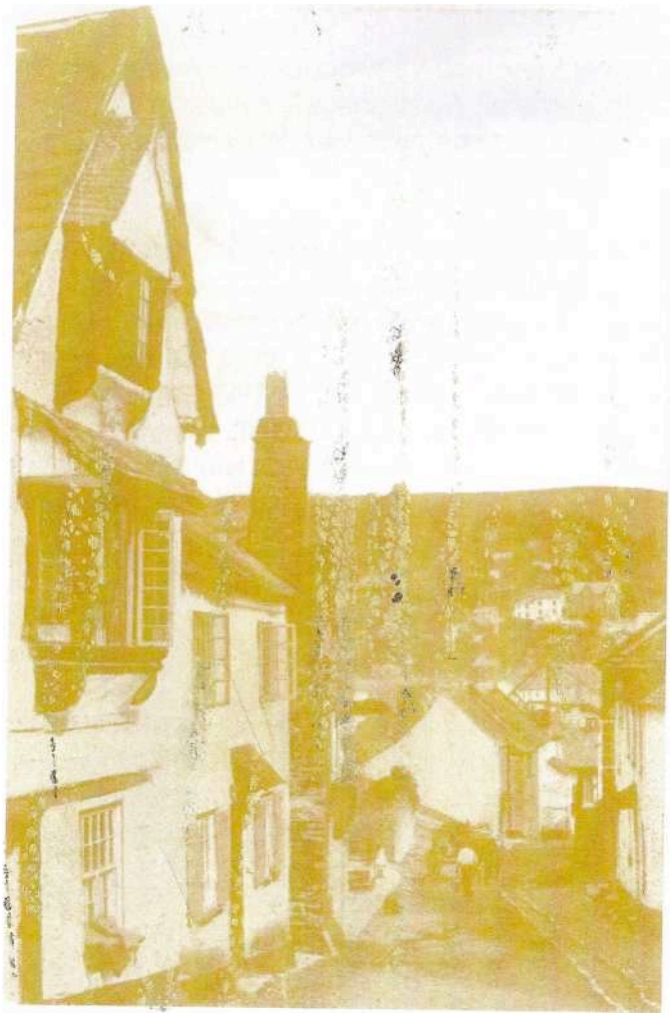
Looe Heritage Guidance Notes



No. 3: Windows and Doors

CARADON
DISTRICT COUNCIL

Working for South East Cornwall

Looe Heritage Guidance Notes

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These Guidance Notes have been produced by Caradon District Council as part of the Looe Heritage Economic Regeneration Scheme (HERS). The views expressed are intended to stimulate discussion and the adoption of positive approaches in the town.

This is one of three Heritage Guidance Notes prepared with the aim of encouraging an approach to building management that will preserve or enhance the character of the Looe Conservation Area. The guidance is based on the premise that in historic settlements the sensitive repair and adaptation of heritage assets is fundamental to the broader aim of economic regeneration. The special character of Looe should inform all decisions, on old and new buildings alike, with the specific aim of achieving incremental enhancement of the town.

Contents:

1.0 Introduction

Looe is an historic place that has a variety of old buildings which reflect its location, development and the activities that have combined to give it a distinctive appearance. Whilst many of the buildings of Looe are of modest architectural character, their collective value is significantly greater than the sum of its parts. The special character of the buildings that add to the historic streetscape is derived from their form, the quality of the materials used and the workmanship expressed in constructional details. As well as the physical character the range of historic and contemporary uses of buildings adds further layers of interest.

There has been a Conservation Area in the town since 1973. Whilst Conservation Area status does offer some limited extra controls to the Local Planning Authority, it does not of itself guarantee preservation or enhancement of the special qualities of the place. The cumulative effect of decisions made by local people regarding the repair, maintenance and improvement of their homes and businesses is the most significant factor in overall townscape quality.

In order to preserve or enhance character it is essential to have some understanding of how it has evolved and what may threaten it in the years ahead. This is being addressed by the Conservation Area Appraisal and Management Plan currently being produced for the town. These Guidance Notes are intended to support the broad aims of these documents and provide a foundation for the adoption of design standards as set out in the Caradon Design Guide that incorporates specific guidance for windows and doors (Section E).

Archive photograph of West Looe Hill

2.0 Historic Background

The historical design of windows and doors records developments in architecture, building technique, manufacture, economy and taste. All historic windows are antique items as important as any equivalent piece of furniture, yet for some reason they are undervalued and even actively derided. A Georgian chair may be taken to experts for valuation and restoration, but a Georgian window is more likely to end up in a skip!

The losses in recent decades have had a significant impact on the townscape of Looe as elsewhere, but the trend can be reversed if there is willingness on the part of property owners. There are significant numbers of traditional windows and doors surviving which need to be cherished as they contribute to the richness of the place.

2.1 Window Evolution

For the purposes of this guide the principal interest is in the development of joinery in the domestic vernacular context. There are clear links between functional buildings and polite or high status architecture, but in terms of townscape character it is the majority of unpretentious buildings that set the scene.

Right up to late medieval times the huge majority of homes had no chimney - the hearth was a slab in the middle of the floor and smoke escaped through the roof. Windows were literally 'wind-holes' that provided ventilation and light; only the wealthy could afford glass so most had to make do with shutters or screens of cloth soaked in animal fat or tar. Openings were broadly splayed so that the maximum light could be gained from the smallest possible external opening.

Chunky timber or stone framed windows were formed which held iron casements. These were either fixed or side hung for opening and filled with small diamond or rectangular shaped pieces of glass held together by a lattice of lead cames, reinforced by iron rods. The availability of glass moved down the social order in the 16th and 17th centuries, so more people could aspire to glazed windows in their homes.

Fig 1: A 17th century mullion and transom window with 19th or early 20th century casements

By the later 17th century the majority of the population could afford some glass. By this time frames and mullions were more slender but iron casements remained normal - these were often replaced later in timber or with fixed glazing. Leaded lights were still quite widespread as they allowed for the use of smaller and cheaper pieces of glass, [see Fig 28]

Fig 2: A mullion window of probable early 18th century date with later fixed 'scale' glazing

The close relationship between windows and wealth supported the Window Tax - one of the most enduring forms of taxation in the country. At the outset in 1696 the tax was payable on houses with more than six windows and that is why people often blocked up some windows so as to avoid payment.

Around this time the sash window was introduced from Holland and with the advent of balancing weights it soon became a British institution, adopted throughout the land. The combination of maximum glazed area and controllable ventilation suited our climate and the balanced proportions had universal appeal. Over the subsequent 200 years the design was refined and adapted - glazing bars became thinner and window openings larger. Industrialists experimented with cast iron, copper and other metals, but softwood remained the most common material. Casements continued in use but mostly on lower status buildings, or in lesser rooms in many vernacular homes.

So it was that until quite recently it was possible to walk around Looe and appreciate a subtle diversity of window design; each type of window telling a story about that individual building, yet contributing to the overall harmony by virtue of being part of a steady evolution.

2.2 Glass Manufacture

In medieval times glass was produced by blowing an elongated balloon shape using a blowpipe, then cutting off the ends, slicing it open and flattening it. This was called 'broad sheet' and produced small panes that were distorted and often discoloured.

Perhaps the most characteristic historic glass is 'crown glass', which was widely used from the 17th to the 19th century. It was produced by blowing a balloon of molten glass and then spinning it rapidly to produce a flat disc. The size of panes that could be produced was limited and dictated the pattern of subdivision of windows throughout Georgian times.

The 'bulls-eye' pane where the glass was attached to the rod for spinning was used on poorer buildings or low status rooms; so the prominent use of authentic, or worse, fake bulls-eye panes is not generally appropriate, *[see Fig 1]* Finished crown glass has great clarity but incorporates distortions that reflect the manufacturing process. It is no longer available so every effort ought to be made to salvage and re-use historic panes. *[Fig 3]*

Fig 3: Every effort should be made to keep historic glass

'Cylinder glass' became available at the end of the Georgian era and involved a process evolved from the broad sheet method. A cylinder of blown glass was stretched by swinging it in a trench; this was allowed to cool and then cut and re-heated to produce flat sheets. The larger panes that could be produced allowed fewer subdivisions in windows and became the standard throughout Victorian Britain.

Various technical advances developed products like plate glass that was used in the early 20th century for shopfronts in particular. The final development came with Pilkingtons float glass in 1959 - a marvellous product but in a sense it is too good! It lacks the play of light and distorted reflections that crown or cylinder glass offer.

Fortunately cylinder glass is still available and will give added character to period windows and properties. It is well worth incorporating a percentage of cylinder glass panes when renovating or copying old windows - it adds character whether viewed from inside or out.

2.3 Window Styles

Casement Windows

The oldest and simplest type of window, the casement window continues to be used up to the present day. Details do vary over time though and this is important when replacement or reinstatement is planned. Historic casements sit within their frame so that they have a flush fitting outer face; importantly both fixed and opening lights then have the same proportion. It was quite common for opening lights to be hinged from the central mullion rather than the frame.

Fig 4: A typical Georgian casement of later 18th century

Fig 5: A window with inward opening casement - circa early 19th century

Modern units often have 'storm-seal' detailing where the frame of the opening light overlaps the window frame; this is a detail that compensates for poor manufacture and is not necessary if a window is well made using good materials.

Sliding Sash Windows

The restful proportions of the double-hung sash add so much to the character of old buildings and streets, whilst horizontal sliding sashes were occasionally used in the 19th century and have a distinctive appearance.

Earlier sashes *[Fig 6]* have chunkier glazing bars and a generally heavier appearance. Throughout the 18th century designs became more elegant, reaching a peak in the early 19th century when glazing bars and meeting rails became amazingly slender. With the advent of sheet glass frames once again became thicker and horns were introduced to add stability and bracing previously provided by the glazing bars. Horns are generally absent on historic multiple paned sashes and their introduction is normally inappropriate. These changes are often subtle but need to be observed and respected where replacement or reinstatement is planned.

Fig 6: An 18th century sash with more robust glazing bars

Fig 7: The restful proportions of early 19th century '6 over 6' sashes are very appealing

Fig 8: Later 19th century sashes are still elegant

In Looe there has been a lot of replacement that has diluted the special character of the place. Changes of material, finish, glazing pattern and mode of opening all diminish the quality and historic appearance of a building.

Feature Windows

Occasionally feature windows add special interest to a building. This is often typical of a particular period or architectural style and distinctive glazing patterns should always be cherished. *[Fig 9] It* is seldom appropriate, however, to introduce an unusual or flamboyant glazing pattern unless there is evidence that it existed previously.

Fig 9: Geometric glazing patterns are usually indicative of an earlier 19th century date and association with the Regency period.

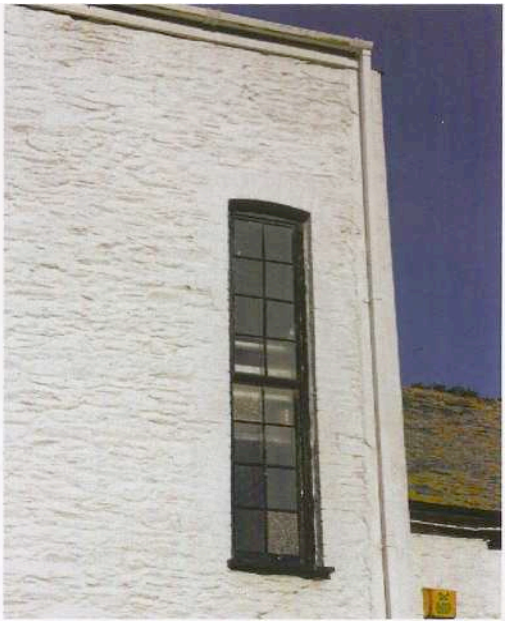


Fig 10: An elongated stair window constructed as a double sash and presumably intended to open.

Stairways are quite often lit by windows that may be unusually large or incorporate decorative coloured glass. *[Fig 10]*

Sometimes unusual window configurations can be indicative of a buildings evolution. *[Fig 11]*

Fig 11: This assemblage of two sashes with side lights is highly unusual and suggests the opening was previously occupied by a wide mullioned window.

Bay and Oriel Windows

Oriel windows were a feature of domestic town buildings in the late medieval period and into the 17th century. Remaining examples need to be prized as rare survivals. From the later 18th century to the early 20th century bay and oriel windows are quite common features.

Fig 12: A rare17th century oriel window projecting over the street

Fig 13: Victorian oriels with ornamental ironwork

In Looe oriel windows project above the street, grabbing a bit of extra light for the interior and adding interest to the exterior. *[Fig 12]* Victorian bays and oriels are a feature of the conservation area and there is a distinctive local trend of decorative ironwork parapets to the lead (or zinc) roofs. [Figs 13 & 14]

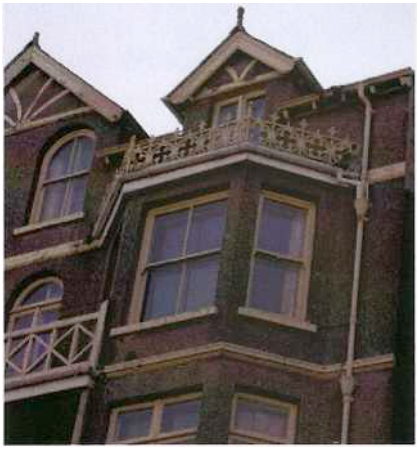


Fig 14: Bays can rise two or three storeys providing a striking townscape element

2.4 Door Styles

Simple Boarded

Early doors were made of heavy boards, usually oak. Timber would've often been given minimal protection, though waxes, tar or pitch were used sometimes and a lime coating was common. The boards were usually wide and quite thick; vertical boards on the outside were commonly fixed to horizontal boards inside by iron nails. Weighty doors demand substantial frames and these are architectural items of great significance in their own right. The handmade nails and strap hinges are a craft feature of ancient doors that was revived during the Arts and Crafts movement.

The latter part of the 20th century saw these features added as insubstantial fakes on lightweight doors which generally detract from the appearance of an old building.

Fig 15: A substantial and ornate doorframe reveals early origins

Original examples of such doors are rare today, especially in towns and on domestic buildings.

Ledged and Braced

Over time the design of plank doors became less substantial, mostly due to the increasing scarcity of timber. Thinner and narrower boards were adopted, often in pine, and these were held in place by ledges and angled braces on the inside. To keep out draughts the boards were either tongue and groove or gaps were filled with beading. Softwood had to have a protective finish of paint so the modern trend of using translucent woodstain is not consistent with authentic character. Quite a number of 19th century examples survive in Looe. *[Fig 16]*

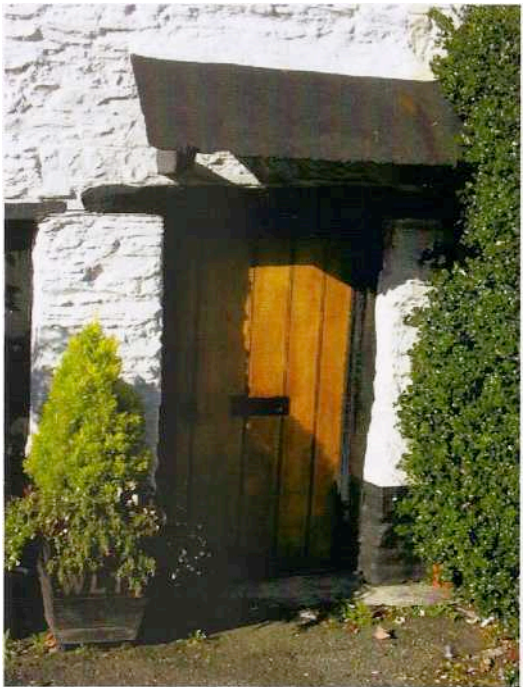


Fig 16: A simple planks door with slate canopy

Panelled Doors

As with ledge and brace, panelled doors were more economical in terms of materials; but they had a more refined appearance and could vary in proportion to suit the taste for classical architecture. The versatility of panelled doors meant that they were used on a great range of buildings and could be adapted to different scales and styles. There are, however, indications of age and status recorded in the construction details and such tangible historic indicators are lost each time a genuine door is replaced. Even intended reproductions are inevitably different, and as old doors are seldom beyond repair, replacement is always regrettable.

Fig 17: A fine 4-paneled door with fanlight and welcoming chamfer to the reveal

Panelled doors can be partly glazed, whether 4 or 6 panel; although this is often a later alteration it was sometimes by design, especially on later Victorian 4 panel doors. Fanlights were also a common feature from the 18^{r} to early 20th centuries; sometimes they are simply glazed but often they have a decorative glazing pattern. *[Fig 17]*

Fig 18: An unadorned 4-panelled door, now part glazed

Fig 19: The panelled door and sash represent a phase of Georgian re-modelling

3.0 Details that Matter Most

Each historic window or door is an artefact that records much about the property owner, the joiner, the economy of the time, available materials and local tastes or preferences. Replacement removes any trace of this heritage even if it is done with sensitivity. Repair is obviously preferable as it preserves the authentic item in situ; it also saves the primary resources and energy used in manufacture. Sometimes replacement is unavoidable and that is when attention to detail becomes paramount.

The guidance below identifies the principal elements that together make up the character of windows and doors - the things that need to be retained or reinstated if the work is to be complimentary.

3.1 Materials

Timber

The vast majority of historic windows are timber, though old iron windows should also be treasured. The appearance of timber windows and doors reflects the nature of the material and the joinery techniques adapted over time. The thickness of sections, type of joints employed and regular refreshment of appearance through maintenance all mean that joinery well over 100 years old can still have style and presence.

Money spent on authentically detailed new softwood windows and doors reflects the cost of the raw material and the time of a craftsman. By specifying sustainably produced timber you are encouraging management of a renewable resource that reduces the production of greenhouse gases and also supporting skilled local jobs. Money spent on repairing an old window will nearly all go to a craftsman and will help to keep traditional joinery skills alive. A sensible maintenance regime also supports local employment in the form of painters and decorators.

Plastic

Polyvinyl-chloride (unplasticised), (better known as PVCu), has become the most popular replacement material based on a combination of cost and 'maintenance-free' sales promises. It also reflects its manufacture in that the hollow sections and internal structure makes the frames more bulky. On close inspection the reality of various components having been bonded or clipped together is usually readily apparent; individual elements often age differently and the mastics that fill gaps tend to discolour. There are some fairly good copies of sash windows these days, but even these have tell-tale mitred corners, mastic joints and clip on beading.

The amount of money spent on advertising by PVCu window companies reflects the price of the raw material they use, a price that does not take account of the environmental cost of the production process. When things go wrong with them it is usually impractical or uneconomic to repair these units, so they are themselves replaced. Whilst PVCu can be recycled there is no market for post window manufacture PVCu due to its combination with other materials and low value - there is no financial incentive to recycle a material that is produced in abundance by the international plastics industry and costs so little to begin with. It can't be disposed of by incineration due to the pollutants released and it is extremely slow to breakdown when buried; consequently useless piles of failed windows are growing at our recycling centres.

Metal

There is a general absence of early metal windows in Looe, though clearly there were more historically. There are some leaded lights and some 20th century galvanised industrial units, but these are unusual and not characteristic.

Fig 20: Not only have the industrial metal windows been lost on the converted upper floors, the pattern, proportion and mode of opening have been totally ignored

3.2 Glazing Pattern

The way in which a window or door is subdivided is a basic characteristic. Unfortunately people sometimes want to make their building 'stand out' and they believe that introducing a different window design is the way to do it. So quarter light or night vent openings are introduced, or sashes become a mullion and transom design or single sheets of glass. Fake lead tape is sometimes stuck on in an effort to make something modern look 'historic' and plastic imitating wood is another common mistake as most historic windows were painted anyway.

Fig 21: The original glazing pattern and mode of opening seen on the left could have been replicated on the right, even in PVCu. The window changes and the poorly designed door have spoiled the building and detracted from its neighbour and the townscape

Doors may have little fanlights introduced and various combinations of superficial machined detailing that may appeal in a glossy catalogue but soon looks dated.

In the context of an individual building these changes are aesthetically harmful and usually reduce the value compared to a similar one that has been sympathetically maintained or restored. In a closely developed town like Looe, the result of such gratuitous changes is that the overall historic character and quality of the place is diminished. This in turn has a further impact on property values and the number of visitors who choose to stop and spend money in local businesses. A chaotic mix of window and door designs makes a statement, albeit subliminal, that the heritage of the place is unappreciated.

3.3 Mode of Opening

Casement windows were always side hung and there is no good reason to change from that. The introduction of more complicated modern hinges will always alter the appearance, especially when open. They are also more prone to failure than the ordinary tried and trusted hinge.

Sash windows are even more vulnerable to changes. The true character of a sliding sash reveals its function in that the upper sash sits forward of the lower, giving visual depth and shadow lines; it also means that the meeting rail overlaps and is, therefore, slender. Attempts to copy sash window patterns in top-hung, bottom-hung or tilt-and-turn units will always be readily apparent when they are closed and unavoidably obvious when opened. *[Fig 22]*

F22: The altered mode of opening has significantly changed the character of the right hand window

3.4 Glazing Bars

It is important that the size and profile of glazing bars are copied in replacement units as they are indicative of the age and status of the building. Attempts to double glaze traditional multi-paned window styles inevitably leads to much thicker bars and nearly always results in the use of chunky beading to hold the glass in place. Any effort to achieve anything like a traditional glazing bar profile results in a greatly reduced air gap in the glazing and consequently the thermal benefits are compromised.

Dummy bars within double glazed units cannot compare with the play of light from an authentic window - they always look like what they are. Fake external bars can be used but tend to be vulnerable to damage during window cleaning.

The difficulty of producing a convincing multi-paned double glazed window is such that on an historic building it is generally best to stick to single glazing and look at other ways to save energy.

3.5 Fixtures and Fittings

The use of good iron or brass fittings will always add to the sense of character internally. Older windows often have simple iron hinges and Georgian examples can have H hinges. These unseen artefacts would have been handmade to order by local craftsmen of the time and ought to be retained if at all possible.

Fig 23: An historic casement with simple hinges and L-plate reinforcement to corners of the central opening light. Note slate sill

On the outside the attractiveness of traditional lintols and sills needs to be considered if they need renewal. The earliest windows in Looe have (or had) slate slab sills, and this tradition continued on humbler buildings into the early 19th century. *[Fig 23]* Decorative timber, render and even cast sills can have considerable character. *[Figs 24 & 25]*

Fig 24: The ovolo chamfer formed in the render frames this sash well and the moulded underside of the sill adds interest

Fig 25: The brackets and dentil cornice give decorative visual support to this oriel window

Georgian and Victorian properties sometimes have decorative architrave around their windows; this is usually formed in run plaster or render but sometimes it was pre-formed and occasionally it is timber.

Some later 19th century examples have decorative brickwork; this was perceived as providing ornament more honestly when applied decoration became unfashionable. *[Fig 26]*

Fig 26: A later Victorian brick window surround is part of the architectural aesthetic

Shutters can be very effective in terms of insulation and are worth keeping in good order. External shutters are a rarity in Looe now, though they may have been more popular historically. *[Fig 27]*

Fig 27: This notable example of external sliding shutters makes the incongruous changes to the neighbouring property all the more lamentable

Fig 28: A simple door canopy

3.6 Doorcases, Canopies and Porches

The functional and decorative fixtures that frame doorways add so much to the character of the streetscene, but can also be vulnerable to removal or inconsiderate alteration.

At the vernacular end of the scale are simple canopies, sometimes a single slab of slate, supported on simple brackets embedded in the wall. These practical features simply protect the threshold a little but they add character. *[Fig 28]*

The Georgian period saw the introduction of doorcases for purely aesthetic purposes. They identify the principal entrance and offer an indication of status to an individual building and they are valuable incidental streetscene features. A number of good examples remain in the conservation area and subtle differences illustrate developments in taste. *[Figs29 & 30]*

Fig 29: A modestly proportioned doorway is given presence by an uncomplicated surround; the heavy bolection mouldings and fielded panels to the door are eye-catching

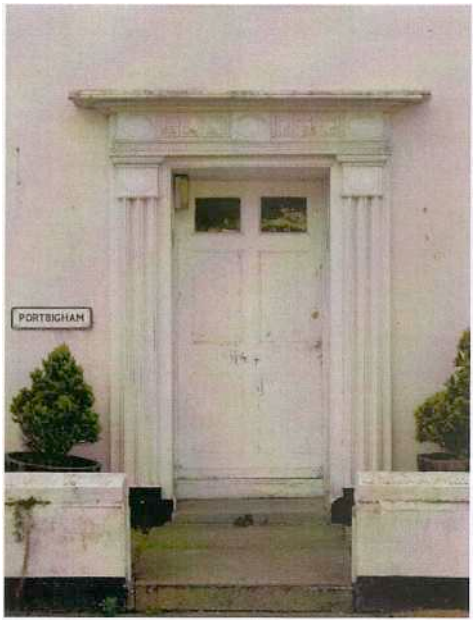


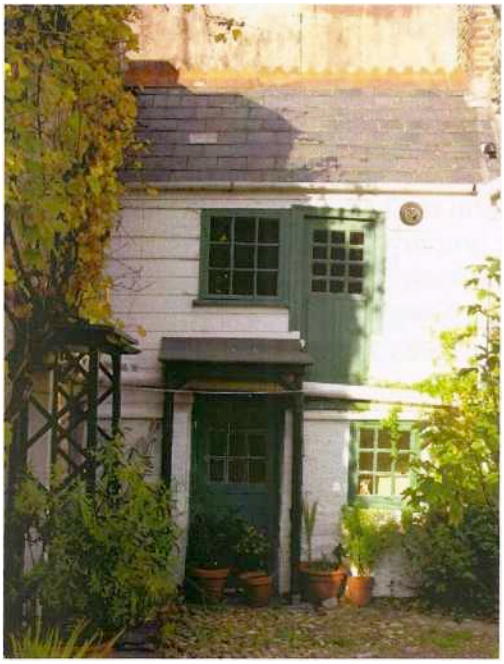
Fig 30: A more refined and ordered doorcase incorporating a Greek revival key motif to the frieze supported on unusual pilasters

Porches and portico's are not a common feature of the conservation area and any proposals to introduce them need to be carefully considered and very well designed.

Fig 31: an interesting glazed canopy on cast iron columns, with a crisply detailed, slightly projecting porch

3.7 Non-Domestic Joinery

It is a strong and distinctive tradition in Looe that there were workshops, sail lofts, stores and other' functional' buildings interspersed with the dwellings. These buildings, large and small, often had windows and doors that reflect their use; where examples remain they should be taken as inspiration for a more imaginative approach to joinery on such buildings. Distinctive modes of opening (or lack of it) and overlapping scale-like glazing have great character.



Figs 32 & 33: The variety and richness embodied in the joinery here bears witness to the range of productive activities that may have taken place in these buildings over successive generations

Fig 34: Workshops and sail lofts are distinctive local building types that need to be cherished - their utilitarian openings and joinery are integral to their character

Whilst conversion to different uses continues to occur there is no reason for the richness and diversity of joinery to be lost. There are a number of properties and outbuildings that have been converted in the past with a loss of character, which would benefit from re-consideration of their windows and doors in the future.

4.0 Summary

This document has tried to break down the arguments relating to windows and doors in the real world - when to replace, what to replace with and why a sensitive conservation-minded approach is beneficial.

In Looe, as elsewhere, sympathetic decisions are losing out to the hard sell of the PVCu replacement industry. In a sensitive conservation area the debate is polarised as nowhere else. Does conservation really make a difference to the economic wellbeing of a town? Surely any property owner ought to be able to do what they like anyway? In the majority of places there is no need for a local authority to seek to influence these decisions, but in an historic town like Looe the choices made by residents do need to be made in a wider context. The economic base of the town is, to a large extent, entwined with its special character.

Studies elsewhere have shown that a concerted effort to address and reverse such trends can have a very significant impact on the economic and social wellbeing of historic settlements. Below, in a FAQ format, is a summary of the arguments which may influence future decisions on the retention and/or replacement of traditional windows and doors.

Frequently asked questions:

Q1: *I can't afford to repair my timber windows - it doesn't cost a lot more to replace them in plastic, so why keep something old when I can have something new?*

A: *The timber in old windows is so well seasoned that it will last a very long time. Your property will also be worth more and you will be contributing to the heritage of your town, so repair is a sound investment.*

*

Q2: *If I fit double glazing it will save energy and pollution and I will save money.*

A: *If your timber windows are capable of repair then you can fit draughtproofing and repair saves the energy used in producing replacements. Most of the benefit of window replacement comes from elimination of draughts anyway, and the payback period on the double glazing itself is long. There are cheaper and more effective ways of saving energy, like added loft insulation and more efficient heating systems.*

*

Q3: *My home suffers from road traffic noise so I need double glazing to solve this.*

A: *The optimum gap between panes of glass to reduce noise pollution is about 80-100mm; the air gap in double glazing is typically less than 22mm. Secondary glazing is, therefore, much more effective and costs a lot less. Traditional wooden shutters are also very good at reducing noise nuisance.*

*

Q4: *I'm fed up with having to paint my windows - at least plastic is maintenance free.*

A: *There is no such thing as 'maintenance free' windows. Plastic gets dirty and needs cleaning, the opening mechanisms often fail over time and the rubber or mastic seals break down - all of which can be difficult and costly to replace.*

*

Q5: *I can't decorate my sash windows without expensive scaffolding.*

A: *Sashes can be easily adapted to allow them to hinge inwards or be lifted out for maintenance, while in daily use they still slide as normal.*

*

Q6: *I think we should look forward and use modern materials; why use old fashioned timber when we have plastic that does the job better?*

A: *Timber is a material of the future. The tree that supplies the wood for your windows has used up carbon dioxide, locked carbon within its structure and released oxygen; the sapling that replaces it in a managed forest will do the same. In production PVCu has used up non-renewable resources, generated toxins and used lots of energy; when its useful life ends it cannot be disposed of without causing more environmental problems.*

*

Q7: *My property already has replacement windows that I don't like, but why should I change them again.*

A: *It's up to you what to do; but putting back windows that are properly detailed for your property will add value. Reinstatement of lost character will also enhance the street you live in and you'll be doing your bit to help improve the image of the town.*

Figs 35 -41A visual postscript

Fig 35: Note the blind boxes (now very rare) and the moulded brackets. The iron plant holder is acceptable as it is reversible, but if planting is over watered it could cause harm to the building fabric

Fig 36: The bottom and meeting rails of this neglected sash are rotten, but the window as a whole is almost certainly repairable

Fig 37: The versatility of the sliding sash is one of its great benefits - this wide 12 over 12 unit is a delightful surprise in the streetscene

Fig 38: The dark finish of this high level window means the detail is rather lost to the eye; but it is a strikingly good piece of joinery

Fig 39: This type of casement with its H hinges and skinny slate sill is a rare survival that exemplifies the vernacular cottage character that once prevailed in the town

Fig 40: This basic window represents the sash equivalent of Fig 39

Fig 41: Well made and maintained traditional joinery can last hundreds of years - that is true sustainability!

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