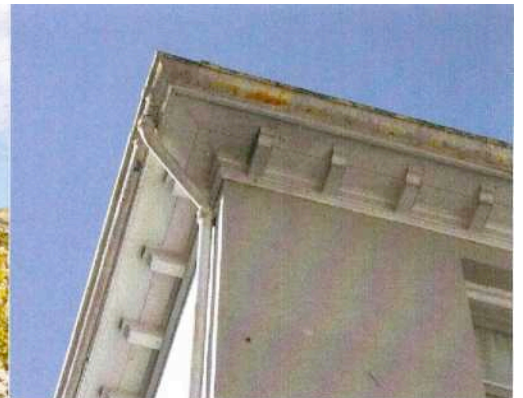


Looe Heritage Guidance Notes



No. 2: Roofs and Rainwater Goods



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.

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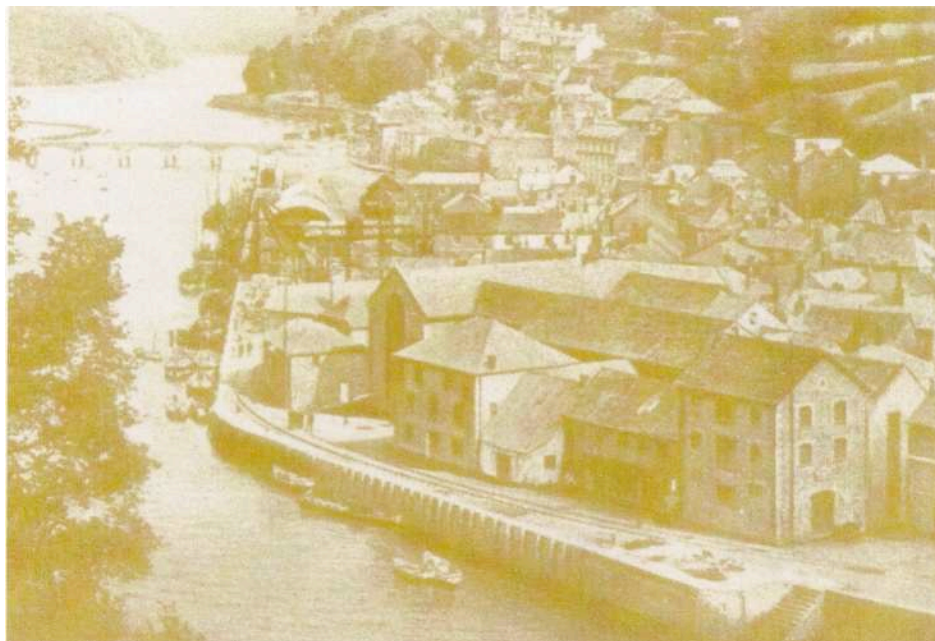
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1.0 Introduction

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 will be 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 roofs (Section E).



Archive photograph of East Looe

2.0 Historic Background

The slate of Cornwall, especially Delabole, has been exploited for centuries on a commercial basis. It has been used throughout the world and retains its reputation for quality, longevity and attractiveness. It has been used in Looe for centuries, though in early times thatch is likely to have been a common material as well.

Given its location on the south coast it seems probable that the roofs of Looe had slate from the quarries of South Devon as well as North Cornwall; but that slate is much less durable and there is little evidence remaining today. After the arrival of the railway in about 1860 the use of Welsh slate became commonplace.

As once the blue-grey slate of Delabole spread across the globe, so today the situation is reversed and cheaper slate is flooding in from South America, China and Spain. Each slate has its own character and qualities; Cornish slate is proven over hundreds of years of use to be durable and to patinate attractively. Imported slates may be cheaper, but their performance is unknown and their appearance is certainly different from the outset and will no doubt be equally evident as they age.

3.0 Roofing Forms

The form, shape and pitch of a roof can be indicative of the period of construction. The availability of suitable timber and the technical skills of the builders in roof construction dictated the spans that could be achieved, and consequently the plan form of the building itself.

3.1 Simple Vernacular

The plain pitched roof is the most ancient form of construction. Starting with cruck frames and evolving to A-frames, they usually have a steep pitch of 35-45 degrees. The ends of a detached building could be gabled, but were often hipped to save building time and resources. In Looe the ancient building plots meant that buildings were commonly linked on one or both sides into informal terraces - a character feature that remains today.

The technical limitations and joinery skills available meant that such buildings were initially only one room deep. Not so many examples remain in the town as there was much adaptation and re-building, especially in the 19th and 20th centuries. Buildings of the 17th and 18th centuries span deeper plans with the traditional A-frames and the simple vernacular roof lends itself to extension into T, L or U forms using the same basic tried and trusted methods. *[Fig 1]*



Fig 1: A U-plan roof in sized Delabole slate with mitred hips

3.2 Deep Plan

More complex roof structures were in use by the very wealthy from medieval times, but did not move down the social ladder until the later 18th and 19th centuries. Advancements in joinery techniques using king-posts, tie beams etc meant that much deeper plans could be covered without the need for costly and troublesome valleys. Many larger and later buildings in Looe have deeper plans and exhibit this form of roof. Some show signs that use of the roofspace was intended from the outset for extra accommodation.

3.3 Other Forms

Occasional oddities can be seen in the town, such as the mansard roof on the Swan Hotel and the hexagonal butter market. *[Fig 2]* Whilst these are part of the historic character of the Conservation Area they cannot be used to justify similar approaches on new developments.



Fig 2: The Butter Market roof in West Looe

4.0 Types of Slating

The appearance of slate roofs changes over time; but each approach is, in its way, a response to the need for economy and efficient use of the resources available. Traditional use of randomly sized slates eliminated wastage by ensuring that most of the slate produced could be used.

4.1 Random Slates in Diminishing Courses

There is little evidence remaining of true Cornish rag slate roofs in Looe, though there are roofs (and some slate hung walls) that use slates of considerable size. The evidence of historic photographs is that scantle slate roofing was prevalent.

The term 'scantle' is applied to a variety of roofing techniques that all involve the use of slates in varying size. Much larger slates are used at the eaves and on the verges to offer more resistance to wind; the rest of the roof is filled with smaller slates having a general reduction in size towards the ridge. *[Fig 3]* This was a very efficient use of materials as virtually any piece of slate could be incorporated somewhere on a roof. A further characteristic of scantle slating is that the slates are hung onto riven laths using wooden pegs and bedded onto lime mortar laid on the head of the course below.



Fig 3: Traditional roof on the Old Guildhall with slate laid in diminishing courses

Due to the tendency for slippage and loss of slates to occur, when pegs either rotted or fell out, roofs were often covered in cementitious slurry or were 'turnerised', (covered with a bitumen soaked hessian cloth).

A common feature of both rag and scantle roofs is that the slate is laid in random widths and diminishing courses - though in both cases this can be a bit haphazard depending on the slate available and the preferred methods of the slater. During the 19th century this tradition was refined and eventually set out as a defined system. The 'Delabole System' allowed the skilled slater to plan the gauge for battens once the slates had been sorted and stacked in various lengths. There are some examples of such ordered roofing in Looe but this is a rarity. [Fig 4]



Fig 4: Ordered diminishing courses in Delabole slate have great character

4.2 Sized Slates

The 19th century saw regularized production of roofing slate. Huge quantities were produced in Wales and the Cornish producers had to follow the trend as well. Regular sizes saved labour time on site and required less skill than random slating; but there was much more wastage and the end result lacked the charm of the older methods.

The great majority of roofs in Looe are covered in sized slates. This is a reflection of the amount of re-modelling and re-building that took place in the town in the second half of the 19th century.



Fig 5: Sized Delabole slates with slippage due to nail rot .many of the slates could be re-fixed though

4.3 Imported and Artificial Slates

Cement fibre slates are thin and insubstantial; they have a very different character to natural slate and will always have a negative impact on character and appearance.

It is unrealistic to expect the historically favoured Cornish and Welsh slates to be used all the time; though they remain a strongly favoured choice for listed buildings. On unlisted buildings cheaper imported slate is certainly an option, but paler grey slate ought to be chosen rather than darker colours or greenish products.

5.0 Essential Roofing Details

Attention to detail and a thorough understanding of traditional methods are essential if new work and repairs are to capture the appearance and essence of historic work.

5.1 Fixing Methods

Historically slates were fixed using pegs, usually oak. Whilst this method is occasionally used for repairs and re-roofing on showpiece buildings it is not a viable alternative today.

The 19 th century saw the use of pegs decline and iron nails became ubiquitous. This in itself causes problems over time as the iron nails tend to rust and fail long before the slate itself shows significant signs of wear, [see Fig 5]

Today copper nails are the norm, though stainless steel is occasionally used. Obviously the type of nail has no impact at all on the appearance of the finished roof, but in recent years there has been an increased use of slate clips. The principal reason for their use is to reduce breakages when slates are being holed - consequently they allow the use of inferior slate.

Slate clips do have a significant detrimental impact on the appearance of a roof. Regimented lines of clips are clearly visible and detract from the aesthetic qualities of the slate.

5.2 Ridges

In medieval times lead was probably the most desirable ridge material and it was available locally. Clay tiles were made elsewhere in the south west and would have found their way here by sea trade. Both options were expensive though and would've been used with care. The two materials have continued in use right up to the present day and remain the most suitable choices. When lead is used it is important to coat it with patination oil to ensure controlled oxidation and prevent white staining of the surrounding slates.

By the 19th century a range of clay ridge tiles were available; the most commonly used were plain red clay or glazed blue/black varieties. More decorative styles became available - crested, pierced and so on. [Fig 6]



Fig 6: Crested red clay ridge tiles

The latter part of the 20th century saw the introduction of heavy looking concrete tiles and interlocking fibre cement. None of these alternatives look good in an historic setting and their appearance does not develop the attractive patina and lichen growths that are so familiar on plain clay tiles.

5.3 Hips

Lead was expensive and clay tiles hard to come by so slaters became skilled at cutting and using slate creatively to achieve weathertight edges, [see Fig 1] The mitred hip is one of those methods that has a practical origin but deserves to be continued as it is simply more attractive. A hip with clay tiles appears heavy and the eye is drawn to the tiles; [Fig 77] whereas a mitred hip has a visual flow and accentuates the quality and beauty of the slate. Mitred hips are the traditional method and ought to be used in preference to tiled hips in most situations.



Fig 7: Tiled hips have a 'heavy' appearance compared with mitred hips

5.4 Valleys

Whilst flat valleys between roof slopes always had to be lead lined, pitched valleys at roof intersects were historically formed by the use of carefully cut slates to form 'swept' or 'laced' valleys. Few contractors have the skills to do such work today, so lead valleys are favoured, but these can be kept minimal if the slates either side are close cut.

6.0 Roofscape Features

The quality of the historic roofscape in Looe is not simply a result of the slate and how it is laid or finished off - there are other items that must be given equal consideration if the special character of the place is to be retained and enhanced.

6.1 Eaves

The majority of old vernacular buildings in Looe have minimal overhang at the eaves. Gutters are sometimes fixed directly onto rafter ends or on brackets spiked into stonework. [Fig 8] Fascia boards are generally simple, shallow

and fixed tight to the wall. [Fig 9] Recent years have seen the introduction of box soffits when re-roofing takes place. This is usually detrimental as it gives a heavy look and often creates a deeper shadow line that exaggerates the effect.



Fig 8: Half round cast iron guttering fixed using spiked brackets, so avoiding the need for a fascia board



Fig 9: Ogee cast iron guttering fixed to a shallow fascia with no overhang or soffit

Many of the buildings constructed or re-modelled in the 18th and 19th centuries had greater architectural aspirations and decorative eaves were a popular form of embellishment. Larger overhanging eaves with decorative brackets or substantial cornicing add visual interest to these buildings, especially when viewed from the more intimate streets. [Figs 10 & 11]



Fig 10: An ornate dentil cornice but black paint makes the detail less apparent



Fig 11: An overhanging bracketed eaves with boarded soffit

6.2 Verges

The local tradition is either for the roofing slate to be laid tight to the top of the wall, with render or a mortar fillet seal [Fig 12] or a course of vertical slates fixed to the wall and abutting the underside of the overhanging roof

slates. [Fig 13] Sometimes slate is simply added to the purlin ends for weather protection.



Fig 12: A simple mortar fillet between the roof and rag slated gable end (note that slate is hung back-to-front to give a natural drip)

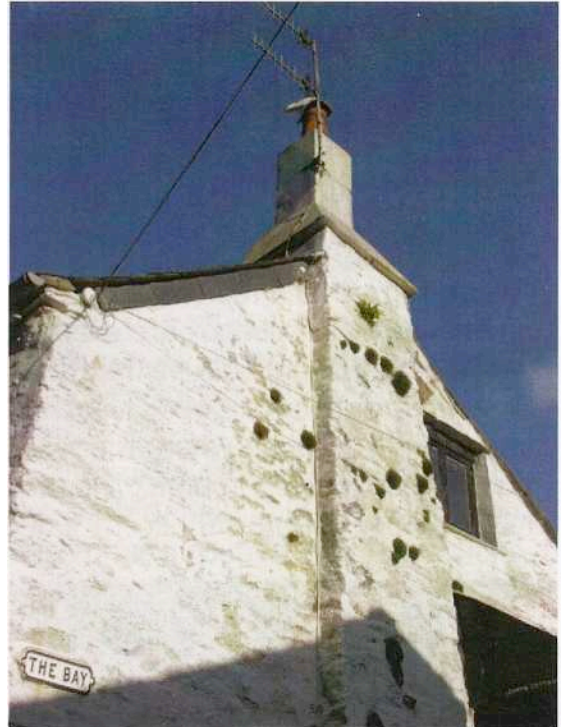


Fig 13: This roof has slated and unslated verges

During the 20th century the use of an undercloak was adopted and this is often formed using fibre cement board which, coupled with thicker battens, has made this a more assertive and less attractive detail.

Bargeboards are quite common on later buildings but do not appear to have been much used before Victorian times. They are usually simple and functional but occasionally decorative.

6.3 Rainwater Goods

The historic form of gutters in the town was simple half round or ogee profile, emptying into simple round section downpipes. Cast iron was the ubiquitous material and so an element of continuity was apparent, unifying the eaves lines throughout. Ogee gutters occasionally have lions head motifs which add interest and ought to be kept. [Fig 14]



Fig 14: Lions heads on ogee gutters are relatively common in Looe

In recent years there has been much introduction of PVCu systems, often in colours and profiles that fail to complement historic examples on neighbouring properties. Plastic is a cheap option but it soon gathers algae and tends to crack or warp. If painted it peels and its lifespan is much less than metal alternatives. Cast iron and aluminium systems are available from a number of suppliers in traditional profiles. These products can be bought powder coated and will look good and last much longer than plastic. Caution should be exercised if extruded systems are being considered as they do not match historic ogee profiles.

Failure to maintain rainwater goods causes more harm to historic fabric than anything else. Blockages are exacerbated by gull droppings and vegetation can soon take hold and ensure that rainwater spills onto walls. [Fig 15] Breakages and leaks can deliver the water collected from a large area of roof into a single location where the results can be most destructive. It is a question of 'a stitch in time'; the false economy of missing regular maintenance can be very costly indeed. [Fig 16]



Fig 15: If gutters are not cleared of debris plants soon take over and the rainwater spills over the face of the building [see also Fig 20]



Fig 16: This broken gutter fixing has clearly been discharging water onto a very important historic facade for some time. It is causing costly damage to slate hanging, cornice and probably structure; it is also a potential danger to pedestrians below

6.4 Chimneys

Chimneys add considerably to the distinctive roofscape of Looe. Whether they are substantial stone stacks, the more common slender brick ones, or a combination of the two, they all tell a story about the historic development of a particular building. [Fig 17] For the most part chimneys in Looe are fairly simple, sometimes notably so; but there is also occasional ornament and this variety is a feature in itself, [see Fig 19] Traditional fixtures like drip slates, pots and cowls all add diversity and interest - they ought to be kept whenever possible. [Fig 18]



Fig 17: Chimneys add interest to roofscape and suggest phases of historical development



Fig 18: A traditional tapered stone stack with slate drips, later raised in brick with a functional pot

It is worth remembering that even if they are not used for fires, chimneys provide passive ventilation to houses and can be very helpful in keeping damp and condensation under control. They can also offer a route for air extraction when it is needed.

6.5 Dormers

Dormers are not a prevalent feature of the town, but they do appear here and there. Some were designed as part of a building but most were 19th century additions. Styles vary but historic ones tend to be attractively proportioned and some retain good details. Eaves dormers are more common than true roofslope dormers, some are gabled, [Fig 19] others are hipped. [Fig 20]



Fig 19: An attractively detailed eaves dormer is a later addition. Note the absence of guttering and simple moulded edges to fascia and barge boards



Fig 20: Hipped dormers are less visually assertive than gabled ones

There are, however, historic examples that are somewhat oversized and inelegant, so these should not be used as justification or templates for new dormers. If new dormers are justified they ought to be based on the best traditional proportions and designs. Large box-like roof extensions inevitably harm the appearance of the roofscape and must be avoided. Where poor roof alterations have been made in the past it is certainly desirable for more sensitive re-modelling to be considered.

6.6 Rooflights

For over 150 years rooflights have been used to allow light and ventilation of roofspaces. Historically they were cast iron and quite small; they were also used with discretion to provide just enough light and normally on less sensitive roofslopes. Quite often a sheet of glass was set into slate to provide illumination of a roof void and this can still be a valid solution in some situations, [see Fig 6]

Today there are a variety of metal 'conservation' units available in a range of sizes; they combine modern performance with traditional appearance and are ideal in a conservation area context. Compared to the chunky timber framed alternatives they are more elegant and sit almost flush with the roofslope; they are also normally top hung and so in use they are less visually disruptive than centre pivot types.

It is important to stress though that all rooflights are a disruption of the roofscape so even the introduction of a well designed unit has to be fully justified.

7.0 New Work

Historic character is most vulnerable when new roofs are needed. The guidance so far ought to inform all new roofing work, whether it is replacement of existing or a new building. Below is a summary of the key points:

7.1 Choice of Materials

- Use the best slate possible, preferably Cornish.
- If using an imported slate, choose a colour that is a reasonable match for local slate - ie blue-grey not green, dark grey or black.
- Fix using nails, not dips.
- Avoid artificial slate if at all possible. Although they are cheaper they look thin and insubstantial. They will not age well like slate and will have a shorter lifespan.
- Concrete or clay tiles are thicker and weather differently to slate. They can only be detrimental to the character of the Conservation Area and must always be avoided. Reasonably priced natural slate is widely available today and will enhance any building compared with artificial products.

- Traditional clay ridge tiles are most common.
- Lead should be used in accordance with best practice standards established by the Lead Sheet Association. It should always be treated with patination oil.
- Cast iron rainwater goods in half round or ogee profiles are characteristic. If PVCu is used it ought to be in these traditional profiles and in black rather than white, grey or brown.



Fig 21: This plastic ogee guttering is not even close to the elegance of the historic version; the unnecessarily complicated down pipes in box profile are an unattractive addition

7.2 Attention to Details

- When replacing an historic slate roof, record how it is detailed at eaves, verge, ridge, around chimneys etc. Try to emulate this as closely as possible.
- If renewing a previously altered roof, look for comparable buildings and refer to the advice in this document.
- On new buildings, incorporate locally distinctive detailing so that the roof fits comfortably within the wider context of the town.
- Retain or reinstate chimneys with characteristic details like pots and drips.

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