal angles and the exposed bedding holes!).



Traditional brick corbelling at the top of a wall.



There are too many brick piers projecting above the top of this wall.



## 4.6 THE SETTING OF HISTORIC BUILDINGS

Where old brick or flint walls exist adjacent to or around an historic building every effort should be made to retain them. Not only do they contribute to the setting but they are usually of historic significance themselves.

The majority of the old walls which survive in the Area were constructed from the local soft red brick and many are quite substantial structures. Random walls made up of random coursing of brick and flint are also common, as are flint walls with brick dressings. A number of 'Crinkle Crankle' or 'Serpentine' walls, which comprise a series of curves on plan to provide stability, were also constructed. The surviving gault or white brick walls mostly date from the late 18th and the 19th Century.

As well as the type of materials used, the detailing, colour, texture, bonding and pointing are all important considerations when designing new walls or repairing existing ones which are located alongside historic buildings.

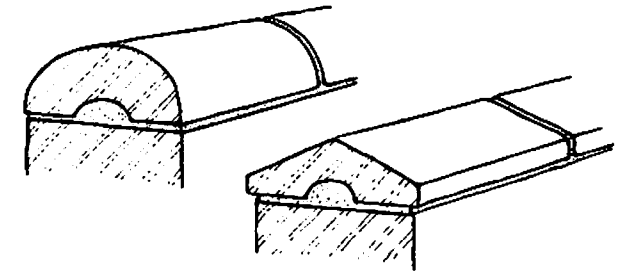
New walls should be kept relatively simple, the arbitrary use of curved brickwork, projecting piers and other overtly modern features should all be avoided. Traditional construction techniques should be employed and plinths, cant bricks, corbelling and buttresses will all add interest if used in a restrained manner. Various traditional brick bonds are appropriate

(stretcher bond will invariably look wrong in many cases) and because of its colour and weathering properties pointing should ideally be in lime mortar. Joints should be relatively thin and finished flush.

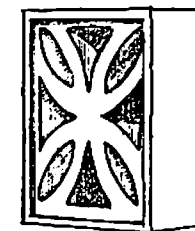
How the top of any wall is finished is particularly important. Traditionally, walls were capped with a simple brick on edge detail or with specially formed semi circular or ridged clay brick copings. A concrete coping to a flint or a brick wall, due to its colour, texture and weathering properties can be inappropriate while a tile creasing was not traditionally used in the Area and can appear fussy. The use of engineering bricks, including cant and bull nosed bricks, due to their shape, colour and texture are unsympathetic. Bricks used as copings laid in such a way that bedding holes are on an exposed face look particularly untidy.

Traditionally, piers in walls were constructed as buttresses and did not project above the top unless they formed focal points or marked an entrance. In both instances they were designed as substantial structures. Similarly, most walls which were built on sloping sites did not step down at the top at closely spaced intervals because they appeared jagged and incomplete. They often remained level, with the height increasing as the ground sloped and stepped down by incorporating substantial piers which

were spaced well apart. Sometimes they were designed with a graceful curve every so often, but in most instances they were actually built on the slope.

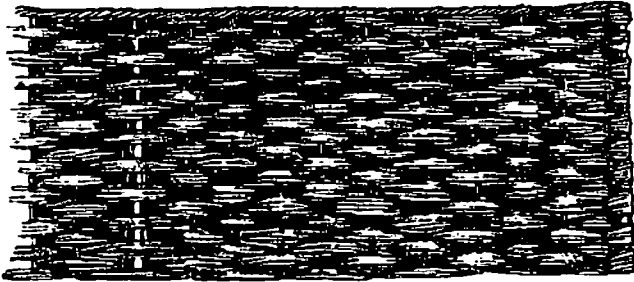


*Half round and ridged (saddleback) clay copings (above) are important traditional features on old walls and should be retained. Where damaged or lost it is possible to have new ones made to match. The character and appearance of concrete copings are very different and their use should be avoided in traditional locations. Concrete screen blocks, such as the one shown below, are wholly inappropriate.*

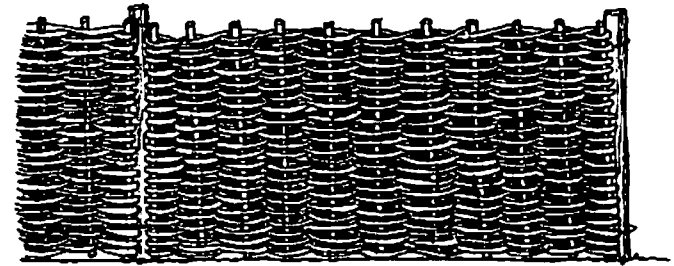


## SECTION 4 – MAJOR ALTERATIONS AND EXTENSIONS

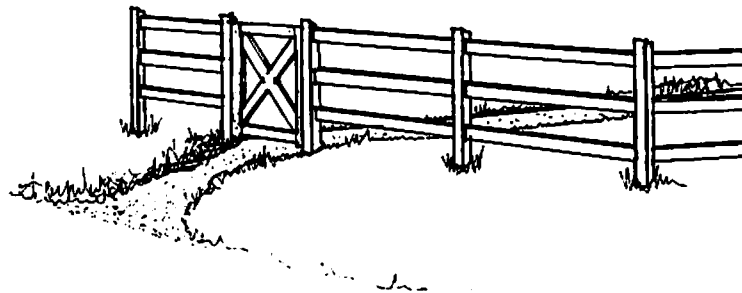
### Fences



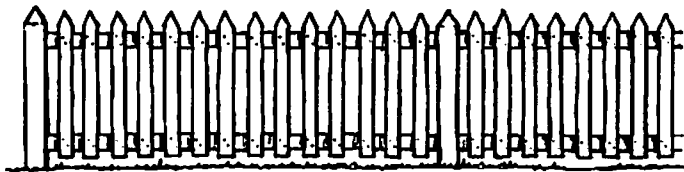
*Continuous osier (willow) fencing built in situ can form a very attractive visual screen.*



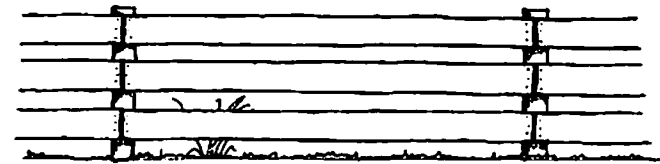
*Split woven hazel hurdles attached to posts also forms an attractive fence, albeit more 'rustic' in appropriate that osier.*



*A timber post and rail fence (painting this type of fence should be avoided).*



*Simple white painted timber palisade fencing.*



*Painted ranch style fencing can be a particularly discordant feature alongside traditional buildings.*

## 4.6 THE SETTING OF HISTORIC BUILDINGS

### Fences

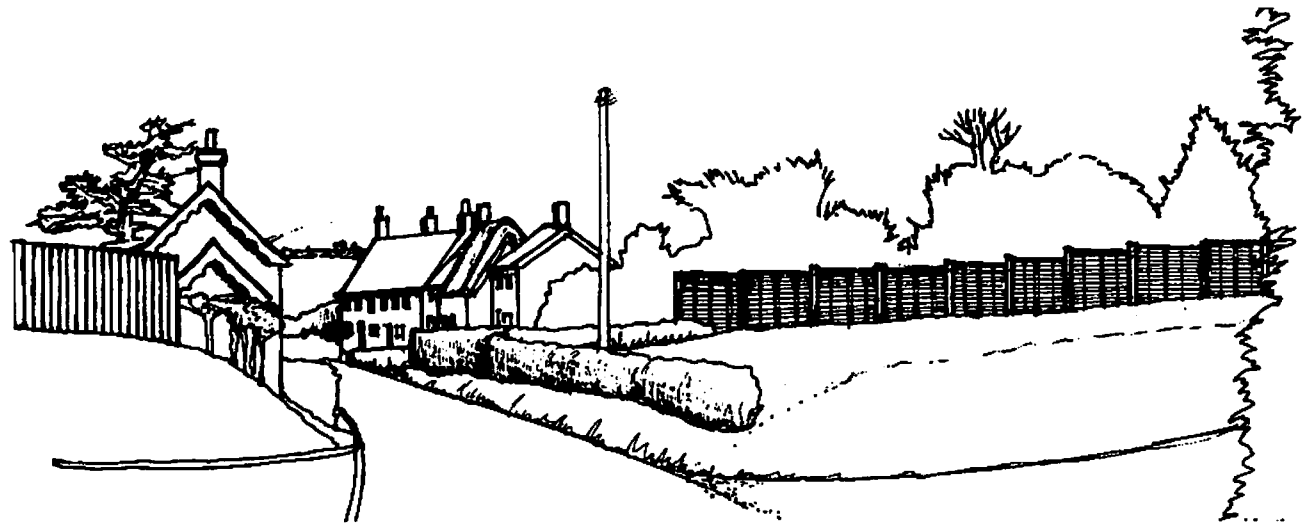
Although they provide a relatively cheap means of achieving the desired privacy, most of the types of fences which are now common are wholly unsuitable for use alongside historic buildings.

Traditionally, in the more urban situations, walls were constructed to provide privacy and to divide one property from another. In villages and more rural areas hedges were the norm. Fences tended to be restricted to the use of simple timber palisade structures around front gardens and post and rails in rural areas where they defined boundaries or were used to restrict the movement of animals.

If a fence has to be used, timber palisade (or picket) fencing is likely to be the most appropriate. Although not a complete visual or security barrier, it does mark a boundary and deter encroachment in a very pleasing manner. Traditionally, palisade fences were often given a white painted finish. Painted ranch style fences in contrast, are non-traditional and should be avoided.

The use of woven wattle fences may also be appropriate, especially in villages and the countryside as they have a rural character and are much less obtrusive than solid timber structures such as a close boarded fence.

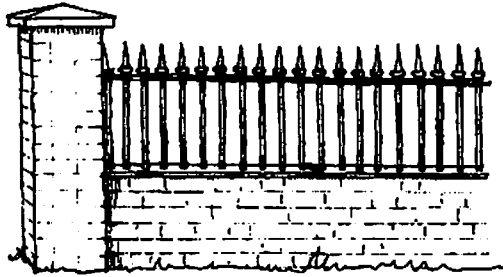
Continuous osier (willow) fencing built insitu, in particular, is very attractive, although woven hazel hurdles are still likely to be more appropriate in most situations than a close boarded or panel fence. Indeed, close boarded and panel fences, because of their modern character and appearance, are in the vast majority of cases, wholly inappropriate in traditional locations and alongside historic buildings.



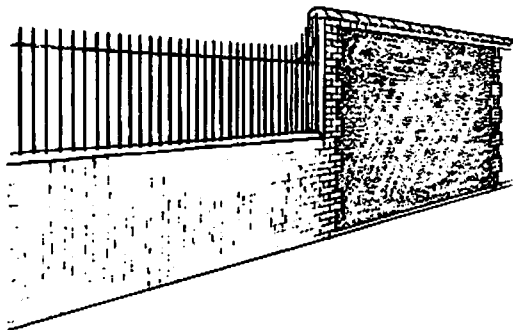
*Closeboarded and panel fences, because of their modern character and appearance, are inappropriate for use in traditional locations and alongside historic buildings.*

## SECTION 4 – MAJOR ALTERATIONS AND EXTENSIONS

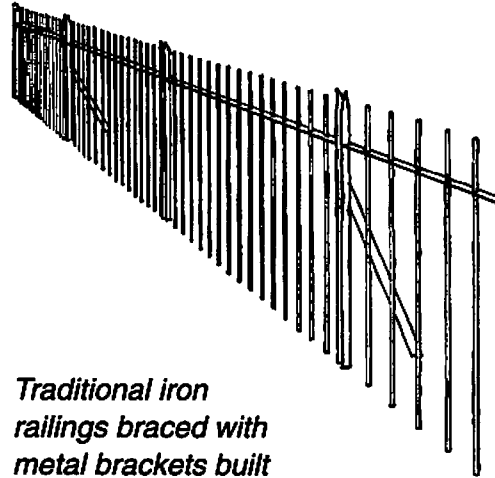
### Railings



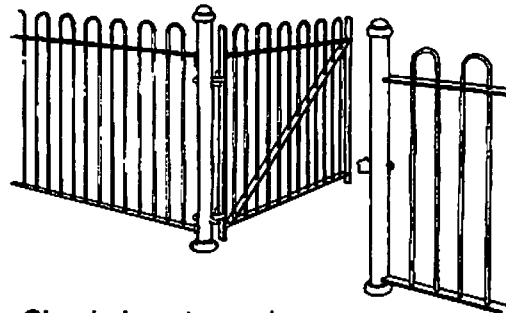
*Ornamental railings used in conjunction with a brick plinth and piers. Traditionally, the piers were spaced well apart and the railings were often fixed to a metal plate which covered the top of the brick wall.*



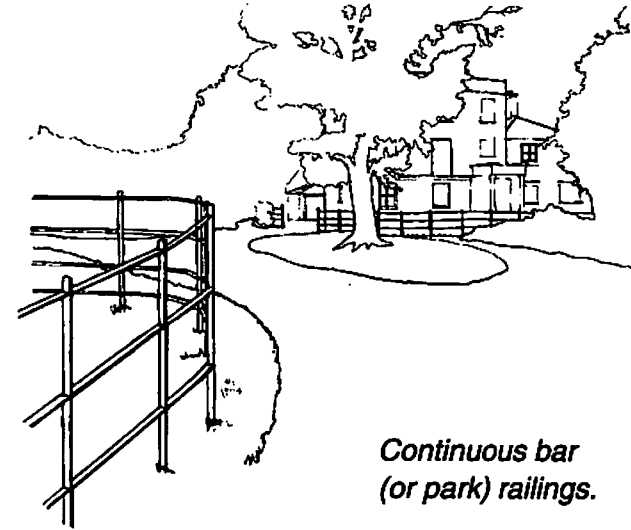
*An attractive combination of simple metal railings and brick and flint walls. (Note each vertical bar is fixed directly into the coping of the wall).*



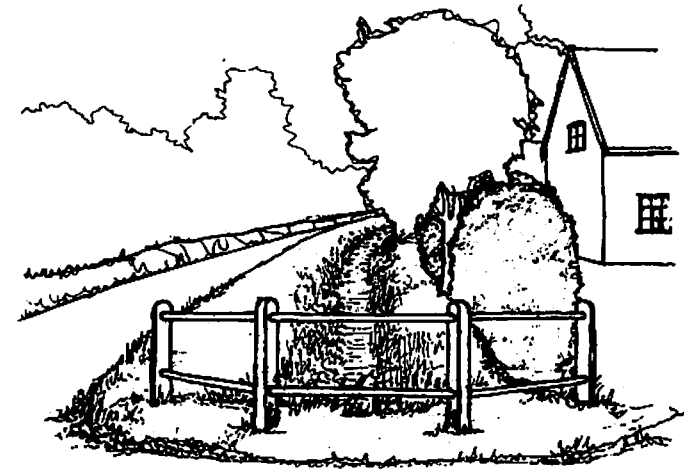
*Traditional iron railings braced with metal brackets built into the ground.*



*Simple bow topped railings.*



*Continuous bar (or park) railings.*



*White painted tubular metal rails supported on concrete posts have become a traditional feature in the Area.*

## 4.6 THE SETTING OF HISTORIC BUILDINGS

### Metal Railings

In the past various forms of metal railings were used to enhance the streetscape in both urban and rural locations. Houses, churchyards, formal parks and other sites in towns and villages, before the war, were enclosed with metal railings often used in conjunction with brick. Where these have survived every effort should be made to repair and properly maintain them.

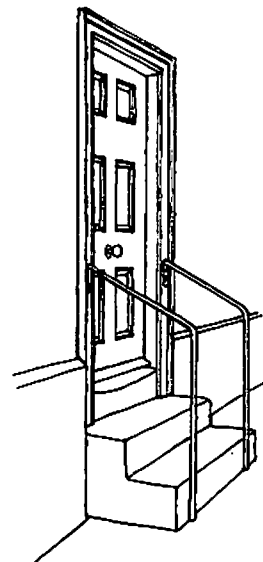
When considering erecting new railings close to or around historic buildings care should be taken to ensure that the right sort is used in particular locations. Sometimes over decorative designs will need to be avoided, whereas in other situations certain types of railing can appear too utilitarian.

When using a combination of railings with brick plinths and piers, unless it is desirable to match existing old railings, designs should be kept relatively simple in order to avoid them appearing over elaborate or too fussy. Furthermore, brick piers should be constructed as substantial structures and be well spaced apart. Where the railings require bracing the use of metal brackets built into the ground is preferable to having too many weak looking brick piers.

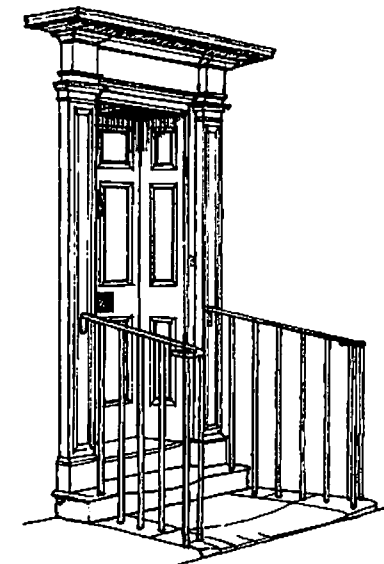
Traditionally, in many cases, railings were designed so that each vertical bar was fixed

into the stone or brick base. Alternatively they were connected to a decorative metal plate which formed a capping to the top of the wall. Where possible these details should be copied for new railings as the addition of a lower horizontal rail is very likely to undermine the appearance of the design.

In villages and the more rural locations, railings made of simple continuous bar, or tubular rails supported by concrete posts can be very effective. The former is traditionally found around large country houses and parkland, whilst the latter (painted white) was erected as a guard rail on a bridge, along a stream or as a simple handrail alongside steps.



*Traditional metal handrails.*

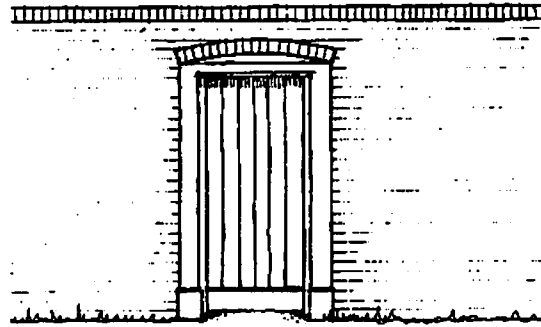
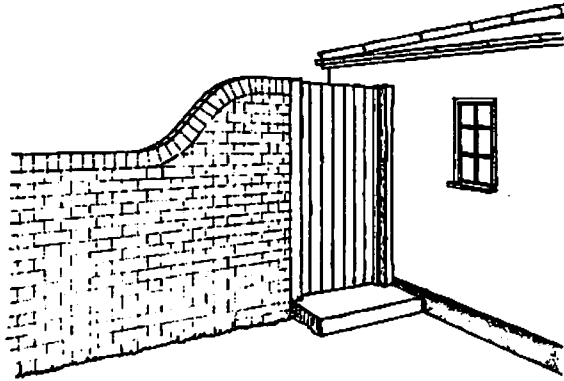


A timber post and chain barrier has been used in the past in a number of locations to give emphasis to an important building or structure. However, their widespread use should be avoided.

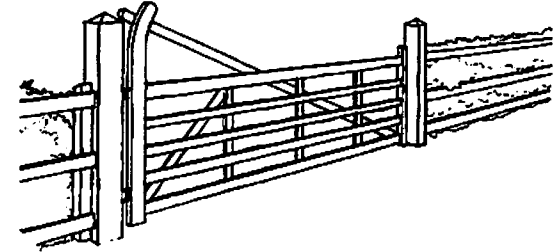
Commonly, in the past, plain black painted metal railings with a flat handrail and circular balusters were used at the entrance to an old building. The handrail was finished off with an elegant curve and each individual baluster was fixed directly into the steps. Alternatively, a simple local vernacular detail was to span a flat metal handrail between the bottom step and the door case, (see illustrations below).

## SECTION 4 – MAJOR ALTERATIONS AND EXTENSIONS

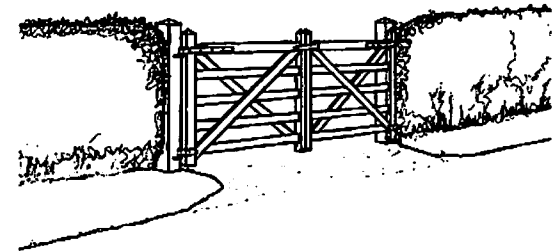
### Gates



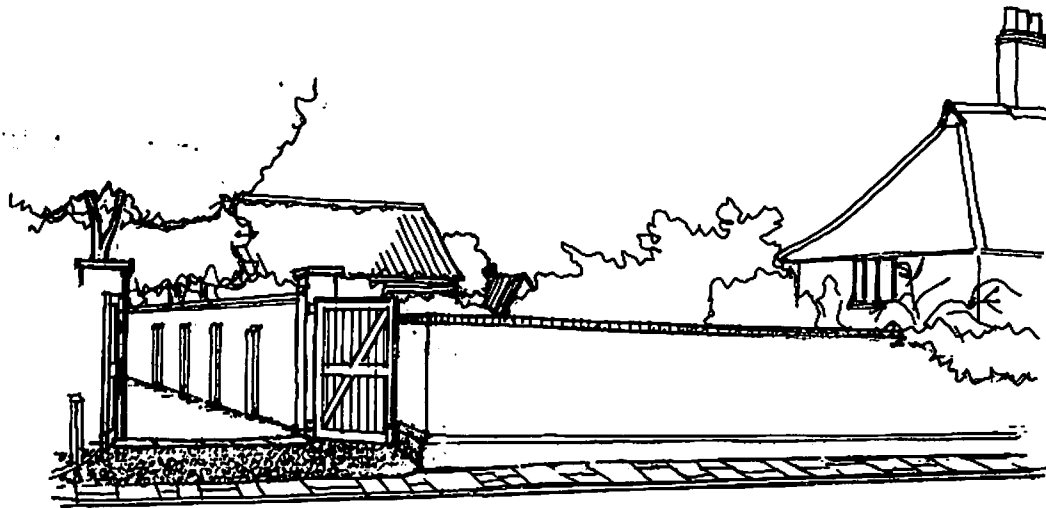
*(Above) Two examples of a simple vertically boarded gate in a brick wall.*



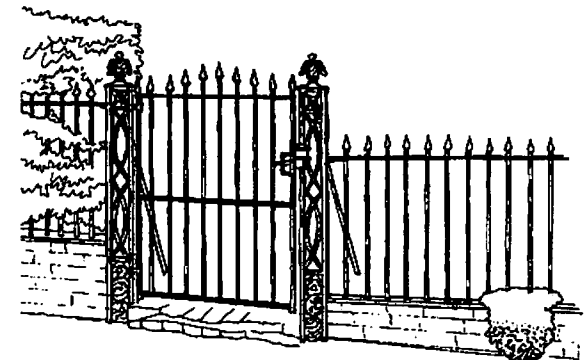
*A five bar gate (there are a number of traditional variations of this).*



*A pair of cross braced timber gates.*



*Timber ledged and braced gates are traditionally used for providing a vehicular access through a wall.*



*Simple Victorian metal gates with decorative metal supports.*

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## 4.6 THE SETTINGS OF HISTORIC BUILDINGS

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### Gates

Traditionally, before the 19th Century, most gates, whether in walls, hedges, railings or fences, were plain and practical.

The more expensive decorative gates tended to mark the entrance to the larger or more important buildings. As a result they were quite substantial objects constructed out of heavy wood or metal.

Today, there are many decorative metal gates on the market, however, the vast majority of these are very lightweight and often appear insubstantial. As with railings, therefore, over-decorative metal gates are best avoided unless they are appropriately designed for their context and the buildings they serve. The more simple designs are almost always more successful.

Where double or single timber gates are located within high brick walls they would normally be constructed with plain, flush, vertically boarded timber, ledged and braced, with a painted finish.

Simple wooden palisade, boarded or framed gates, as well as variations of the traditional 'five-bar' gate, are all rural in character and are particularly suited to village locations.

The design of gate supports is just as important visually, as the gates themselves. If decorative

metal gates are used then the design of the gate posts should be complementary. In fact, as a general rule, it is actually better to combine decorative posts with relatively plain gates, rather than the other way round.

Masonry piers which flank tall or wide gates should appear as large, solid structures. A brick pier which is brick and a half square (225mm), for example, will almost always look too thin and weak.



*The attractive gate lodge and entrance to Sibton Park.*

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## APPENDIX 1 – LOCAL PLAN POLICIES

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### **POLICY LP1**

#### **Conservation Areas – Control of Development and Enhancement**

To protect the character of the Conservation Areas, as shown on the Proposals Map, and to ensure that new buildings, alterations or other development preserve or enhance them, the District Council will, in the control of development within, or affecting, each Conservation Area, pay special attention to the following matters:

- (i) the building materials used, to ensure that they are consistent with the general character of the respective area;
- (ii) the form, scale, design and detailing of new buildings, and of alterations to existing buildings, to ensure that they are in harmony with, and relate satisfactorily to, their surroundings;
- (iii) other development, including street furniture, road, footpath and other surfaces, lighting and advertisement displays, should be in keeping with the respective Conservation Area; wherever practicable, electricity, telephone and other cable systems should be placed underground, or in suitably concealed locations;

(iv) natural features, including trees, should be preserved wherever possible; schemes of landscaping and tree planting will normally be required;

(v) Supplementary Planning Guidance.

The District Council will normally seek the submission of detailed plans and drawings of proposed development instead of granting planning permission in outline form.

As resources permit, the District Council will support and formulate proposals for the enhancement of Conservation Areas.

### **POLICY LP5**

#### **Listed Building Consent**

The District Council will only grant listed building consent to, and/or planning permission for, alterations or extensions to, and/or change of use of, buildings listed as being of special architectural or historic interest where it can satisfactorily be demonstrated that they will not prejudice the special character of the building and its setting. Extensions to Listed Buildings should ensure that, visually, the Listed Building remains the dominant feature on the site.

Only in exceptional circumstances will demolition be permitted, and, in considering all proposals, it will need to be demonstrated to the satisfaction of the District Council that all attempts have been made to preserve the building, continue the present use, or find an alternative, suitable use for it.

### **POLICY LP6**

#### **Preservation of Listed Buildings**

The District Council will seek to ensure that Listed Buildings are not deliberately permitted to deteriorate, and will consider taking whatever action is deemed necessary to secure their continued preservation. In order to assist this process the District Council will, as resources permit, seek to prepare a Register of Listed Buildings at Risk.

### **POLICY LP19**

#### **Design**

Proposals which comprise poor design and layout or otherwise seriously detract from the character of their surroundings will not be permitted. In considering the design aspects of planning applications the District Council will have regard to Supplementary Planning Guidance which has been prepared and adopted and will generally resist proposals which do not conform to that Guidance.



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**POLICY LP21**

**Design in Areas of High Landscape Value**

In the Area of Outstanding Natural Beauty and Special Landscape Areas the form of buildings, choice of materials, and colours must be sympathetic to the general character of the area and seek to reduce visual impact. For any new development, including extensions and alterations, which does take place in prominent locations in the AONB, the District Council will expect the use of traditional materials for the entire structure.

**POLICY LP32**

**Replacement and Extension of Dwellings in the Countryside**

Proposals for the replacement or extension of existing dwellings in the Countryside will generally be acceptable, provided the existing property is an authorised residential unit which has not been abandoned, does not result in an increase in the number of dwelling units, does not result in or exacerbate a serious traffic hazard and involves only a modest change in the size of the original building. In assessing proposals, the District Council will have regard to:

- (i) the landscape setting of the house and its grounds;
- (ii) the relationship between the dwelling and its plot;
- (iii) the effect on residential amenity;
- (iv) in the case of extensions, the need to retain a supply of small dwellings in rural areas;
- (v) in the case of extensions, the effect on the character and appearance of the original building;
- (vi) in the case of replacements, the character and quality of the existing building and its contribution to the landscape in comparison with its replacement.

Where proposals involve more than a modest change, they will be treated as proposals for new dwellings and, therefore, will not normally be permitted.

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## APPENDIX 2 – LISTED BUILDINGS

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### **What is a Listed building?**

A Listed building is defined as one which is of special architectural or historic interest, which has been included in a 'List' compiled by the Government as required by Act of Parliament. The term "building" as used in the Town and Country Planning Acts covers a wide range of man-made structures and can include things such as bridges, walls, gates, telephone boxes, village pumps, and many others.

Once buildings are added to the List they are placed in one of three grades. Grade 1 (1.4% of the total) and Grade II\* (4.1% of the total) are for the most important buildings, nationally. The majority (94.5%) are Listed Grade II.

### **What is the purpose of Listing?**

Buildings are Listed in order to identify and protect the Country's architectural heritage. Measures to protect ancient monuments and historic buildings originated over a century ago, but it was not until after severe losses both from war damage and postwar development that the present system of Listed building control was introduced in the 1968 Town and County Planning Act. The current legislation, the Planning (Listed Building and Conservation Areas) Act 1990, is designed to ensure that historic buildings are properly protected from neglect, inappropriate alterations and extensions and that any demolition is allowed only after very careful consideration.

### **How are buildings Listed?**

Buildings are Listed on behalf of the Government by the Department of National Heritage, with advice from English Heritage. The List is compiled mainly by a systematic survey and review, although buildings can be added individually by a Government decision to 'Spot List' them. Anyone can apply to have a building 'Spot Listed' although it is important that requests draw attention to any new evidence which was not available previously to explain why the building's special interest may have been overlooked. There is no statutory right of appeal against a building being Listed but representations can be made to the Department of National Heritage if it is felt that a building is not of sufficient architectural or historic interest.

Where an unlisted building is under threat and it is discovered to be of quality it is open to Local Authorities to serve a 'Building Preservation Notice' which has the immediate effect of temporarily 'Listing' that building. However, an Authority may be liable to pay an owner or developer compensation if the Government decide not to permanently List the building.

The current statutory 'List' is available for inspection at the Woodbridge Offices of the District Council.

### **How are the buildings chosen ?**

Buildings are judged according to a set of national standards. The criteria which the Secretary of State applies includes: the architectural and historical interest of the building itself, any close historical associations the building has with important people or events, or whether the building forms part of an interesting group (e.g. squares, terraces or 'planned' developments).

Age and rarity are important considerations. In general, the older the building the more likely it is to be eligible for Listing. Thus all buildings built before 1700 which survive in anything like their original condition are Listed. Most of those built between 1700 and 1840 are also included, however, for buildings built since 1840 Listing will depend on definite architectural quality and character or important historical associations.

It should be noted that it is not just large or impressive buildings that are important. The significance of many small, modest structures are of considerable interest as examples of their type and their value should not be underestimated. Modern buildings which are less than 30 years old will only be Listed if their architecture is considered to be of national importance. Buildings which are less than 10 years old are not Listed.

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### **How much of the building is covered by Listing?**

All of it: outside, inside, later additions and; alterations as well as original structure, whether specifically referred to in the List description or not. There is no such thing as just a 'Listed facade' or a 'Listed interior', although many people think this is so. The description of the building on the official 'List' is intended primarily for identification purposes and should not be interpreted as a description of all the important features.

The legislation also states that for the purposes of the Act the Listing extends to "Any object of structure fixed to the building; and any object or structure within the curtilage of the building which, although not fixed to the building, forms part of the land and has done so since July 1948". This could, therefore, include such things as out-buildings, garages, barns, stables, green houses, garden walls, ornaments and statues.

Obviously there are sometimes problems with determining the extent of the "curtilage" of a Listed building. Usually three factors are taken into account:

- The physical layout of the site and related structures.
- Ownership past and present.

- The use and function past and present.

It is up to the Local Authority to determine whether a building or structure occupies land which forms part of the curtilage of a Listed building.

### **How is an owner told that a building is Listed?**

Once a building has been Listed the Government informs the District Council who then has the responsibility of notifying the owner and occupier. If somebody buys a Listed building, a Solicitor's 'Search' should reveal the fact.

### **What is the effect of Listing?**

With certain exceptions the legislation requires that anyone who wants to demolish, alter, or extend a Listed building in any way which would affect its special character should first obtain 'Listed Building Consent' from the Local Planning Authority.

It is therefore always advisable to consult the District Council before starting any work which may be considered to affect the "special character" of the building. Listed Building Consent will be in addition to any Planning Permission needed. It should be noted that some works to dwelling houses which do not

require Planning Permission will still require Listed Building Consent if the building is Listed.

The fact that a building is Listed does not mean that it can never be altered or extended. What it does mean though, is that care will be taken over decisions affecting its future and that when any changes are undertaken they respect the character and ensure the retention of the building's special interest.

Owners, their agents, builders etc., should all be aware that under Section 9 of the Planning (Listed Buildings and Conservation Areas) Act 1990 it is a criminal offence to undertake works to a Listed building in a way which affects its special character without consent. Prosecution under this legislation can lead to heavy penalties.

### **How is Listed Building Consent obtained?**

Applications should be made using the appropriate forms and must contain sufficient particulars to identify the building and include plans, specifications and detailed drawings which properly describe and explain the implications of the works. In some instances an applicant may be required to submit an historical analysis of the existing building.

Unlike Planning Applications no fee is required. In most cases it will be in an owner's interest to

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## APPENDIX 2 – LISTED BUILDINGS

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employ an agent to act for them who is experienced with working on historic buildings and good conservation practice. Normally, eight weeks are required in order to process a Listed Building Application, sometimes a longer period will be necessary if the issues are complex.

For all Listed Building Applications the Planning Authority is required to consult various organisations, to advertise the application and allow a period of time for comments to be made. Any representations which are relevant must then be taken into account when a decision is made. With some types of application the Planning Authority is required to consult various national organisations including, English Heritage, The Society for the Protection of Ancient Buildings, The Georgian Group, and others. Furthermore, in certain instances Local Authorities have to refer applications to Central Government for a final decision if they are “minded to approve” them. If an application for Listed Building Consent is refused then the applicant has the right to appeal to the Department of the Environment.

It is important that no work is commenced before an application is determined. Any work not approved would have to be changed or the building would have to be reinstated to its former condition.

(If an application is approved for the demolition

of a Listed building the legislation requires the applicant to notify the Royal Commission on the Historical Monuments of England in order to enable them to record the building if they so wish).

### **Is consent required for maintenance or repairs?**

Repairs will require consent if they affect the character of the building as one of special architectural or historic interest. There is often confusion over just what can be classed as a ‘repair’. A repair not requiring consent should be looked at as minor works of routine maintenance and could include splicing in a new section of timber into a defective window or renewing a defective length of guttering or replacing rotten fascias and bargeboards in exactly the same material and design.

On the other hand, works which can affect the character of a building and therefore require Listed Building Consent are wide ranging and can include:

- replacing an existing window or door with a new one;
- changing the sort of tile or type of thatch on a roof;
- painting or rendering over facing brickwork;

- sandblasting as a method of cleaning old timbers or brickwork;
- changing the external paint colour if it is considered that it affects its character of the building.

### **Is content required to alter or remove internal features?**

The Listing of a building confers protection not only on the building but also any object or structure fixed to the building. Under normal circumstances, fixtures which were put in place as part of an overall architectural design, including objects specifically designed or made to fit a particular space or room, are treated as being part of the building. Listed Building Consent would therefore be required for removing or altering them. Items such as fireplaces, staircase balustrades, panelling, wall paintings and decorative plasterwork will normally be found to be part of the building.

### **What is taken into account when Listed Building Applications are being considered?**

The Local Planning Authority is required by law to have “special regard to the desirability of preserving the building or its setting or any features of special architectural or historic

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interest which it possesses". The Government provides detailed advice in the form of published guidance and Planning Authorities are obliged to take this into account when making decisions, (Planning Policy Guidance 15: Planning and the Historic Environment, HMSO publications). The guidance makes it clear that there should be a general presumption in favour of the preservation of Listed buildings and any of the architectural or historic qualities which justified the building being Listed in the first place.

**What if unauthorised works have occurred?**

Any unauthorised works to a Listed building which affect its character can result in the offender being liable to prosecution. Local Planning Authorities are also empowered to issue a 'Listed Building Enforcement Notice' which would require the owner of the building to restore it to its former condition. There is the right of appeal against such a Notice being issued.

**Can an owner be made to repair a Listed building?**

If reasonable steps are not being taken to properly preserve a Listed building, the Local Authority can serve the owner with a 'Repairs Notice' requiring a schedule of permanent repairs to be undertaken. Failure to comply could result in compulsory purchase. Again,

owners have the right of appeal to the Department of the Environment if they consider that the Authority has acted unreasonably.

A Council is also empowered to carry out urgent temporary repairs to an unoccupied Listed building and to recover the costs from the owner.

**Advice**

Most owners are pleased that their property has been Listed and recognised as part of the Nations heritage. Furthermore in many instances the distinction of being Listed may add to the value of a residential property. However, some owners may be a bit apprehensive about the implications of what Listing actually involves. If you have other, more detailed questions, including any about finance, grants, VAT etc., the Design and Conservation Section of the District Council's Planning and Leisure Department is available to help and advise on all aspects of Listed building legislation.

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## APPENDIX 3 – GLOSSARY OF TERMS

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**ADZE** A Medieval carpenters tool used to shape timbers.

**AISLE** A passage alongside the nave, choir or transept of a church, or the main body of some other building separated from it by columns, piers, or posts.

**ARCHITRAVE** In Classical architecture, the lowest of the three main parts of an entablature.

Also a moulded trim around openings to cover the gap between doors or windows and the wall finish.

**ARRIS** The edge at a corner on plaster, joinery, bricks etc.

**ASHLAR** A facing of dressed stones on a wall.

**BAFFEL ENTRANCE** A lobby into a dwelling positioned to the side of an internal chimney stack.

**BALUSTER** The vertical member supporting a handrail on a staircase.

**BARGE BOARDS** Boards placed on the verge of a gable to cover the junction between roof and wall.

**BATTEN** A thin strip of wood used, for example, to support the tiles on a roof.

**BAY** One of several uniform divisions of a building, for example the section between the main posts of a timber framed building.

**BOND** The arrangement of headers and stretchers in brickwork.

**BRACE** A short, straight or curved timber fixed diagonally to two structural timbers to strengthen the joint by triangulation.

**BRACKET** A projection designed as a support.

**BRESSUMMER** In timber framing, usually the sill of the upper wall above a jetty, otherwise any beam spanning an opening.

**BRICK SLIP** A thin brick specially made or cut from normal sized bricks.

**BULLNOSED BRICK** A special shaped brick with a rounded end or edge.

**BYRE** A shelter for farm animals.

**CAMES** Lead strips used for fixing diamond shaped panes of glass (quarries) in windows.

**CANT BRICK** A special shaped brick with a sloped end or edge.

**CAT SLIDE DORMER** A dormer with a sloping roof which has a pitch that is less than that of the main roof.

**CAMBERED ARCH** In brickwork, a flat topped arch which is curved at the bottom.

**CAPITAL** The head or top part of a column.

**CAPPING PIECE** A timber strip fixed to the top of a barge board to cover edge of the tiles.

**CASEMENT WINDOW** A window with one or more hinged opening lights.

**CEMENT** A binder, usually meaning Portland Cement, originally so called because its colour and texture resembled Portlands Stone.

The raw materials are clay and lime.

**CHAMFER** A sloping edge, for example on a piece of timber.

**CHASE** A groove cut into a wall, timber, plasterwork etc.

**CHIMNEY BREAST** The projection into a room of a fireplace and its flue.

**CHIMNEY PIECE** Decorative frame of wood, plaster, stone etc, around the fireplace.

**CILL** See sill.

**CLAY LUMP** A building material comprising blocks made of clay mixed with chopped straw etc, left to dry naturally.

**COLLAR** A beam connecting opposite rafters at high level.

**COMBED WHEAT REED** A thatching material that is in fact straw not reed.

**CORBAL** Brickwork stepping out to form a projection.

**CORNICE** The top projecting mouldings of an entablature, parapet etc.

**COUNTER BATTEN** To lay battens beneath or above other battens but at right angles to them.

**CRINKLE-CRANKLE WALL** A free standing wall the plan form of which is based upon a series of regular curves, sometimes known as a serpentine wall.

**CROSS WING** A two-storied wing set at right angles to the principle building.

**CROWN POST** A vertical timber post, sometimes decorated, rising from a tie beam, to support a purlin. The crown post does not reach ridge level as does a king post.

**DAMP-PROOF COURSE** A layer of impervious material inserted horizontally along a wall to prevent rising damp.

**DENTIL** A set of projecting blocks (plaster, timber, stone etc), or bricks evenly spaced to form a horizontal ornamental row.

**DIAPER BRICKWORK** Designs based on repeating patterns, usually forming diamonds.

**DOORCASE** A decorative surround to a door.

**DORMER** A window which projects from a sloping roof.

**DRY ROT** A fungi which attacks wood in buildings.

**EAVES** The junction between the bottom edge of a roof slope with the wall below.

**ENGINEERING BRICK** A modern, hard clay brick of high compressive strength and low absorption used, for example, for manholes.

**ENGLISH BOND** Brickwork bond with alternative courses of headers and stretchers.

**ENTABLATURE** The term for the architrave, frieze and cornice above the columns in Classical architecture. Doorcases sometimes include an entablature above the door.

**FANLIGHT** A window over a door within the main door frame.

**FASCIA** A board covering vertical ends of the rafters at the eaves of a roof or a panel over a shopfront, usually carrying the shop's name.

**FEATHER EDGED BOARDING** Timber boards used for fencing or cladding. A thin edge and a thicker one enable them to overlap.

**FIELDLED PANEL** A panel with a plain raised central area, for example in a panelled door.

**FILLET** A small triangular piece of timber or a length of mortar placed along the edge of tiles on a roof.

**FLASHING** Waterproofing around chimneys, roof junctions etc, usually lead.

**FLEMISH BOND** Brickwork bond with alternating stretchers and headers along each course and alternating vertically between courses.

**FLITCH PLATE** A metal plate inserted into a timber beam to strengthen it.

**FRIEZE** In Classical architecture, a horizontal band between the architrave and cornice of an entablature.

**GABLE** The triangular upper part of a wall between the sloping ends of a pitched roof.

**GABLE ROOF** A roof with two slopes opposite one another with a gable at each end.

**GABLET** A small gable at the top of a hipped roof.

**GAMBREL ROOF** A hipped roof which incorporates vertical gablets.

**GAULT BRICK** A 'white' brick. The colour was produced from local clays with a high lime content.

**GIRDING BEAM** In timber framing, a horizontal beam in a wall at the level of the upper floor or roughly half way between sole and wall plate. Also known as a girth or rail.

**GAUGED BRICKWORK** Precise brickwork often with shaped or rubbed bricks laid with very fine joints.

**GLAZING BAR** Timber or metal divider which supports panes of glass in a window, roof light etc.

**HALVED JOINT** A general way of joining timbers of the same thickness. One half of each is cut away so the resulting joint has flush faces.

**HALL** The main living quarters in Medieval times.

**HALL HOUSE** A Medieval house with a large open living area.

**HEADER** A brick laid at right angles to the face of the wall so that the end rather than the side appears on the wall face.

**HEADER BOND** Brickwork bond composed entirely of headers.

**HERRINGBONE BRICKWORK** Bricks laid in a diagonal pattern.

**HIP** The external angle formed by the intersection of two roof slopes.

**HIPPED ROOF** A pitched roof which has four slopes instead of the two slopes of a gabled roof.

**HIP RAFTER** A rafter supporting a hip.

**HAZEL HURDLE** A light framework of interlaced split hazel sticks traditionally used as a temporary fence. See also wattle fence.

**JACK RAFTER** Short rafters between the wall plate and a hip rafter.

**JAMB** Vertical side of a door or window frame.

**JETTY** The projection of the floor joists enabling an

upper storey to overhang the lower.

**JOIST** One of several horizontal beams which form a timber floor or ceiling.

**JOWL** In timber framed buildings, the enlarged head of the main post permitting the tie beam, wall plate and post to be jointed together.

**KING POST** A vertical timber post, often decorated, spanning between the tie beam and the ridge of a roof.

**KNAPPED FLINT** A flint that has been split. Sometimes they are further chipped (or dressed) to a desired shape.

**LATH AND PLASTER** A traditional finish for walls and ceilings. Split wooden slats are nailed to joists or studs with gaps between them. Then plaster is applied in one or more coats.

**LATTICE** A framework of strips of wood or other material crossed diagonally.

**LEDGE AND BRACED DOOR** A simple, vertically boarded door held together by horizontal members (ledges) and strengthened with diagonal members (braces).

**LIGHT** The part of a window separated from the next part by a mullion and/or transome.

**LIME** A chalk or limestone based material traditionally used for plastering and bricklaying.

**LINTEL** A horizontal structural member spanning above a door, window, fireplace opening etc.

**LONG STRAW** A name for the types of wheat straw that are used in thatching.

**LOUVRE** Horizontal parallel slats in windows, doors, etc, to help provide ventilation.

**MATHEMATICAL TILE** A clay tile shaped so that when fixed to timber framing and pointed it looks like brickwork.

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## APPENDIX 3 – GLOSSARY OF TERMS

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**MANSARD ROOF** A roof of two slopes, the lower being steeper than the upper.

**MORTISE AND TENON JOINT** A timber joint, the tenon (projection) on one timber fitting into the mortise (cavity) on another.

**MOULDING** A continuous projecting or recessed decorative band.

**MULLION** A vertical member dividing a window into lights.

**MUNTIN** The vertical member dividing panels in timber panelling or doors.

**NEWEL** An upright post at the top or bottom of a flight of stairs supporting the handrail.

**NOGGING** The filling of brick, stone, etc, between the studs of a timber frame.

**OSIER FENCE** A fence made out of woven lengths of willow. See also wattle fence.

**OUTSHOT** A single storey addition to a building where the roof is an extension of the main roof and usually of a shallower pitch.

**PALISADE FENCE** A fence made of vertical wooden strips fixed to horizontal rails and spaced out evenly with gaps in between.

**PANTILE** A roofing tile shaped like a shallow S.

**PARGETING** Plasterwork that has been incised or moulded to form a pattern or picture.

**PARLOUR** A ground floor living room, sometimes called a solar.

**PEDIMENT** In Classical architecture, a low pitched gable above doors, windows etc.

**PEG** A small cylindrical wooden pin or dowel used to join parts of a timber frame together or to fix tiles to a roof.

**PENNY ROUND POINTING** A type of brick pointing where a thin line was made in the brick coloured mortar joint using the edge of a penny in order to

emulate precise brickwork with very fine joints.

**PENTICE BOARD** A sloping timber strip placed horizontally on a gable end to throw water off the wall. Also found above window and door openings.

**PERPEND** The vertical mortar joint in brickwork.

**PILASTER** A shallow pier or rectangular column projecting only slightly from a wall.

**PLINTH** In Classical architecture, the square member forming the base of a column. Also a projection at the bottom of a wall or a low foundation wall.

**POINTING** The mortar finish to brickwork.

**PORTICO** In Classical architecture, a roof supported by columns or a porch with columns.

**POST** A vertical timber carrying a load.

**PRINCIPAL RAFTERS** The main rafters which carry the purlins which in turn support secondary (or common) rafters.

**PURLIN** A horizontal roof timber that supports the common rafters.

**QUARRY** A diamond shaped pane of glass.

**QUEEN POSTS** Vertical timbers rising from a tie beam to the junction of a collar, purlin and principal rafter. Always in pairs.

**QUOINS** The external corner of a wall or around openings where stones, bricks or blocks are laid so they appear alternately large and small.

The same effect is created in plasterwork.

**RAFTERS** Timbers which slope from the top of a wall to the ridge of a roof in order to support the weight of the roof covering.

**RAIL** A horizontal member in timber framing, panelling, doors and windows.

**RAT TRAP BOND** A bond of brickwork where bricks are laid on their edge. It reduces the number of bricks needed to build a wall.

**REBATE** A groove or recess cut into a timber member, for example a glazing rebate in a window frame or a rebate in a door frame into which the door closes.

**RENDER** A covering of plaster, cement, lime, etc, to the external face of a wall.

**REVEAL** The side of the wall at an opening, for example a door or window reveal.

**RIDGE** On a roof, the intersection at the top of the main roof slopes.

**RISER** In a staircase, the vertical part between the treads of a stair.

**ROOFING FELT** Waterproof felt laid under the tiles to help prevent water ingress. Also known as sarking felt.

**RUBBED BRICKS** Soft, smooth clay bricks which are shaped to fit into arch etc, by rubbing them with a stone or another brick.

**RUSTICATION** Masonry, (brick, stone, etc), or plaster, finished in such a way that it has the appearance of large blocks separated from each other by deep joints.

**SADDLEBACK COPING** A ridged coping.

**SASH** The glazed part of a window which fits into a frame and can be hinged, sliding or fixed.

**SASH WINDOW** A window which slides up and down.

**SERPENTINE WALL** See Crinkle-Crankle wall.

**SCARF JOINT** A general name for a lapped joint between two pieces of timber.

**SCISSOR JOINT** A traditional carpentry repair joint which resembles an open pair of scissors, used to resist lateral movement.

**SCREENS PASSAGE** A passage running across a Medieval hall, flanked on one side by the buttery and pantry and on the other by a wall or screen. At both ends doors led to the outside.



**SEDGE** A grass like plant used for thatching.

**SEGMENTAL ARCH** In brickwork, a shallow arch in the shape of a segment of a circle.

**SILL** The horizontal base of a doorway or window frame or the horizontal foundation timber of a timber framed house. See also sole plate.

**SOFFIT** The underside of a flat surface, for example the underside of a projecting eaves, an arch, lintel, etc.

**SOLAR** Parlour or private room in Medieval and Tudor houses, sometimes at first floor level.

**SOLE PLATE** The heavy timber running around the base of a timber framed building, often sat on a brick plinth, into which the posts and studs of the frame are tenoned. Also known as the sill plate.

**SPALL** The general flaking and deterioration of a surface, especially brick or stone.

**SPLAYED JOINT** A sloping cut across two timbers to enable them to be fixed together.

**SOLDIER COURSE** A course of bricks laid standing on their ends.

**SPROCKET** A timber fixed to the ends of rafters at the eaves to give the eaves overhang a slightly flatter slope than the rest of the roof.

**STILE** The upright member forming the edge of a window or a door.

**STRETCHER** A brick laid parallel to the wall so that its side appears on the wall face.

**STRING** One of the two sloping members of a staircase which carry the ends of the treads and risers.

**STRING COURSE** A thin decorative, horizontal course of brick along a wall.

**STRUT** Vertical or sloping timber helping to support a rafter.

**STUCCO** A fine smooth faced plaster.

**STUDS** Intermediate vertical posts in a timber framed wall or partition.

**TERRA COTTA** Fired but unglazed clay, used mainly for decorative purposes because it can be fired in moulds.

**THATCH** Straw, reed, etc, used as a roof covering.

**TIE BEAM** A beam which spans between opposite wall plates to prevent the roof spreading.

**TILE CREAMING** A course of plain tiles projecting out from a free standing wall, parapet etc, to throw off water. A modern detail, they are usually positioned under a brick coping in order to form a drip.

**TILE HANGING** The fixing of plain tiles vertically as an external wall cladding material.

**TILTING FILLET** A triangular section of timber nailed across the ends of rafters to tilt the last tiles slightly less steeply than the rest of the roof.

**TIMBER FRAMED BUILDING** A building constructed with a load bearing frame of timber.

**TORCHING** Mortar pointing to the underside of tiles or slates to prevent them lifting and to make them more weather tight.

**TRANSOM** A horizontal member dividing a window into lights.

**TREAD** The level part of a stair.

**TRIMMER** A horizontal member used to section off surrounding timbers to form an opening, for example forming a stairwell in a timber floor.

**TRUSS** A structural roof frame made up of members joined together to form triangles.

**TUCK POINTING** A type of brick pointing which imitates very fine brickwork with thin mortar joints.

**TUMBLING IN** In brickwork, bricks laid on a slope within a wall where other bricks are laid horizontally.

**UNDERCLOAK** A modern detail where a course of fibre cement boards or plain tiles are laid along the top of a gable wall at the verge to support the edge of the tiles and give them a slight inward tilt.

**VALLEY** The internal angle that is formed by intersection of two sloping roofs.

**VERGE** The sloping edge of a pitched roof above a gable.

**VOUSSOIR** A wedge-shaped stone or brick that is used with others to construct an arch.

**WALL PLATE** A longitudinal timber fixed to top of the wall to which are secured the feet of the rafters and the ends of the tie beams and ceiling joists.

**WATTLE AND DAUB** A framework of willow, hazel or other wood, plastered with clay, straw, dung etc, as a filling to the spaces between a timber framed wall.

**WATTLE FENCE** A fence comprising a series of panels made with stakes interwoven with twigs branches etc. See hazel hurdle and osier fence.

**WEATHER BOARDING** Overlapping horizontal boards as a cladding to walls.

**WEATHER STRUCK** A mortar joint that is shaped with an outward slope to throw off rainwater.

**WET ROT** A general term for fungi which attacks wet wood.

**WIND BRACES** Straight or curved pieces of timber fixed between principal rafters and purlins.

**WINDER** In a winding stair, a step which is narrower one end than the other.

**YORKSHIRE SASH WINDOW** A window which slides sideways rather than up and down.

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## APPENDIX 4 – RELEVANT ORGANISATIONS AND FURTHER READING

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### RELEVANT ORGANISATIONS

**Department of the Environment  
Government Office for Eastern Region**  
Heron House  
49-53 Goldington Road  
Bedford MK40 3LL  
(Tel: 01234 796238)

**Department of National Heritage  
(Heritage Division)**  
Third Floor  
2-4 Cockspur Street  
London SW1Y 5DH  
(Tel: 0171 211 6000)

**English Heritage**  
23 Savile Row  
London W1X 1AB  
(Tel: 0171 973 3000)

**The Ancient Monuments Society**  
St Ann's Vestry Hall  
2 Church Entry  
London EC4V 5HB  
(Tel: 0171 236 3934)

**The Council for British Archaeology**  
Bowes Morrell House  
111 Walmgate  
York YO1 2UA  
(Tel: 01904 671417)

**The Georgian Group**  
6 Fitzroy Square  
London W1P 6DX  
(Tel: 0171 387 1720)

**The Royal Commission on the  
Historical Monuments of England**  
Alexander House  
19 Fleming Way  
Swindon SN7 2NG  
(Tel: 01793 414100)

**The Society for the Protection of Ancient  
Buildings**  
37 Spital Square  
London E1 6DY  
(Tel: 0171 377 1644)

**The Victorian Society**  
1 Priory Gardens  
Bedford Park  
London W4 1TT  
(Tel: 0181 994 1019)

**Suffolk Preservation Society**  
Little Hall  
Market Place  
Lavenham  
Sudbury  
Suffolk CO10 9QZ  
(Tel: 01787 247179)

**East Anglian Master Thatchers Association**  
Thatchers Rest  
Levens Green  
Great Manden  
Nr. Ware  
Hertfordshire  
SG11 1HD  
(Tel: 01920 438695)

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## FURTHER READING

### **Department of the Environment/Department of National Heritage**

Planning Policy Guidance No 15: Planning and the Historic Environment, (especially annexe C, guidance on alterations to Listed buildings), HMSO Publications  
PO Box 276  
London SW8 5DT  
(Tel: 0171 873 0011)

### **English Heritage**

Practical Building Conservation, (Five volumes, including technical bibliography), John and Nicola Ashurst, (Gower Technical Press).

The Repair of Historic Buildings: Advice on Principles and Methods, Christopher Brereton, (English Heritage).

#### Leaflets:

Insuring Your Historic Building: Houses and Commercial Buildings, 1997.

Investigative Work in Historic Buildings, 1995.

Principles of Repair, 1993.

Scaffolding and Temporary Works on Historic Buildings, 1995.

Framing Opinions 1: Draughtproofing.

Framing Opinions 2: Door and Window Furniture.

Framing Opinions 3: Metal Windows.

Framing Opinions 4: Timber Sash Windows.

Framing Opinions 5: Window Comparisons.

Framing Opinions 7: Energy Savings.

The Pointing of Brickwork, 1994.

Dormer Windows (London examples), 1991.

Georgian Joinery, 1660-1840 (London examples), 1993.

Ornamental Ironwork: Gates and Railings (London examples), 1993.

### **The Society for the Protection of Ancient Buildings**

#### SPAB Technical Pamphlets:

14/1 Outward Leaning Walls.

14/2 Strengthening Timber Floors.

14/3 Chimneys in Old Buildings.

14/5 Pointing Stone and Brick Walling.

14/8 The Control of Damp in Old Buildings.

14/9 Electrical Installations (revised edition).

14/10 The Care and Repair of Thatched Roofs.

14/11 Panel Infilling to Timber Framed Buildings.

14/12 The Repair of Timber Frames and Roofs.

14/13 Repair of Wood Windows.

#### SPAB Information Sheets:

IN/1 Basic Limewash.

IN/2/3 Timber Treatment – A Warning about the Defrassing of Timbers and The Surface Treatment of Timber-Framed Houses.

IN/4 The Need for Old Buildings to “Breathe”.

IN/5 Removing Paint from Old Buildings.

IN/7 First Aid Repair to Traditional Farm Buildings.

IN/8 Tuck Pointing in Practice.

IN/9 An Introduction to Building Limes.

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## APPENDIX 4 – RELEVANT ORGANISATIONS AND FURTHER READING

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IN/10 Patching Old Floorboards.

IN/11 Rough-Cast for Historic Buildings.

IN/12 Introduction to the Repair of Lime-Ash & Plaster Floors.

### **The Georgian Group**

The Georgian Group Book of The Georgian House, Stephen Parissien, (Aurum Press).

The Georgian Townhouse Book.

Advisory leaflets:

1. Windows.

2. Brickwork.

3. Doors.

4. Paint Colour.

5. Render, Stucco & Plaster.

6. Wallpaper.

7. Mouldings.

8. Iron works.

9. Fireplaces.

10. Roofs.

11. Floors.

12. Stonework.

13. Lighting.

14. Curtains and Blinds.

15. Papier Mache.

### **The Victorian Society**

Booklets:

No 1 Doors.

No 2 Decorative Tiles.

No 3 Fireplaces.

No 4 Interior Mouldings.

No 5 Wall Coverings.

No 6 Cast Iron.

No 7 Brickwork.

### **Other Publications**

The Building Conservation Directory, published annually, a guide to specialist suppliers, consultants, refurbishment and design (Cathedral Communications Ltd.) (Tel: 01747 871717)

The English House;  
The Repair of Ancient Buildings,  
both by A. R. Powys, (available form S.P.A.B.)

The Historic Home Owner's Companion,  
Matthew Saunders, (Batsford 1987).

House and Cottage Conversion: Interiors;  
House and Cottage Conversion: Do's and Don'ts,  
both by H Lander, (Acanthus Books)

The House Restorer's Guide,  
H Lander (David and Charles)

How Old is Your House?  
P. Cunnington, (Black)

Care for Old Houses,  
P. Cunnington, (Prism Alpha)

English Vernacular Houses,  
E. Mercer, (H.M.S.O)

House Maintenance for the Intelligent Owner,  
E. Bird, (Adam and Charles Black)

Vernacular Building Conservation,  
J. Bowyer, (Architectural Press)

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The Care and Conservation of Georgian Buildings,  
Edinburgh New Town Conservation Committee,  
(Architectural Press, available from S.P.A.B).

Restoring Old Houses,  
N. Hutchins, (Van Nostrand Books, London)

How to Restore and Improve your Victorian House,  
A. Johnson, (David and Charles)

The Repair and Maintenance of Houses,  
Ian and Gordon Melville, (The Estates Gazette Ltd,  
London)

The English Terraced House,  
S. Muthesius, (Yale University Press)

The Buildings of England – Suffolk,  
N. Pevsner, (Penguin)

Your House, the Outside View,  
J. Prizeman, (Quiller Press, London)

Period Houses – A Guide to Authentic Architectural  
Features,  
A. Quincey.

New Life for Old Houses,  
G. Stephen, (The Preservation Press; National Trust  
for Historical Preservation)

New Life for an Old House,  
T. West (Barrie Jenkin)

Restoring Period Timber Framed Houses,  
David J. Swindells, (David and Charles)

Discovering Timber-Framed Buildings,  
Richard Harris, (Shire Publications)

Suffolk Houses, A Study of Domestic Architecture,  
Eric Sandon, (Baron Publishing/Antique Collectors  
Club Ltd, Woodbridge, Suffolk)

Illustrated Handbook of Vernacular Architecture,  
R. W. Brunskill, (Faber and Faber)

The Traditional Buildings of Britain – An Introduction  
to Vernacular Architecture,  
R.W. Burnskill, (Victor Gollancz Ltd)

Vernacular Architecture of Suffolk –  
A Bibliography,  
Suffolk County Council

The Development of Carpentry 1200 – 1700,  
C. A. Hewett, (David and Charles)

English Historic Carpentry,  
C. A. Hewett, (Fillimore)

Old Houses and Village Buildings in East Anglia,  
Basil Oliver, (1912, Batsford)

The Pattern of English Building,  
Alec Clifton – Taylor, (Batsford/Faber and Faber)

Produced by the Design and Conservation Section of the  
Planning and Leisure Department of Suffolk Coastal District Council:

David Whittaker, *Architect/Planner*

Adrian Craddock, *Senior Design Officer*

Liz Martin, *Architectural Technician*