

# Traditional Buildings in Ireland

Home Owners Handbook



Featuring The Mourne Homesteads Experience

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# Preface

The purpose of this handbook is to provide a first step, practical guide and information source for those initiating or assisting in projects to maintain, repair, restore, alter or extend a traditional building(s), taking into account heritage issues.

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# Introduction

**Writing** this introduction is a pleasure for me because this handbook is an important and informative aspect of the Mourne Heritage Trust's Built Heritage Programme. Under this programme, through the Mourne Homesteads Scheme, we are restoring, enlarging and refurbishing nine properties of varying sizes to create spacious modern homes within traditional buildings. I would call on all owners and potential owners of such properties to read and enjoy this handbook, then look at the possibilities of restoration, refurbishment and perhaps even sympathetic enlargement of your traditional buildings to maintain and enhance the historic and cultural ambience of our landscapes.

The landscapes and environment of Ireland are not just important to us locally but also nationally and indeed internationally. An essential part of those landscapes is the traditional or vernacular buildings that sit comfortably in them. I am not just referring to the few exceptional protected buildings but also to the myriad of vernacular rural dwellings, which, in a friendly, comfortable, homely way, pepper our landscape. Sadly, many of them are now derelict, yet they were the comfortable homes for generations of rural dwellers throughout the last three or four centuries. When one thinks of the stories and local history, which were told and retold around those welcoming hearths, indeed it is sad that much of it has not been recorded. Much of it was the history of ordinary folk, political or otherwise, which eventually grew to become the history of our nations.

These unprotected buildings are one of the most threatened parts of our heritage and culture because they are wide open to inappropriate development. In fact their very existence can often bring their own demise when they are used as reasons to obtain planning permission for a replacement dwelling. Economic forces also threaten them.

The sadness of this situation is that many could be sympathetically restored and refurbished, maintaining, not just the occupation of the historic site, but the whole familiar ambience of a traditional rural family home. To all potential owners and owners of such dwellings, please read, enjoy and be inspired by this handbook. Then consider the possibilities of restoration and refurbishment of your vernacular building to maintain the historic and familiar cultural feel of our landscapes. This handbook shows and suggests how this can be achieved, how these buildings can once again become comfortable, accommodating family homes and even income and job generators. (Hanna's Close on the front cover of this handbook is an example of the latter.)

I am very proud of the achievements of the Mourne Heritage Trust in the challenging field of Built Heritage Conservation and I am happy to commend this handbook to you in the hope that you will join us in our quest to retain as many of these threatened, yet important buildings. As the poet tells us:-

"The warmth that makes a house a home,  
Comes not from Hearth, but love alone."

**Arthur Mitchell**

Chairman  
Mourne Heritage Trust

## Foreword

**For** some years now, the Northern Ireland Housing Executive has been involved with the Mourne Heritage Trust on the innovative Mourne Homesteads scheme which has sought to restore and reuse traditional buildings. This involvement was in part due to an awareness that the restoration skills and knowledge developed from the Mourne project would be of value elsewhere in Northern Ireland.

The improvement and repair of domestic properties is one of the Housing Executive's key priorities and the Private Sector Grants service provides financial help in this regard. As the Regional Strategic Housing Authority, the Housing Executive therefore welcomes and supports this traditional building restoration guide as a practical way of assisting owners of traditional buildings.

This guide is expected to contribute to the maintenance and up keep of properties and to help ensure that they are used for their original purpose, principally as dwelling houses for those requiring a decent home. I would encourage anyone wishing to restore a traditional building to make use of this guide and to check with the Housing Executive on grant options that may be available to them.

**Paddy McIntyre**

Chief Executive  
Northern Ireland Housing Executive







# The Historic Development of Traditional Buildings

Section One



## The Historic Development of Traditional Buildings



The traveller through rural Ireland can not but notice the persistent scatter of empty and derelict traditional buildings that punctuate the landscape no matter where you go. Equally, it is impossible not to notice how contrasting the new buildings are, when set against the old, in form, size, style, materials and siting. A wholesale change in the rural built environment is taking place without any debate as to the consequences, whether they be the loss of distinctiveness, national or regional; the loss of history and cultural values or the sustainability issues arising from energy and material losses that follow the tossing of an old building into a hole and to building a new one in its place. Change is not unique to this age but never has it been on the scale and the speed we are witnessing today. It is happening not because these older buildings can no longer serve a useful purpose, it is because, at this point in time, we, as a society, do not need to count the cost. How future generations will judge us we can only guess.

Archaeological evidence of man's habitation in Ireland dates back to 7000BC. Throughout the time span between then and now, traditional ways of building have evolved, one person learning from another. Changing circumstances have led to changing solutions and along the line influences from other cultures have gradually been blended in. At any given point in time, there have been shared values, shared customs, local materials and local ways to use them and the learning process has always been to build on the past.



It is common today to link the concepts of tradition and the vernacular exclusively to the lowest levels in society but you only have to scratch the surface of history to find this is simply not a true perspective. Until very recently, it was only at the very peak of the social ladder that buildings were consciously designed and where architectural style played a significant role. From the landless labourer to the minor gentry, buildings were generally constructed in a common way; the relationship and size of rooms did not differ greatly across this span of society. The only real difference was in how many apartments you had. Most families lived in a single room,







sometimes with the luxury of a loft and some sort of partition to provide a basic level of privacy, whereas the tenant farmer might well have eight such rooms in his two storeyed house. A further variant near the top of the social ladder was the double pile which is more or less two smaller houses, one parallel to the other and interlinked.

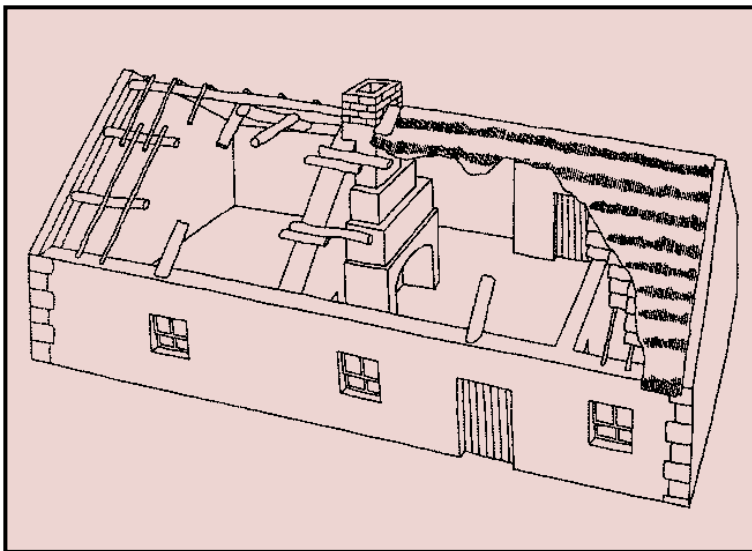
The earliest evidence of buildings indicate timber frames but clearly a tradition for masonry construction has early beginnings, as witnessed by the stone grave constructions and cashels of pre-Christian times followed by round towers, stone built churches (some of which reflect the detailing of timber construction as at St MacDara's Island, County Galway) and the sophisticated dry stone work of the cells at Skellig and the Gallarus Oratory, Dingle. Rathes and ring forts span from pre-Christian to post-Christian times, indeed there is a growing body of scholarship that believes some of these sites were occupied well into the medieval period. Of the sixty or so excavated to date, only timber framed building remains have been found in them. Circular, oval and rectangular forms seemingly co-existed through this time.

The years between the arrival of the Anglo Normans and the Plantations have, so far, revealed little to us beyond the very obvious castles and fortified tower houses. With the

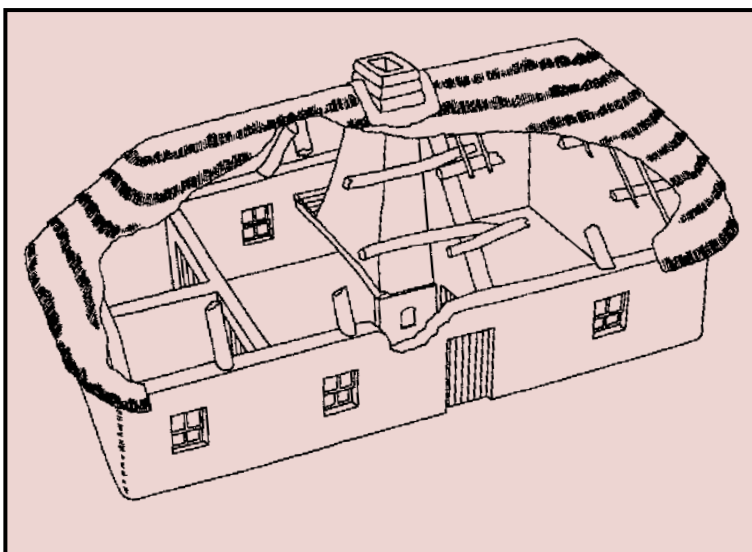
Plantations came a whole rash of written and illustrated accounts amongst which the maps drawn by Richard Bartlett are particularly helpful. His drawings of buildings are quite detailed. They show curved as well as rectangular plan forms and they indicate what appear to be cruck frames in some instances. The blades of a cruck are selected because they are curved and can reach from the perimeter of the building at ground level to the height of the roof ridge in the centre, all in one piece. Quite a number of buildings constructed in this way have been identified in recent years. Most are in the North in the zone roughly bounded by Lurgan, Lisburn and Lough Neagh. By contrast, some buildings of this period seem to have been transportable, in keeping with the common practice of booleying.

It is from the end of the Plantation period that the forms of traditional buildings, with which we are familiar today, begin to emerge. After the 1640 rising, timber for building became very scarce. The government paid subsidies to encourage replanting. Nevertheless, timber frame construction, whether of the Irish or English variety, became practically extinct. From this point on, almost every new building was of load bearing, masonry construction.

## The Nature of Our Traditional Buildings



Gabled roof, direct entry.



Hipped roof, lobby entry.

**What** have come to be classified as traditional buildings are all buildings put up without a formal design process. Their form, plan and method of construction simply follow a tradition for the time and place of their conception. This principle is not confined to dwellings, it caters for churches, mills, barns, byres and other building uses as well. A basic distinction has been made by the leading commentators, in relation to houses, between direct entry and lobby entry plan forms. The first is most common in the North and West, the second in the South and East but this is not exclusively so.

In the direct entry plan, the external door(s) is at the end of the main room away from the main hearth, whereas in the lobby entry plan the door(s) and hearth are at the same end of the room and the hearth is sheltered by a jamb wall. Both these forms are found in basic, single-roomed houses and when there is more than one room, the additional rooms are set out in line, linking directly out of each other, there being no specific circulation areas; that is to say, no hall or passage. If the plan is double pile, then there are two parallel strings of rooms. If there is a loft or an upper floor, the stair will rise directly out of the main room. Sometimes the range will include for agricultural uses, perhaps a dairy, a byre or a cow house. And it is not by any means rare to find a lodging for workers. Such a lodging is easily identified because it will have a hearth and an outside door but no internal connecting door with the rest of the house. What appear today to be quite modest houses are found with lodging

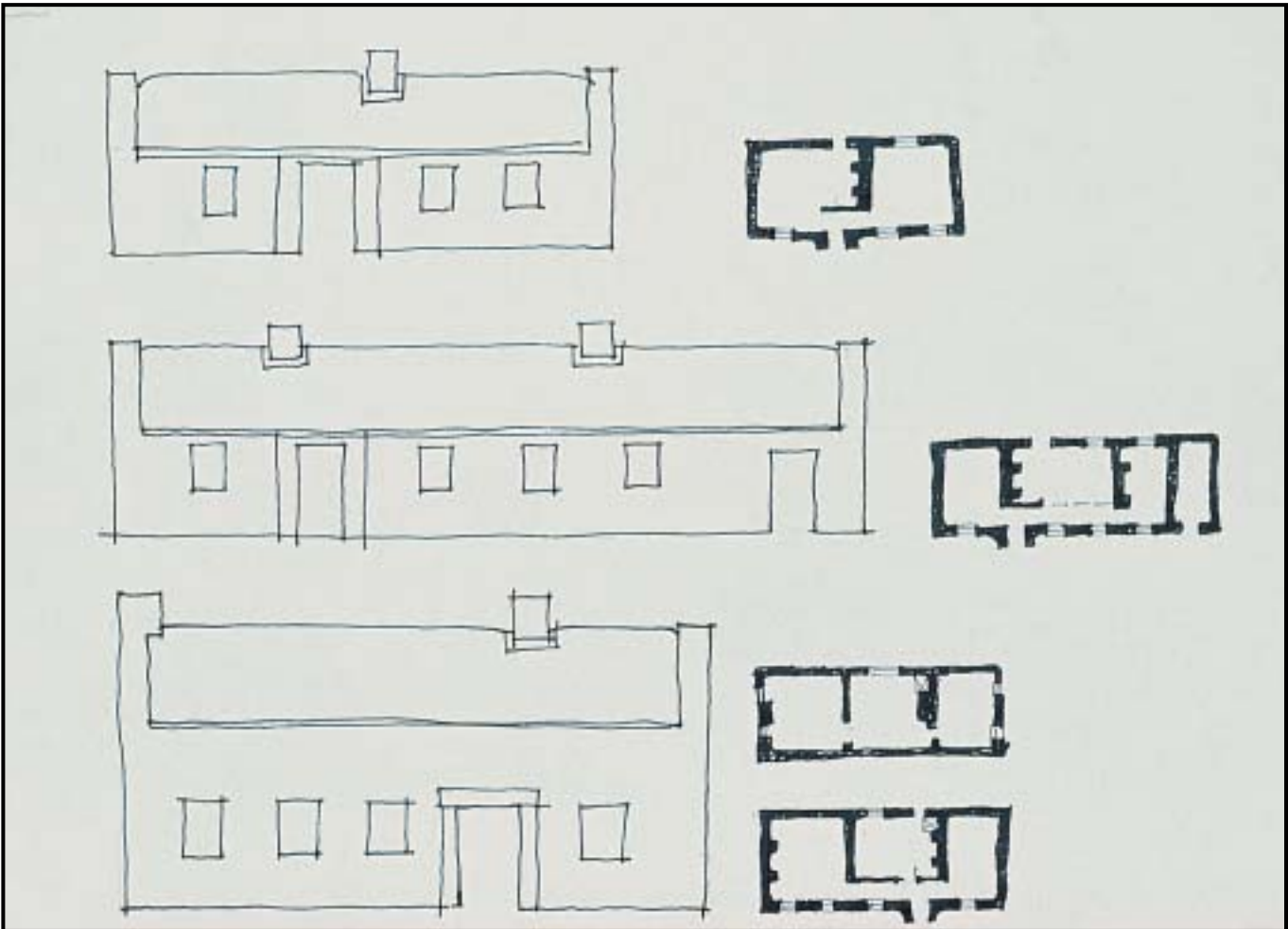
rooms. When you think about a family with eight children living in one room, one can imagine the parents being delighted when the eldest moved away to work for a local farmer or landlord, the contracts being made at one of the hiring fairs held in every market town.

Where industry improved the local economy, dwellings might be extended. The most common extension was to add another room at the gable or to incorporate into the dwelling a bay that had hitherto been for agricultural use. Sometimes the choice was to add a storey over one or more bays. Site conditions generally dictated the choice. It is only in recent times, usually when services like water or electricity were brought to a house, that rooms were added at the back. Outbuildings followed the same structural pattern as the house and, like the house, were sometimes single and sometimes two storeys.

Through the next century and a half, this building tradition continued, the only obvious change being the gradual sophistication of the component elements, in particular the doors, windows, stairs and hearths and it is from these elements that most of these buildings can be dated. There were also external influences. One was taxation which touched on bricks, glass and hearths. Other influences were the gradual replacement of turf as a fuel by coal and the improvement of transport.



The industrial revolution brought with it more radical changes. The extending Empire delivered an ever widening choice of materials and, as wealth descended the social ladder, the choices were open to a growing section of society.



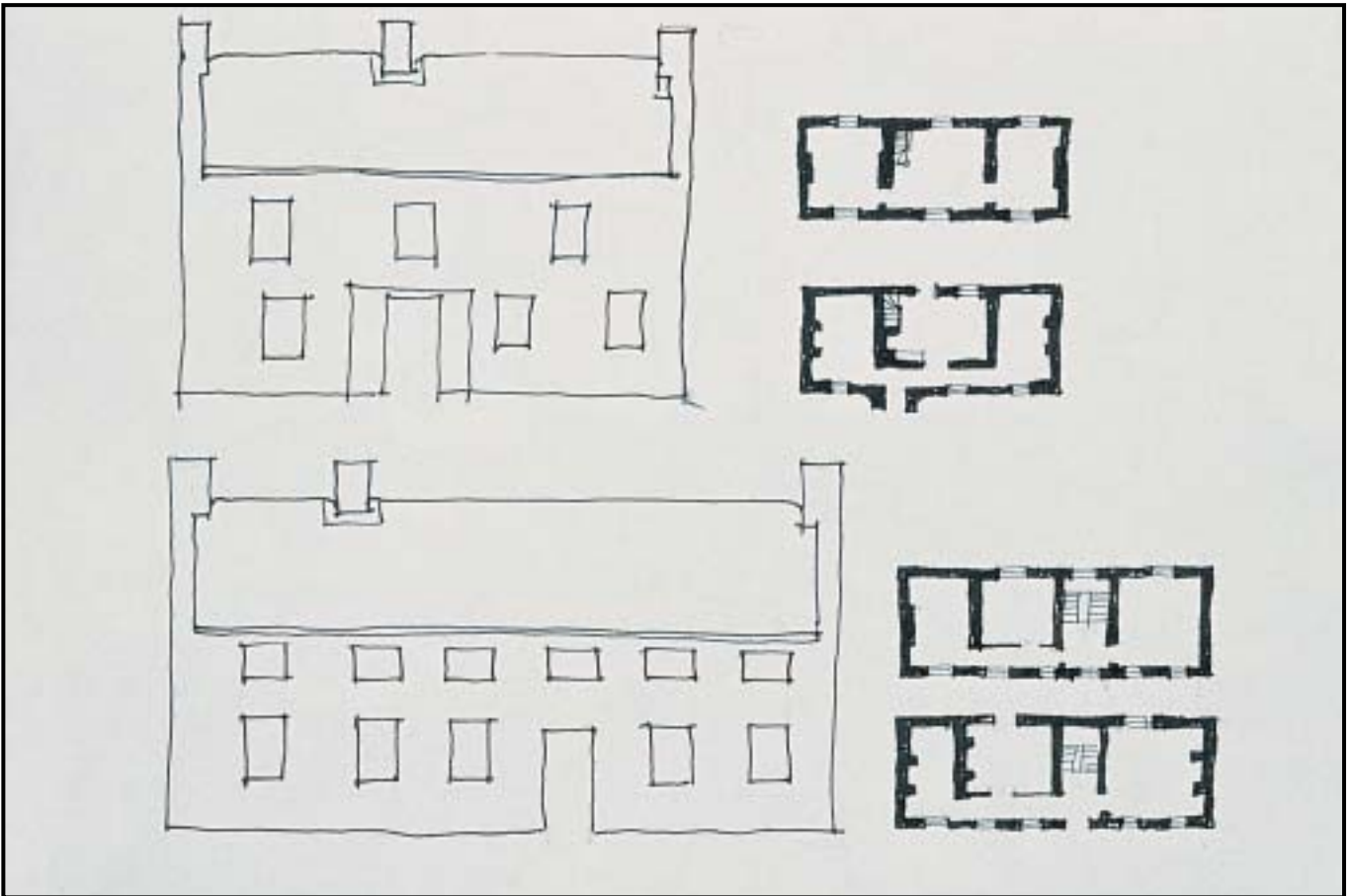
Above and opposite:  
Variation of scale but  
shared tradition.

Machinery by stages changed the whole economy of building. Take for one example nails and screws; in the Plantation era, each nail and each screw was individually hand made. When these components could be mass produced, carpenters no longer needed to construct complicated timber jointings. Planks and scantlings could now be machine sawn so that timbers could be accurately shaped away from the site and delivered, already machined, to predictable shapes and sizes. The same was happening with brick making. Bricks used to be made on site and fired in clamps\*. The result was not always a total success. Now continuously fired kilns and machine cut brick clay reduced waste and delivered a reliable product. Experiments

were being made with proprietary cements. Finally Portland Cement made its appearance in the late 1850s.

\* Clamp literally means a heap. A burning floor was prepared that included channels to facilitate the draft. Unburnt bricks were stacked with space between each to allow the heat to have maximum effect. Different patterns of stacking were deliberately used for their effect on colouring. Fuel was packed into the channels in the floor as well as a core at the heart of the clamp. The fuel was fired and as soon as it had taken hold, the outer face was sealed with clay or wet sods. The burning process took about a week and had to be watched continuously. Any leakage had to be resealed immediately otherwise all the heat would be drawn to one point and the bricks ruined.





However, industry brought with it problems as well as solutions. The conditions of the new urban workforce in the expanding industrial towns were beginning to ring alarm bells at governmental level. Something had to be done to establish minimum standards to prevent disease and social unrest. The first moves came from the Poor Law Guardians and by a series of steps the Model Byelaws came into being and were to remain the guidance for new building, albeit with periodic amendment, until the 1970s (in Northern Ireland).

Regulations and manufactured components gradually stifled the old traditions in building. Only now are we emerging at the other end of that tunnel with a new generation of Building Regulations that are performance led instead of being prescriptive. At the same time,

conservationists are gaining a scientifically based understanding of traditional building and can now demonstrate in modern speak, that the old builders were not as stupid as they had been made out to be in the intervening years, when we were all taught that traditional buildings were unsanitary and unstable, certainly not worth the effort necessary to give them a new lease of life. A case in point where modern research has vindicated traditional techniques is in the use of lime for mass masonry construction. The lime has been proved to display a flexibility which keeps out water while allowing a degree of movement, whereas in the same context Portland Cement is rigid and fails on both counts. Of course, both materials have their place but must be used with wisdom and understanding.

## The Elements of Traditional Constructions



**Walls** – The material used depends on what is locally available. The most common walling material is undressed rubble stone and the second most common is earth. Most people are familiar with rubble stone. These load-bearing walls are generally 600mm to 700mm thick and the stones are selected to face up on both sides. When walls are built against a bank, they are sometimes only faced on the one side. The stonework is occasionally exposed but more often it is protected, at least by layers of limewash but usually there is also one coat of plaster or more.

Earth as a building material is generally not so familiar to most of us. Many owners are quite shocked to find their house has earth walls but, in practice, earth is a very reliable building material. It is important to keep it dry. The especially weak points are the head and the foot but the surfaces between must all be protected with lime. There are a great many earth buildings in use today. Some have been standing for two centuries and more. Earth walls have been built in a variety of ways, some by ramming wet clay between shutters, others by using hand formed lumps or unbaked bricks that have been pre-dried under cover. Some earth walls are reinforced with straw, hair or rags. Earth was commonly used as a bedding for rubble stone work, sometimes neat and sometimes it was mixed with lime. Fired bricks were always available but, until they could be mass produced, they were very expensive and consequently were used when nothing else would do. Early bricks were made with local clay and usually fired on site in a purpose built clamp. These bricks were thin, very much like the bricks made by the Romans, often as little as 60mm in depth. This compensated for the inefficiencies of clamp firing. Brick tax, which was levied from 1784 until 1850 led to larger bricks being made. The size of the 'imperial' brick was finally standardised, then in 1970, the industry adapted the metric size that we use today. The introduction of the continuously burning Hoffman Kiln in 1858 completely revolutionised brick making. From that time on, most bricks were machine made. There are only five brick makers presently in Ireland. At Kingscourt, County



Cavan, there are still some very early kilns that are well worth seeing for those interested in the history of brick making.

The footings for these traditional load bearing walls, no matter what material is used for the mass of the wall, begins with the cleaning of all vegetable soil down to a firm, level and well drained base. The drainage and disposal of ground water in order to protect the foundations was catered for on nearly every site by constructing stone lined shores. Large stones were then laid as a base for the wall. When the soil was back filled, the top of these foundation stones was left exposed in order to minimise the amount of water that could rise into the body of the wall above.

Timber components, such as door frames and windows, were built in as the wall was raised; only in later years, when it became common practice to form the openings in brick, was it possible to offer up frames into a completed wall.

**Roofs** – The next task was to frame the roof. For early buildings, local trees would have been felled and the timber used green. This way it was easier to shape and tool but sometimes the subtle green timbers would distort when put under stress. A sag or bow in an old roof is a familiar sight and many a roof has been condemned out of hand in

modern times for this reason alone. The most was made of a tree. The limbs were sized and selected for different tasks; even the finest branches might be put to use to support the scraws for thatch.

Traditional room sizes could be spanned with simple, unframed supporting timbers. However, in some instances, particularly earlier roofs, the timbers were framed, that is to say, they were joined together and braced with the result that they formed a rigid structure very much like a boat turned upside-down that only needed vertical support, all the other forces being absorbed by the frame, but some original roof members were seriously undersized, especially in the periods when timber was in particularly short supply. Inspection of the roof timbers can provide information about the history of a building. For example, if all the upper faces of the load bearing timbers have been dressed, it is reasonably certain that it was originally tiled or slated. If they are uneven, it was probably thatched. Framed roofs generally had numbered joints. If the numbers do not coincide, then the timbers are probably re-used from an older roof. In early roofs, the timbers are split, riven and axed with a minimum of sawn work. The faces left by machine sawing are quite different in appearance from hand sawn surfaces. Early roof timbers are pegged together, only later roofs have nails and

screw fixings. In early roofs the lower rafter ends are held in place by being built into the head of the wall, whereas in later roofs there is a timber wall plate. In early houses, ceilings were rare and smoking fires and inadequate chimneys have often blackened the underside of the roof and have helped to preserve the timbers from decay. All these features and many more are tell-tales that will help the owner to put together the story of his house.

**Roof Coverings** – The common coverings for traditional roofs included slates, tiles and thatch. In more modern times, manufactured sheet materials have been used including corrugated iron and asbestos. In the past, wooden shingles were widely used; their popularity seems to have waned when suitable timber could not be found and along our coasts tarred canvass was once a common sight. Today the most used covering is slate. There were a number of regions where local slate or stone was used extensively but economics have forced all these quarries out of business. The last to close, approximately ten years ago, was at Killoran in County Tipperary. Firstly, imports from Wales and now from further afield have completely extinguished the local industry. There were a few tile works in Ireland of which Florence Court, County Fermanagh, is one of the better known but they were never produced in any great quantities. While nails remained expensive, coverings were held in place with wooden pegs and were often torched (plastered) inside to stop them rattling in the wind. Some roofs were sarked (boarded) instead of battened; this made it

easier to accommodate irregular sizes of slate. On a sarked roof, it was common to spread a layer of chaff or shous as a bedding to the slates, again to stop them rattling in the wind.

Of all roof coverings, thatch was the most common until well into the last century. In most people's minds, thatch means a covering of straw. However, in practice, a very wide variety of plant material has been used through time. The detailed examination of the accumulated layers of surviving thatched roofs has discovered a great deal about the evolution of local agricultural practices, climate change, the social standing of the owners and more.

Generally, people used whatever material there was to hand in sufficient quantities, whether it was cultivated or wild, related to social status. In a recent report on thatch in Ireland, presented to the Department of the Environment, Heritage and Local Government, three classifications for historic thatch are noted:–

**Scavenger Thatch** – for the poorest houses whatever came to hand was used, be it heather, broom, bracken, marram grass etc. This type of thatch is now non-existent outside the museum context.

**Vernacular Thatch** – represents the majority of roofs and is locally grown wheat, oats, rye, barley or flax used with distinctive local styles and traditions.

**Landlord Thatch** – consciously romantic and picturesque, found in lodges and estate cottages and generally based on English decorative styles and often using reed.

In the past, roofs received regular attention. The thatcher's first priority was to protect the harvest through the winter months in ricks, stacks and clamps. Only when this work was done, did he turn his attention to the house roof. Today, roofs do not get this level of maintenance as part of the agricultural cycle with the result that the longevity of materials and workmanship have become an ever increasing concern for owners of thatched roofs.

Another important change is the mechanization of agriculture and the development of new strains of cereal crops that are suitable to the combine harvester. Old varieties had tall sturdy stems, ideal for thatch but the new varieties have been bred for greater yields and with much shorter stems. Fortunately, enough growers have continued with the old varieties to provide for about two thirds of the thatcher's needs in Ireland. The rest is imported, mostly from Eastern Europe and a great deal of this imported material is reed.

The historic methods of fixing thatch onto a roof fall into five broad categories:-

**Scollop Thatch** – bundles are held in place using wooden rods or spars and scollops driven into an underlay of scraws.



Scallop thatch, rye.



Bundles of rye ready for a new spar coat.



Rope net over staple thatch.

**Roped Thatch** – loose bundles of straw or marram grass held in place by a network of ropes

**Pegged Thatch** – ropes are stretched horizontally over the straw and fastened with wooden scollops or pegs

**Thrust Thatch** – the first layer of straw is sewn to the roof timbers using straw ropes. Next, small bundles are folded over and knotted then forced up into the roof using a forked stick (spurtle).

**Stapple Thatch** – straw is made into tightly knotted bundles (stapples) which are secured in position with daubs of wet clay.

The present thatching industry only provides scollop thatch and within that category there are three basic variants:–

**Water Reed** – the beds are carefully managed to provide a regular stem length of around 2 metres. Stems are cleaned and bundles made up as the reed is harvested. When it is delivered to site, it is ready for placing on the roof. The bundles are placed – butts downward, fastened and then the butts are beaten up to form an even slope. Reed stems are relatively rigid so that ridges and other tight detailing is finished in straw or rushes.

**Combed Wheat Reed** – is not in fact reed at all and may not be wheat. The description comes from the appearance

and the techniques which are similar to reed. The straw is harvested using a binder-reaper and only the heads are threshed. In this way, the stems are not damaged. Next, the straw is combed, leaving a straight, clean stem. Bundles are made up and placed on the roof – butts down. The procedure from this point on is as for reed except that the straw is subtle enough to make the ridges and all other details.

**Long Straw** – usually winter wheat with solid stems but not always. No particular care is taken with the reaping or threshing. The material is delivered to site as a disorderly heap. The first job for the thatcher is to draw out the stems into parallel bundles. Some stems will be butt up, some butt down. In the finished work, more of the stem is exposed than with the previous techniques and many heads will be visible. The result is a much softer, flowing appearance compared to the sharpness and angularity of the other techniques. Surveys have shown that more historic Irish roofs were covered in this way than any other.

All three of these are variants of scollop thatch. Historically, there is a bed of scraws below the thatch. Where the roof timbers were exposed below and not ceiled, some roofs were first covered with decorative matting of straw called fleeking. Quite often on a new roof, a first layer of straw was stitched down with ropes but further coatings and repairs were secured with rods

and scollops, usually willow or hazel. Today, some thatchers work with iron rods and wire in place of scollops and thatchers using reed will fix direct to the roof timbers, dispensing with scraws altogether.

### Roof Junctions and Internal Gutters

– The sealing of roof junctions, abutments, valleys and secret gutters tend to be one of the least satisfactory features of historic traditional buildings. Today, we would use lead or copper in all these situations. Copper was particularly popular in the Dublin region because of the copper mines in the Wicklow Mountains but elsewhere lead dominates.

In the past, many of these junctions were simply sealed using cut slates set in mortar and sometimes mortar alone. There was a serious decline in the quality of plumbing and other metalwork reaching an all time low towards the end of the 18th century with the result that the modern owner quite often has simply to start again from scratch.

**Chimneys** – Chimneys are relative newcomers to the evolution of traditional buildings. In many castles and tower houses flues are simple openings in the parapets and, at the bottom of the social ladder, chimneys were practically unknown until the 19th century. The burning of coal and the higher temperatures generated made chimneys essential requirements. In a building where there was no chimney, the smoke would gradually seep through the thatch, trickle out under the lintel of the door or find its way out of a gable window.



Old hearth adapted for coal burning.

Many early chimneys were shallow boxes formed of wattle and plaster and rising only just proud of the roof. Below, there may have been a hood made of similar materials over the turf fire that smouldered on the floor. Examples of these arrangements still exist. Changing to coal as a fuel and the Hearth Tax influenced chimney design. Chimneys were now built with more durable materials, stone or brick and some affluent owners built stacks that they would never use simply to advertise their wealth.

The chimney pot first made an appearance in the reign of George III. The first pots were cast iron but the pots we are most familiar with today are vitrified clay. In the second half of the 19th century, very decorative pots became fashionable. Sometimes the role of the pot was fulfilled by slates or tiles set on edge in a bed of mortar. The insides of flues were generally parged or plastered until ceramic liners became available towards the end of the 19th century.

In traditional buildings, chimneys are always in the line of the roof ridge. Their relationship to the entrance door is a very useful clue to the plan form of the house, showing if it is direct entry or lobby entry in arrangement.

### Gutters and Down-pipes –

No thatched building nor many slated ones ever had fitted gutters and down-pipes. At best, there may have been a very short length to protect the stranger at the front door. Where they were fitted, the oldest are all cast iron and this remains the best material for the job to this day. Cheaper alternatives followed including galvanised iron, asbestos and PVC. In very recent times, aluminium has come onto the market and the cast and spun varieties perform to the standards of cast iron.

**Floors** – On the ground floor, the main room, practically always, has a solid floor. There is plenty of evidence that many of these floors were originally rammed earth, sometimes painted and sometimes polished. Today, except in a museum context, all these earth floors have been concreted over. If the floor was not originally earth, it is paved either with stone slabs or clay tiles according to status and location. Where there are other ground floor rooms, it is likely that they will be boarded. The boards will be nailed to timber runners laid directly on the earth. Upper floors, where they existed, had to be framed and boarded. In the Plantation era, this would have been a very costly component. The span of the room was halved using a stout Bressummer beam with a near square cross section of roughly 200mm x 200mm. The top edges of the beam would be housed out for the joists. The boarding would be broad and square edged, nailed down with hand wrought brads. There would be no ceiling.



As timber became more scarce, the Bressummer was often omitted with the result that there would be a spring in the floor. The extent of this spring would be lessened if there was a ceiling and more so if tongued and grooved boarding was fitted.

Early floors are of native timber, often oak. By the beginning of the 18th century, Baltic pine (Memel) was almost universally used. After the Napoleonic wars, timbers from the Empire, particularly North America, make their appearance. This sequence is generally applicable to all carpentry and joinery work throughout the building.

**Stairs** – Most houses would have had little more than a companionway or a ladder but there might have been a rudimentary stair boarded up in a cupboard-like structure in the corner of the room. If, however, a stair had been planned into the construction, it tends to





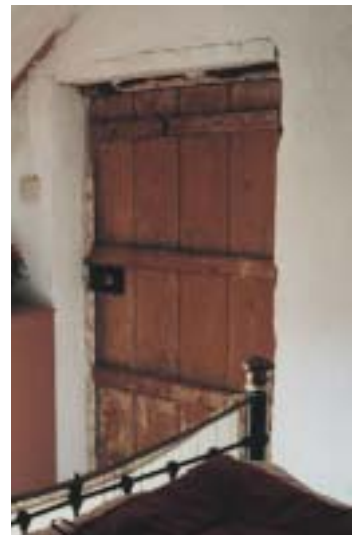
Open string stair.



Closed string stair.



A selection of door types.



be made a feature. In Plantation times, open string stairs were popular with turned balusters and broad, moulded handrails. Early in the 18th century, the closed string became more common, the balustrades were lighter and plainer. Occasionally exotic timbers like mahogany were used for the handrail. The Victorians returned to decorative balustrades with open strings and newel posts were often made a feature. The stair position can usually be determined from outside by virtue of the window positions for lighting the stair; usually either half way up the flight or from a skylight in the roof.

**Doors** – Early doors are broad planks held together by rails and secured shut by a timber slip bolt or latch and occasionally with the added security of a draw bar. Panelled doors gradually filtered down the social ladder. In some houses, planked doors were dressed up to look like panelled doors by the addition of moulded rails to the face of the boards, usually one face only. By the late 19th century, panelled doors were within the grasp of most people. The panel details, mouldings and fittings can date a door fairly accurately. Boarded (sheeted) doors

continued to be made; as the years went on, the boards became narrower and thinner. In the late 19th century, they often have beaded or bevelled edges. By contrast, the frames generally became heavier and braces were added to the rails. The first iron fittings, hinges, latches, bolts and locks were all hand forged and many of them, even in poor houses, are very elegant designs. The first iron hinges were strap 'H' or 'HL' pattern, leaf hinges came in with mass production. Latches and locks were practically all rim fittings, an original mortice lock or latch is a rare find. Door frames and fittings were all painted or varnished; sometimes they were grained or scumbled, unless they were made of exotic timbers, which was very unusual. Any brass knobs, escutcheons or facings would be polished. Polished timber or china finger plates were sometimes fitted to protect the paintwork from dirty hands.

**Windows** – In Plantation times, many windows were simply barred and shuttered and without glazing. Glass was expensive to make and it was taxed. In consequence, glazed windows in most houses were small. Over time, glass manufacturing techniques developed making cheaper and ever larger sizes of sheet until it was no longer necessary to sub-divide a window with intermediate glazing bars. Old glass enhances the character of the original windows.

The early windows were fixed lights or hinged casements. However, by the beginning of the 18th century, the boxed framed sliding sash had become almost universally accepted. The first patterns were relatively narrow, often three times as high as they were wide and the glazing bars were broad and heavy. Over the years, the detailing was refined, reaching a peak of elegance early in the 19th century by which time the timber components had become so slender you would wonder they could do their job so well. Timber encasements were common, the simplest were fixed timber sheeting, the most elaborate were panelled and provided for internal folding shutters. Quite modest looking farm houses can be found to have these very up-market fittings at least in the principal rooms or the principal elevation. Simplified versions of the sliding sash were made without weights and cords; these were held open on drop over catches and it was usual for only the bottom sash to move while the top sash remained fixed in place. Like doors, windows can be accurately dated from their detailing, glazing patterns, mouldings etc. On landed estates and in agricultural buildings, industrial buildings and even churches, cast iron windows became the fashion in the early 19th century although they had been known before that time. Like doors, windows were always decorated.





Fold back doors.

## Internal Finishes; Walls and Ceilings

– Lime plaster is practically universal. Sometimes it was applied directly to the masonry wall, sometimes the walls were lined and then plastered to laths on battens. A very smooth, regular finish could be obtained by a final skim of pure lime or gypsum. Where householders were wealthy enough to have a parlour, that room would often be run with a cornice moulding. The further up the social scale you were, the more embellishments there would be. Where the ceilings were plastered, this would be to laths. In the later 19th century, when machine run match boarding became available, this material was often used to finish walls and ceilings; wainscoting became very popular with a moulded chair rail along the top. When houses were up-dated, the timber sheeting was fitted on top of earlier plasterwork.



Built in furniture.

**Furnishings** – It is interesting to note some of the features that developed in traditional homes to save space. Space was certainly at a premium even if many of the household jobs were carried on outside that we would do inside today. This is particularly true of the main room of the house. Here, the settle bed served as a seat in daytime and bed at night. Sometimes the table was a leaf hinged to the wall and could be folded back. Doors were frequently made to fold in the middle so that they would wrap around a corner and not project into the room when open. Lastly, the built in dresser could double up as a screen to the bed space.







# Traditional Buildings in the 21st Century

Section Two

Extensions, Alterations and Setting

## Extensions, Alterations and Setting

**Traditional** buildings tend to be small by today's standards – typically 700 – 1000sqft, on a narrow plan form, often only 15-20 feet in width. This invariably leads to the need to extend, perhaps double or treble the original house size, and unless this is done carefully, it can easily destroy the very essence of the historic character and significance of the building.

There are, however, a number of principles that, if followed, can result in successful extensions that will preserve, even enhance, the character of the original building.





1

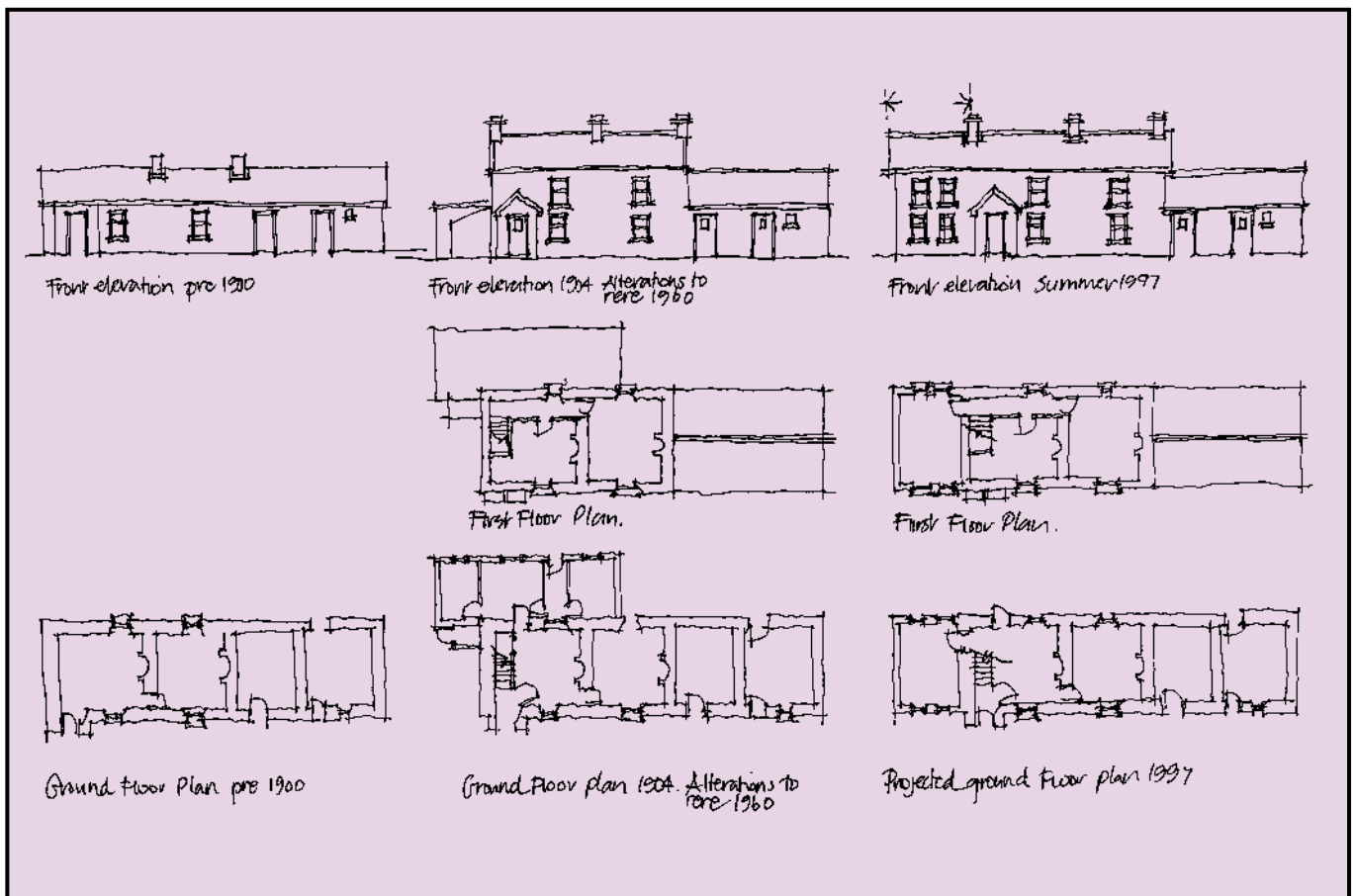
Reach an understanding as to what is significant about your house – the plan form, the shape and design of the windows, the materials such as natural slate, or lime plaster, and use the protection of this significance as a fundamental basis for any decisions about alterations or extensions.

2

Understand how the house, or a similar house, has already evolved with the changing needs of past generations.

Traditional houses were extended either along their length, or upwards, but rarely in width. The use of returns, creating 'L' or 'T' shapes is not strictly speaking in the historic vernacular tradition, but has been common for at least a century, and can be acceptable as long as the result retains emphasis on the original volume.

Typical evolution of a traditional house.



### 3

**The proportion of the plan form** is crucial to traditional character and has not been sufficiently recognised in the design of either extensions or new houses in the countryside. The traditional narrow plan form (originally determined by the span of roof timbers available) combined with the optimum roof pitch for weathering in a wet Irish climate (35-45degrees), creates a harmonious balance between wall and roof area. A wide plan house creates a greater roof area and visually upsets this balance.



## 4

**Your accommodation needs.** Modern living makes unavoidable demands on traditional buildings that can only be met by alteration and adaptation, but how that is done is crucial to the success of the finished building. Among the critical issues are:

The demand for privacy – separate rooms rather than shared spaces, space set aside for circulation rather than moving through one room to get to another. This is reasonable, even normal but creating corridors in traditional, narrow plan cottages gives very unsatisfactory spaces.

The demand for services – multiple bathrooms and en-suites, comprehensive electrical installations and heating systems – can overload the capacity of a small house. How many toilets do you actually need? Technical developments can also help – wireless IT systems avoid tracking of walls for new cables, and many of the new forms of heating in sustainable, low energy use, ways are ideally suited to high thermal mass traditional houses.

Decisions on the accommodation needs will directly shape the result – as part of the decision making process it is tempting to express one's personality where tradition would have satisfied our parents – be careful!

Among the common pitfalls to avoid are:

An existing attic is to be converted, and a new staircase is needed. Because it is new, it must conform to the Building Regulations (if it is an existing staircase, with no change of use, it does not have to conform), and be of a certain width, with specific headroom requirements. However, with the low eaves and narrow width of the old house, the only place where these requirements can be met is in the middle of the house, taking up valuable ground floor space and the most usable attic space. The result of this dilemma is often a temptation to raise the eaves and change the roof pitch – alterations which on their own can destroy the vernacular character of a traditional house.

Careful positioning of services is crucial to avoid the need to create expensive large holes through thick rubble stone walls, and to ensure good ventilation which will avoid condensation. For these reasons it is often best to concentrate heavily serviced areas (bathrooms, kitchens etc) in extensions, rather than within the original building. This has the added advantage of using the full volume of the traditional house for the main rooms – living room, main bedrooms, thus minimising need for new sub-divisions.

Minimise the structural alterations required by working with the existing layout as much as possible. Creating a new window opening in a rubble stone wall often leads to a much larger hole than that needed due to the nature of the construction with large stones, randomly placed. The cost of this and the rebuilding is often unnecessary with a little planning.

## 5

**Many traditional houses are attached to or surrounded by outbuildings** – barns, byres and stores, and there have been many successful conversions of these, integrating them into the main house. The most successful examples have been where the original character of these outbuildings has been retained and it is not attempted to produce a uniformity of treatment with the original house section, but instead to celebrate their agricultural or industrial character, for example, by retention of a corrugated metal roof covering, suitably insulated for its new use.





## 6

**Serious and sensitive designers have two choices** when considering how to extend a traditional and historic house – either an accurate reproduction of the original in an authentic manner, or creation of a contemporary response based on an understanding of the form, materials, proportion and design of the original. The former, historically accurate approach should not be confused with a simplistic pastiche which can diminish the quality of the original. Nor is the latter concerned with grafting on the latest fashionable style onto a traditional house, but a response informed by tradition and history. Both approaches are acknowledged in Planning Service NI, Planning Policy Statement 6; both require considerable understanding of the essential character of the vernacular tradition.



## 7

**With listed or other particularly important houses,** the emphasis of the finished result should always remain on the original, rather than being lost amongst a large modern extension. When an extension two or three times the size of the original is needed, this can be particularly difficult, especially with the use of narrow plan forms. It is in these situations that 'L', 'T' or 'U' plan layouts, although not strictly traditional, can be useful in breaking down the bulk of the extension so that it does not dominate the original house, without creating excessive travel distances between rooms. An open, flowing plan type arrangement works best, reflecting the traditional form of a central kitchen as the social hub of the house, linking and opening up spaces, not a series of enclosed and independent boxes.



## 8

**Traditional houses rarely sit alone in a natural landscape.** Rather, they are an integral part of an evolved, man made setting of farm and industrial buildings, walls, fences, gates and planned natural features such as shelter belts. There are often deeper layers of history as well – raths, dolmens, lazy beds, pointing to centuries of habitation and an empathy with the natural landscape.

One of the most disturbing aspects of new houses in the countryside is that all too often, all traces of historic setting are swept away to create a clean flat site. The result is a building disconnected with the cultural and natural landscape it is placed in.

In the conversion and alteration of vernacular buildings it is crucial that all aspects of the setting are fully recognised and protected, so that the finished project is absorbed into the landscape rather than seeming to be imposed on it.







Some critical features of the setting include:

The entrance off the public road may need to be altered, either for construction access or a Roads Authority sightline requirement. The detail of the entrance should be in the scale and character of the surroundings, using the style of existing walls, gateposts etc. Avoid the temptation to provide suburban garden enclosures or pretentious statements.

The choice of surface treatment has a major impact – gravel or stone macadam finishes have a softer, more traditional feel, compared with tarmac or concrete, or even large areas of paving bricks. If you want a more permanent finish the tarmac top dressed with gravel gives the best of both worlds, and traditional cobbles can be appropriate between the house and outbuildings.

Driveway edges can be softened by the use of timber boarding rather than concrete kerbs and extensive hard areas avoided by creating areas of reinforced grass.

Traditionally, gardens were often enclosed by walls or hedges, and designed for private enjoyment rather than public show. In the countryside, this is crucial to avoid suburbanisation, and a screen of natural vegetation between the public road and the cultivated garden is an important factor.

The quality of the design and planning process is crucial to the quality of the final result – get the basic decision wrong and no amount of money spent on finishes will make

up for it. Once destroyed, historic character cannot be replaced. So get yourself an architect with a commitment to conservation, with a track record of sensitive conversions and take your time to get it right.

There are now many examples of quality traditional and contemporary conversions and extensions of vernacular buildings, that deliver 21st century standards of accommodation while preserving the historic character. These provide a reference point for those who continue to doubt the potential of traditional buildings.



## Threats

**Despite** the example set by a significant number of owners, who have already successfully demonstrated the opportunities presented by traditional buildings, we all know from our own individual experiences that traditional buildings continue to be lost from our countryside at an alarming rate. There are not many statistics available to quantify this loss but the following references are representative of the change that is taking place right across the island.

- The Mourne Dereliction Survey – DOE NI – 1980
- Changing Vernacular Landscapes – A University Dissertation by Caroline Maguire – 1997
- A Sense of Loss – EHSNI – 1998
- The Mourne Audit – Mourne Heritage Trust – 2001/2 (This document can be compared with the DOE 1980 survey.)

Together, they tell an alarming story.

The loss of traditional buildings is by no means unique to this island. It is a common concern across Europe as the following ICOMOS (International Council on Monuments and Sites) resolutions bear witness:-

- 1971 – Srbske Pleso-Brno – Resolution for the Protection of Folk Architecture

- 1972 – Salonika – Resolution to Conserve and Revitalize Vernacular and Rural Architecture
- 1975 – Plovdiv – Resolution for Vernacular Architecture and its Adaption to the needs of Modern Life
- 1989 – Council of Europe Recommendation R (89) 6 to member states – “The Protection and Enhancement of the Rural Architectural Heritage”
- 2000 – ICOMOS – Vernacular Charter

ICOMOS is an official advisory body to the Council of Europe.

At home there have been a series of conferences and seminars devoted to the subject:-

- 1993 – Traditional Architecture in Ireland – University College Dublin
- 1994 – Our Countryside: Voices of Change – Newcastle, Co Down
- 1998 – Living Buildings, Living Places – Enniskillen, Co Fermanagh
- 1998 – Bliss or Blitz – Belfast
- 1999 – Irish Thatched Roofs – Athlone, Co Westmeath

It has not been all talk and the news is certainly not all doom and gloom. Many traditional buildings have been saved by caring owners. Local Trusts and Amenity Groups have saved others and government has also played a positive role.





In the North, the Craigavon (New City) Commission in the 1960s, took the unexpected step of recognising the contribution of traditional buildings to the built environment of the Designated Area. Hearth Housing Association has had some memorable successes. The Northern Ireland Housing Executive is currently showing a positive interest in traditional buildings. The Executive guide to the Home Improvement Grants Scheme 1996 addresses the needs of the traditional building stock amongst its worked examples. The Executive's Vernacular Housing Initiative, 1999, was an in depth study and the Executive is currently one of the main partners in the Mourne Homesteads Scheme to bring empty and derelict farmhouses, within the Mourne designated

Area of Outstanding Natural Beauty, back into use as family homes. The Department of Agriculture has paid grants to restore traditional farm buildings and there are tourist orientated initiatives both past and present that have given new life to traditional rural buildings. The Ulster Architectural Heritage Society, The Historic Buildings Council and, more recently, the Heritage Lottery Fund, continue to play important supporting roles.

In the South, as in the North, many private initiatives have brought new life to old buildings. The Heritage Council is playing a major part and has completed a project of its own to conserve a two storey, thatched farmhouse at Mayglass, Co Wexford. The National Inventory of Architectural Heritage is by no means complete but is certainly playing a part in raising public awareness. Duchas, the Heritage Service, was very proactive until its dismemberment during recent government reorganizations. (Duchas was also a partner in the Mourne Homesteads Scheme.) The Department of Environment Heritage and Local Government (DoEHLG) now provides advice for building owners. Supporting roles are played by The Irish Georgian Society and An Taisce.

The Mourne Audit of all rural buildings within the boundaries of the designated Area of Outstanding Natural Beauty was preliminary work to the Homesteads Scheme and has thrown up a number of interesting facts. By interpolation with the 1980 Department of Environment survey, it can be ascertained that nearly 1000 traditional buildings have been lost during the passing of a score of years. The Audit assessed every rural building, roughly 6000 in all and identified 1038 as having obvious traditional origins. These were all catalogued against 19 headings. Of these basically traditional buildings approximately 600 were considered to have retained enough original fabric to have the capacity for restoration. Over 90% of the buildings catalogued were dwellings, 48% were empty or partly derelict and 5% were in use as holiday homes. Also recorded in the course of the Audit were the location and number of new buildings, that is to say buildings built since the last revision of the record maps which were the 1979/80 OS survey 1:10,000 series also the location and number of older buildings that had been altered and/or extended such that they are beyond practical restoration.

There is still a great deal of computing to do in order to get the maximum out of the data collected. The picture it presents, no doubt, provides a microcosm of a national picture. There are some unpleasant truths amongst the data. For one thing, the indication is that there isn't much time left to us if any significant numbers of traditional buildings are to be saved. On the other hand, it has proved that there are enough still left to make it worth trying.





Sample Map  
Mourne Audit 2001-02

Section of Map Ref  
OS Sheet 284  
Surveyed 1979-80  
Scale 1:10,000

- ✕ Traditional building totally lost or terminally derelict.
- A new building.
- Recorded traditional house in use or vacant, capable of restoration: referenced thus 16.4.62



Reproduced from the 1979-80 Ordnance Survey of Northern Ireland, Scale: 1:10,000, Sheet 284, map with the permission of the Controller of Her Majesty's Stationery Office, © Crown Copyright 2004. Permit Number 40495.







# The Care of a Traditional Building

Section Three



## Care in Practice

Traditional buildings, like any other buildings, require an element of care, in order for them to fulfil their purpose efficiently. This work should be planned to avoid unnecessary loss or disruption of original fabric. Before deciding on a programme of work it is advisable to review the building as discussed in Section 2.

**Review** – Begin by investigating the development of the building through time with a view to finding answers to the following questions:–

1. Is the building all from one period or has it been altered or extended in the past?
2. Have works of alteration and extension:
  - created any practical problems or structural weaknesses
  - blended in or conflicted with the essential character of the original buildings?

From these assessments, valued judgements can be made as to which elements must stay and which can go.

BS7913, Guide to the Principles of the Conservation of Historic Buildings, contains some useful definitions.

**Maintenance** – Routine work necessary to keep the fabric of the building, the moving parts of machinery, grounds, gardens or any other artefact in good order.

**Repair** – Work beyond the scope of regular maintenance to remedy defects, significant decay or damage caused deliberately or by accident, neglect, normal weathering or wear and tear, the object of which is to return the building or artefact to good order without alteration or restoration.

Note – Most repair work should be anticipated and planned but occasionally it can be required in response to specific events, such as a storm or accident.

**Restoration** – Alteration of a building, part of a building or artefact which has decayed, been lost or damaged or is thought to have been inappropriately repaired or altered in the past, the objective of which is to make it conform again to the design or appearance at a previous date.

Note – The accuracy of any restoration depends on the extent to which the original design or appearance of a previous date is known, or can be established by research.

A basis for decision making has now been established from which to evaluate the condition of the building. Taking each element in turn, it will be possible to decide between maintenance, repair or restoration when works are required.

**Curtilage and Site** – There may be legal issues to clarify relating to elements that impact on other owners. These may include shared access, boundaries and party walls. Then there is the routing of services, way



leaves, rights to discharge effluent etc. These sorts of issues are most likely to arise when a portion of land is sold separately out of a larger holding. If there are issues of this nature, take legal advice.

At the top of the list of practical issues is likely to be ground water. Almost every traditional building was protected at the time of construction by land drains (shores). It is common for these not to have been maintained and they may have been seriously damaged. Builders involved in earlier works to extend the building or to bring in underground services are likely to have destroyed these historic drains without realizing what they were. Traditional buildings do not have damp proof courses and so it is critical that ground water is diverted away. If the old drains are not working, then new ones must be provided. These new drains must be maintainable; it must be possible to rod them and flush them on a regular basis to keep them flowing.

Impervious pavings like asphalt and concrete are often brought close to the walls of a building in the belief that this will help keep water away. Unfortunately, it very often does the opposite; water gets in at the junction between the paving and the building and cannot get out again except by rising up inside the wall. Impervious pavings should ideally stop at least one metre from the base of the walls.

Walls, gates, fences, hedges and trees will all require maintenance and some element of repair.



**Walls** – Rising damp can be a problem but it will be less likely if the ground water is drained away as described above. Wherever possible, the top surface of the foundations stones should be exposed to minimize still further the opportunities for water to reach the mass of the wall. The efficacy of proprietary systems of chemical injection or electro osmosis in mass masonry walls is far from proven. They may help but they should not be relied on to do the job single-handed. Mass masonry walls must not be encased with impermeable coatings, be they plasters or paints. The outer face is especially critical. This is because it is practically impossible to keep all moisture out of walls built in this way. An impermeable coating simply makes it impossible for the water ever to get out again but that will not stop it trying and, in trying, damage will be caused. The most common cause of damp in walls is, in fact, defective gutters. On very exposed sites, the provision of shelter should be considered; this may include tree planting, hedges, walls etc. Lime based mortars, renders and plasters are always good choices because of their permeability and flexibility for use with mass masonry walls. It should be remembered that water can take a long time to dry out of a mass masonry wall after the cause has been remedied. While the wall is drying, salts may form and the surface may discolour. Always remove these salts by dry brushing or by vacuum, never try to wash them off. Washing will make them progressively worse.



Walls are sometimes found to be out of plumb. This may not be critical but it must be investigated. Common causes are ground water softening the foundations, alterations that have weakened the wall or a structural failure in another element, commonly the roof, whereby horizontal loadings are being resisted at the head of the wall. Where the cause is being transmitted from another failing element, that element must be the first to be repaired. Provided the centre of gravity does not move beyond the face of the wall, it will be possible to restrain and stabilize. Afterwards, all structural cracks must be grouted so that the wall becomes a unit again. It may be necessary to create a ring beam or to tie the wall in at first floor level, if the building has two stories. Professional advice will be necessary for this type of work.



Exposed mud walling raised later in brick work.



**Ground Floors** – Old ground floors will not be damp proofed. If, after taking all the precautions already described, the floor remains damp, there will be no alternative but to take it up and renew it. Thermal insulation could be considered at the same time. Old tiles can be carefully taken up and reused.

**Upper Floors and The Roof** – Under-sizing of members is the cause of many problems. The shortage of timber through long periods of our history has taken its toll. If structural members have fractured, they must be repaired or, if this is not practical, then replacement of the failed timber will be necessary. It may be the failure is due to shock, for example from an explosion. Overloading can usually be overcome by strengthening the existing structure but, in extreme cases, the entire element may have to be renewed.

Fungus and insect attack are other causes of timber failure. Insects may have colonized the timber before it was ever cut and used. Where this has been the case, it is usual for the holes to be limited to areas of sap wood and for there to be no new frass, indicating that the emerging beetles have moved on. The areas of real concern are where timbers are continuously damp. Common causes for damp in these situations are:–

- Blocked and broken gutters affecting wall plates, rafter ends and timbers built into the walls





- Defective roof coverings – the effect will be local and isolated
- Problems can be associated with roof lights. The older patterns are single glazed into cast iron frames and are frequently located in areas where there are temperature extremes such as above a staircase. Here the rising warm air meets cold glass and iron surfaces leading to condensation, often enough to support timber decay. Modern double glazed units are now available with similar profiles to the older designs. Failed flashings or fractured glass can allow water ingress. If so simply replace the failed component.
- Failure in services, usually a leaking pipe or joint. Water may travel along the outer surface of the pipe and saturate a relatively wide area of timber. The cause can also be condensation on metal pipes, tanks and other fittings
- Micro climates created by human activities like boiling kettles, cooking, washing clothes, bathrooms – particularly showers and saunas in badly ventilated spaces where water vapour and saturated air become stagnant. The relative placing of insulation and vapour barriers are critical decisions in the creation and prevention of situations like this. In any of the situations listed above, insect and fungus based decay will thrive. Not only must the infected timber be replaced, the cause must be corrected. Chemical treatment of timbers can provide a level of protection against the spread of fungus and beetle attack but no chemicals will survive continuous saturation.
- Guttering is the single most common cause of decay in buildings. The principal reason is poor maintenance or perhaps no maintenance at all. Every gutter and every down-pipe should be checked at least

Modern thatching techniques using flax, metal fixings and no screws.

once a year. Mid autumn is a good time, just after the leaves have fallen. As well as clearing blockages, the check should include settings, falls, fractures and the condition of support brackets, gutter bolts etc. Down-pipes should be accessible for rodding and sinks and hoppers should all have related overflows. Indirect discharges via secondary roofs should be designed out wherever possible. If there are any sections of plastic or cold formed aluminium, it is advisable to replace them with something more robust and durable. Gutters are such a critical element it is not an area where penny-pinching will ever pay off.



Badly set gutter – the tilt should be away from the building.

**Roof Coverings** – Slates are the most common covering. Natural stone is virtually indestructible. Natural failure in slates, like delamination or bursting due to impurities, usually manifest themselves early in the life of a slate so that material failure on a mature roof is almost always due to traffic over the roof, that is to say, people on the roof for some other purpose walking on the slates or leaning ladders against them and cracking them. It is far more common for the fixings to fail than the slates themselves. It is feasible to re-fasten the occasional slipped slate but when the problem is extensive, it is an indication that the nail fixings have rusted away, so-called nail sickness, in which case there is no alternative but to strip the roof and re-slate. A careful slater stripping an old roof should be able to save about 60% of the old slates for reuse. The same advice relates generally to tiles. The differences would be that tiles have a limited life and can be susceptible to frost but tend to be more resistant to chemical attack and air pollution.

The life expectancy of lead is related to workmanship, chemical attack and air pollution. A hundred years is a reasonable life for well worked lead but there are recorded cases of lead lasting three times longer. The Lead Sheet Association and the Lead Contractors Association both keep a tight rein on their members. It is advisable to use contractors registered with these organisations because their standards are published and guaranteed.







Lead valley.



Thatch needs regular attention. A small amount of repair at the right time can save a great deal of work later on. Points of special weakness tend to be where the thatch meets other materials, for example at chimneys, gables and party walls. Since thatch is no longer the natural outcome of a recurring agricultural cycle, the life span of thatched roofs has become the focus of much debate. From all the evidence, it would appear that our modern day roofs last every bit as long as the roofs of previous generations. Provided the materials and workmanship are sound,

the critical issues in the life of thatch are pitch, climate and setting. Steeper pitches last better than slacker ones, drier climates are better than damp ones and moving air is better than stagnant air. Another factor is drips. Regular drips from trees, cables, television aerials etc are extremely destructive. Given favourable conditions and regular attention to the weak points, a spar coating of thatch, cereal or reed, can last over thirty years.



**Chimneys** – Chimneys are the most exposed features of most buildings. They are under constant attack from the forces of nature to the outside and the chemicals and heat of combustion to the inside. Weathering leads to water penetration which, in turn, can lead to frost damage. The weakest points are the cap and where the stack emerges from the roof. Remedial external work can involve one or all of the following, re-flaunching the cap or dressing it with lead, re-pointing or re-rendering the shaft of the stack and replacing the flashings at roof level. Water can also be coming down the inside of the flue. This is especially likely if the flue is not used. The correct action to prevent this is a ventilating cap.

Failures due to combustion include fires inside the flue. A chimney fire can be caused because the flue has not been cleaned. Soot and bird's nests are very combustible or there may be timbers built into the flue. This last is most likely if the building is old enough not to have had a chimney when it was first constructed. Sulphur is a cause of another type of failure. If sulphur laden soot becomes damp, sulphuric acid is created which attacks the structure of the chimney leading to the forming of salts. Salts expand as the crystals form with the result that the stack begins to lean. This chain of events is most common in relation to slow burning appliances because, when they are closed down with a minimum draft, the gasses move so slowly in the flue that they cool before they reach the top and condensation takes place. This condensation

provides enough water to combine with the sulphur. In bad cases, the entire stack may have to be rebuilt. The prevention is to fit inert linings. Never totally block a flue even if it has no use. Without ventilation, stagnant, moist air will build up inside and eventually cause untold damage.

Smoking fires can be caused in a number of ways. The most usual reason is that the flue is blocked. This may be because it needs to be cleaned. Equally, it may be that some fabric, a brick or parging, has become displaced. It may be that birds are trying to build a nest. The first thing to do is to clean the flue and see what comes down. If it is simply soot and sticks, the problem is likely to be solved. If it is building materials, then, at the very least, the flue must be lined.

Fires may smoke for other reasons too. Those reasons may be outside, for example tall trees or a higher building close by creating down drafts. Alternatively, it may be due to the relationship in size between the fire opening and the flue size. This relationship may change if, for example, a chimney is rebuilt with a different diameter flue. The Society for the Protection of Ancient Buildings Technical Pamphlet No 3; Chimneys in Old Buildings is particularly helpful on this subject.



**Doors** – Not much goes wrong with doors beyond use and abuse. The most susceptible component to decay is the frame, or in more elaborate examples, the panelled encasement. Dampness may reach these timbers upwards from the floor or downwards through the walls and binding timbers in the walls may act as a highway for fungal attack. If this happens, there is no alternative to replacement in part or as a whole but the cause must also be attended to otherwise the same will happen again. Old doors are much more interesting if they have their original fittings, hinges, latches and locks. Only doors made of exotic timbers were historically left undecorated, so resist the temptation to strip them all back to a natural timber finish.



**Windows** – In most instances the original windows in a traditional building will be double hung sliding sashes. This style of window came into vogue in the 17th century and remained the most common window type until the beginning of the 20th century. Sliding sashes have been given a bad press in recent years by modern manufacturers who tell us they can do a better job. There are many examples of sliding sashes that have been in service for three centuries. Over time, there is wear and tear and the elements do not fit as snug and tight as they did when they were first made but these faults can be rectified and there are commercial companies that specialize in this work of overhaul and upgrading. However, if there has been a prolonged period of neglect, it can be that replacement is necessary. It is a good thing to paint all new timber surfaces before fitting. This includes surfaces that will never be seen. The paint will help to protect the new work against future decay.

We are continuously being told about the heat that is lost through old windows. Thankfully, in traditional buildings, the window to wall ratio is low and there are often internal shutters that are very effective in controlling heat loss. There are also very effective modern draft excluding fittings that can be added to old windows. Double glazing on the other hand is not suitable for sashes sub-divided into small panes. Indeed, in some cases, the sash frames are not deep enough to carry even the minimum sized double glazed units. In these cases, secondary glazing set into a separate additional frame should be considered as an alternative. As with doors, original fittings very much enhance the appearance of old windows.





**Paintwork** – All paint, old and modern alike, is made up of three constituents, pigment, solvent and binder. The most common reasons for failure are:–

- Water – which can become trapped behind the paint film causing blistering. Modern impervious paints based on alkyds, acrylics and polymers are particularly susceptible:
- Incompatible layering of paints. This is where a strongly bound paint overlays a weakly bound paint. Over time, the bond between the two breaks down resulting in large flakes of the top coating becoming detached. The same sort of thing can happen when paint is applied over varnish, especially where the surface is exposed to high temperature gradients.
- Bad preparation of old surfaces. Damp conditions, vegetable growth, dirt and unstable old paintwork are all potential causes of early paint failures.
- Applying subsequent paint coatings before the previous coat has had time to dry leads to failures:
- Overlaying dark colours with light ones. Heat will build up in the dark under-layer which will expand and crack the outer light coloured paint. The paint will not necessarily become detached but will be crazed with a network of cracks. Again, surfaces exposed to direct sunlight are the most prone to failure.

When paint fails, there is no alternative to getting back to a firm clean surface and starting again.





Modern paint manufacturers have been through a bad time making use of new solvent and binder materials without fully understanding the consequences. There is evidence that this attitude is changing and it is getting home to manufacturers that little more than half their production is used on new surfaces. A few manufacturers have always designed their component mixes to be compatible with old paints and old buildings.

The reasons for applying paint are twofold, decoration and protection. Purely decorative paintwork can last for centuries. Protective paintwork will require regular attention, on average every six years.



**Services** – New services can be very demanding on old structures. Too often there is insufficient advance planning and installers are left very much to their own devices. Routing in particular should be planned not just left to happen. Traditional buildings are full of voids, nooks and crannies that can be exploited, avoiding the need to tear lumps out of the historic fabric in order to get from room to room. All too often the pros and cons of exposing pipe-work and surface mounted wiring in conduits are never seriously debated.

Micro climatic effects on historic fabric have been discussed in many of the sections above. Ventilation has always been an essential ingredient for the well-being of old buildings. Traditional contributors to this constant movement of air have included open fires, the open front door (a welcoming feature from the past) and a routine of opening windows after a room is vacated; a dining room after the meal is over, a bedroom when people have dressed and gone out etc. Because so many of these habits have changed, it is necessary to compensate in other ways, otherwise the fabric of the building will suffer.

Remember, services need maintenance and periodic updating. This should be facilitated in their design and layout by providing removable panels, crawl boards, lighting and protection as necessary. An example, all too frequently encountered, would be electrical cables trailed around a roof space without any lighting and where workmen can unintentionally tread on them damaging the insulation. In this scenario, a fire is likely to follow and too often does.

**Conclusion** – The choice of builder can be difficult. There is nothing to beat the man you can trust, who has known your building, its strengths and its weaknesses, man and boy. Without this sort of support, go for a builder whose work you have seen and who carries the recommendations of those he has previously worked for. If all trades were controlled as thoroughly as those working in lead, that choice would be a much simpler task.







## The Legislative Context – Approvals, VAT and Grants

Section Four

The following notes are not intended as a complete guide to the complex areas of Statutory Approvals, VAT and Grants, but rather a broad summary of key issues and some useful pointers for finding detailed information.

# 1

## Planning in Northern Ireland

**Planning** policy is based on the Planning Order (NI) 1991 and is contained in both the Statutory Area Plans and in specific policies. Since 1993 planning policy in the countryside has been based on 'A Planning Strategy for Northern Ireland'. This is gradually being superseded by specific policies contained in Planning Policy Statements (PPS's) of which the most relevant for vernacular buildings is PPS6 'Planning , Archaeology and the Built Heritage', PPS7 'Quality Residential Developments' and, currently at consultation stage, PPS14 – 'Housing in Rural Areas'

There are four broad scenarios:–

- a) Listed buildings, anywhere in the countryside
- b) Unlisted buildings in Conservation Areas
- c) Unlisted buildings in Areas of Special Control and Green belts
- d) Unlisted buildings in general rural areas

### a) Listed buildings

There are approximately 8,500 listed buildings in Northern Ireland, of which only a small proportion are vernacular and 150 are thatched. In recent years this number has increased with the realisation of the growing threat, calculated for the first time in the DoE Environment and Heritage Service study 'A Sense of Loss', published in 1998.

Listed buildings are allocated Grades, mainly for grant purposes – A, B+, B1 and B2, but regardless of grade they are all subject to the same legislation and policy.

Listed buildings are subject to stringent legislation to ensure any changes, inside, outside and to the setting, are subject to detailed scrutiny. The detail of these policies is contained in PPS6, and they are backed up by legislation and wide ranging powers.

In general, these policies are aimed at ensuring that listed buildings are properly maintained and sensitively adapted or changed. They do not prohibit change, but ensure that the reasons for the listing in the first place are not lost in any subsequent works.





As Policy BH10 of PPS6 states:

*There will be a presumption in favour of retaining listed buildings. The Department will not permit the demolition of a listed building unless there are exceptional reasons why the building cannot be retained in its original or a reasonably modified form.*

Listing applies to the **whole** building, inside and out, and to the **setting**, which can be quite a wide area, and to other buildings if they are physically attached.

Any work, other than minor, 'like for like' repairs or reinstatement, is subject to achieving 'Listed Building Consent', a separate application from the standard planning process. Many works that do not require Planning Permission may still require Listed Building Consent

To balance this additional bureaucratic hurdle, there are some benefits to listed buildings – chiefly eligibility for VAT relief (see page 71) and grant aid (see page 72).

#### b) Unlisted buildings in Conservation Areas

All current Conservation Areas in Northern Ireland are in cities, towns and villages and as such contain few traditional buildings. However, rural Conservation Areas are under consideration and these could be useful tools to protecting vernacular character. PPS6 sets the same broad criteria for the demolition of unlisted buildings in Conservation Areas as for listed buildings and so in general the presumption is for repair and re-use rather than demolition and redevelopment. Conservation Area designation is confined to the external fabric of the building and the general setting but has no control over the interior. The emphasis of the policy is on the character of the Area rather than that of the individual buildings, as is the case with listed structures. There is no VAT relief for unlisted buildings and grant aid is currently limited to those Conservation Areas where there is a Heritage Lottery Fund 'Townscape Heritage Initiative' operating.



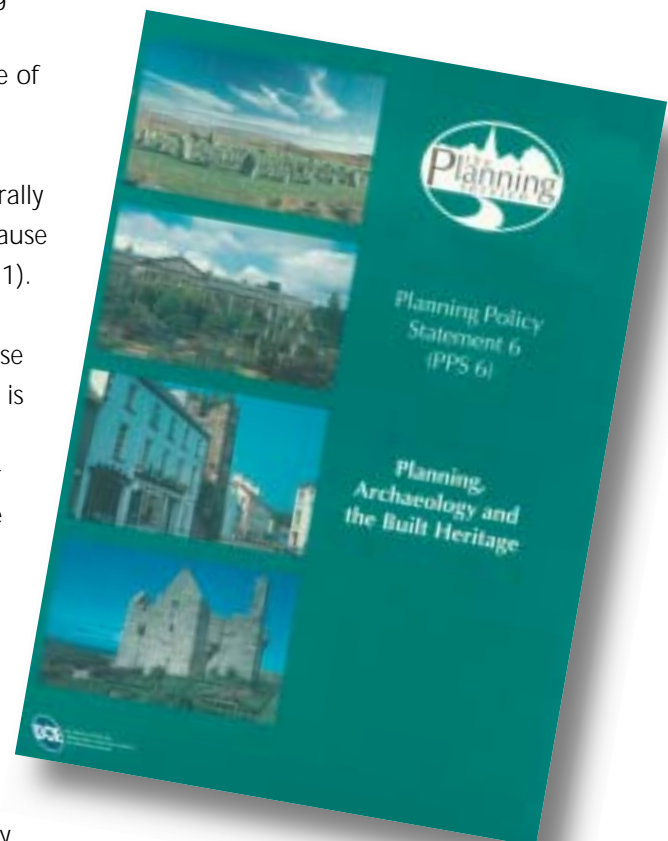
### c) Unlisted buildings in Areas of Special Control and Green belts

In general, there is a presumption against new housing development in Areas of Special Control and Green Belts (except for those who can prove a need to live in the area), but replacement of existing houses is permitted. Policy does not distinguish between repair and re-use of existing houses in use and their replacement, and so in most cases, owners chose to replace as it is generally easier and cheaper, not the least because of the current VAT policy (see page 71).

The general test as to whether a house can be replaced with a new dwelling is that it 'displays the essential characteristics of a house' – ie it is or was a house (not a barn etc) and the roof and external fabric is generally intact. Implementation of this policy on the ground, however, is not always consistent.

This same criterion is applied even if it is intended to restore an existing house, although this is widely regarded as unfair and a disincentive to

those wanting to conserve the vernacular heritage. In practice, sympathetic planning officers can interpret the criteria for 'displaying the essential characteristics of a house' more flexibly if the proposals are for restoration than if they were for demolition and redevelopment.



Policy BH15 of PPS6 deals with the re-use of non listed vernacular buildings and is primarily aimed at the conversion to residential use of rural schools, farm complexes, mills etc., but also for the re-use of more run-down former houses that might fit under the ‘displaying the essential characteristics of a house’ policy. This is a very progressive policy in encouraging the re-use of vernacular buildings and it comes with detailed criteria to ensure the traditional character of the buildings are protected and it is not seen as the first step to a replacement permission. It is taken as not referring to ordinary farm sheds but substantial buildings with a distinct vernacular quality and character. The policy states that the building must be

*“an important element in the landscape and of local architectural merit or historic interest”*

and

*“normally no extensions are involved”*

#### d) Unlisted buildings in general rural areas

Outside Areas of Special Protection and Greenbelts, there is a general presumption in favour of new, individual houses, provided that general good planning criteria are met. However, this also means that even quite ruined houses can get planning permission for restoration and these are the type of buildings that may well qualify for zero VAT rating. Policy BH15, as above, applies to the general countryside and provides a route for the re-use of vernacular mills and other non-domestic buildings.



## 2 Planning in the Republic of Ireland

**General** planning policy is contained within Development Plans and Local Area Plans, based on the Local Authority areas, and apart from works of 'like for like' repair or reinstatement, Planning Permission is likely to be required, especially for 'Protected Structures'.

Buildings of architectural, historic, and other special interest can be designated as 'Protected Structures' under the Planning and Development Act 2000. Part IV of this far reaching legislation required that a Record of Protected Structures be compiled by each Local Authority and the process of designation is not yet complete. Traditional buildings are, so far, particularly under-represented in most areas and so in reality, there is very little protection for rural traditional buildings at present.

The government has published draft 'Architectural Heritage Protection Guidelines for Planning Authorities'. These are the basis of a sound policy for the careful repair and conservation of historic buildings, but as yet they are only draft guidelines and there is patchy enforceable protection on the ground.

They do however contain a great deal of information on the legislation as well as guidance on repairs, alterations and extensions to historic buildings. Many Local Authorities now have a Conservation Officer in place to give advice and guidance and it is worth making contact before lodging any application.

Also useful are DoEHLG guidance documents aimed at the public: PL12 'A Guide to Architectural Heritage' and the 'Conservation Guidelines' series.

One aspect of the 2000 Act is the concept of a 'Declaration', whereby the owner of a protected structure can ask the Local Authority to carry out an assessment (at the Authorities expense) and 'declare' what the significance of the property is and what works would require Planning Permission and what would not. This can provide a very useful source of guidance and advice for the owner.

## 3 VAT

**The** current VAT regime in Northern Ireland is generally regarded as iniquitous as regards repair and restoration of buildings as in general full VAT at 17.5% is due on works of repair, alteration and extension, but demolition and redevelopment is zero rated. This, on its own, is often the deciding factor in choosing which option to follow.

There are, however, a number of situations that offer some relief:–

- Conversion of industrial buildings (eg old mills, warehouses etc) to residential is zero rated for VAT
- Conversion of a large residential building into separate units is zero rated
- Restoration of a former house that has been unused for residential purposes for 10 years is treated as a new house and zero rated
- Restoration of a former house that has been unused for residential purposes for 3 years is subject to a reduced rate of VAT (5%) rather than the full 17.5%

- Listed buildings for residential use can have works of alteration and extension zero rated, provided certain criteria are met, though full VAT is still payable on repairs.

Professional fees provided as a separate service are always charged at the full VAT rate.

In practice, VAT is a complex area and it is recommended to use the services of an experienced accountant or talk directly to the local VAT office. See also HM Customs and Excise Advice Note 708 VAT: Buildings and Construction.

VAT in Republic of Ireland is a lot simpler as all works to buildings, of whatever type and category is subject to VAT at the rate of 11%, and professional fees at 21%.

## 4 Grant Aid

### Grant aid in Northern Ireland

The Ulster Architectural Heritage Society, in conjunction with Environment and Heritage Service publish the 'Directory of Funds for Historic Buildings in Northern Ireland'. This gives details of current sources of finance for restoring historic buildings and is available free of charge from UAHS (see Useful Addresses Section).

The Housing Executive administers the Improvement Grant Scheme which provides grants to people who are 18 years of age or over and are owner occupiers or landlords. There are several different types of grant assistance designed to target specific types of people or property that need financial assistance to carry out necessary repairs or improvements.

### Grant aid in Republic of Ireland

Protected Structures in Ireland, depending on the works proposed, may be eligible for grant aid from the Local Authority and the Heritage Council, but grant resources are low. The Heritage Council will fund buildings other than 'protected structures' if on their 'Buildings at Risk' register.

There may be tax relief on expenditure on approved, protected buildings. Advice should be sought from the Revenue Commissioners – see their leaflet IT30. Most houses currently under this scheme are 'grand' houses but it does not preclude traditional buildings.

Thatched structures can also avail of grants from DoEHLG and Gaeltact grants. (See Useful Addresses Section)



## 5 Building Regulations

**Building** regulations are largely written with new buildings in mind and need not apply to repair and conservation schemes if there is no change of use and works are largely like for like repairs. However, in practice, most extensive restoration schemes will require Building Control Approval and unless interpreted with care, the application of regulations designed for new construction can lead to a deterioration in the quality and character of traditional buildings.

Remember, the whole house does not need to comply with every regulation.

It is recommended that anyone contemplating works should:–

- Discuss the project with Building Control officers at an early stage in the process. Building Control is administered by District Councils in Northern Ireland and in the Republic by the Local Authorities, though here compliance is largely self-certified by the applicants agents.
- If you are employing an architect, surveyor or designer, make sure they are sympathetic to the desire to retain as much historic character as possible.

It is at the Building Control Approval stage that the pretty design drawings of a Planning Approval are converted into the hard practicalities of complying with what can seem like rigid regulations. Having a knowledgeable and sympathetic conservation architect on your side can make all the difference between an authentic restoration and a pastiche reconstruction.

- Realise that you need to meet the **standards** of the Building Regulations, not the easiest ‘deemed to satisfy’ construction method to achieve them. In reality there are often many ways to achieve compliance.

For example, the desire to achieve thermal insulation standards can lead to loss of traditional windows and replacement with uPVC double-glazed units. It is however possible to balance heat loss through single glazed windows, especially small traditional windows, against, for example, extra roof insulation to achieve the overall heat loss standard and keep the character of the building.

## 6 Sources of Guidance

### Northern Ireland

Ulster Architectural Heritage Society  
66 Donegall Pass  
Belfast  
BT7 1BU  
028 9055 0213  
info@uahs.co.uk  
www.uahs.co.uk

Environment & Heritage Service  
(Historic Building Grant Aid)  
Waterman House  
5-33 Hill Street  
Belfast  
County Antrim  
Northern Ireland  
BT1 2LA  
028 9054 3064  
hbgrants@doeni.gov.uk  
www.ehsni.gov.uk

Northern Ireland Housing Executive  
The Housing Centre  
2 Adelaide Street  
Belfast  
028 9024 0588  
www.nihe.gov.uk.

Planning Service NI  
Headquarters  
Millennium House  
19-25 Great Victoria Street  
Belfast  
BT2 7BN  
028 9041 6700  
Planning.service.hq@nics.gov.uk  
www.planningni.gov.uk

HM Customs & Excise (VAT)  
Business Advice Unit  
VAT Office  
Custom House  
Custom House Square  
Belfast  
BT1 3ET  
VAT Registration Unit:  
084 5711 2114  
www.hmce.gov.uk

Heritage Lottery Fund  
51-53 Adelaide Street  
Belfast, BT2 8FE  
028 9031 0120  
enquire@hlf.org.uk  
www.hlf.org.uk

## Republic of Ireland

Conservation Officers  
Contact your Local Authority

The Heritage Council  
Rothe House  
Kilkenny  
Ireland  
056 777 0777  
[www.heritagecouncil.ie](http://www.heritagecouncil.ie)

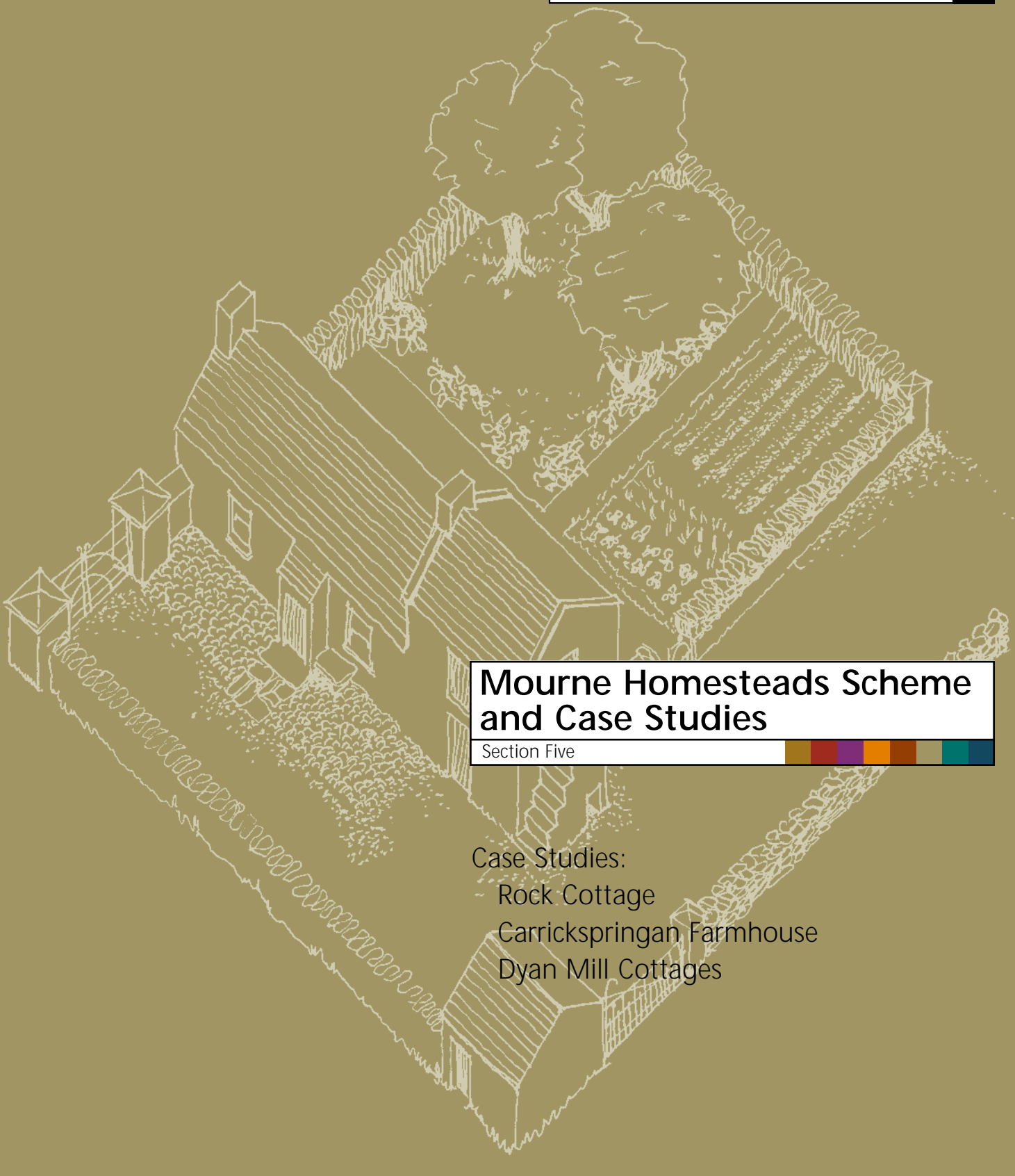
Department of the Environment,  
Heritage & Local Government  
Dún Scéine  
Harcourt Lane  
Dublin 2  
01 411 7157  
[www.environ.ie](http://www.environ.ie)

Department of Community,  
Rural and Gaeltacht Affairs  
43-49 Mespil Road  
Dublin 4  
01 667 0826  
[eolas@pobail.ie](mailto:eolas@pobail.ie)  
[www.pobail.ie](http://www.pobail.ie)



Direct Taxes: Administration  
Revenue Commissioner  
Dublin Castle  
Dublin 2  
01 647 5000 ext. 48011





## Mourne Homesteads Scheme and Case Studies

Section Five

Case Studies:

Rock Cottage

Carrickspringan Farmhouse

Dyan Mill Cottages

## The Mourne Heritage Trust was formed in 1997:

‘to sustain and enhance the environment, rural regeneration, built and cultural heritage and visitor opportunities of the Mourne Area of Outstanding Natural Beauty and to contribute to the well being of Mourne’s communities.’

## The Mourne Homesteads Scheme

**The** Mourne Homesteads Scheme is an initiative of the Mourne Heritage Trust (MHT) and is the culmination of several years campaigning and alarm over the accelerating loss of traditional buildings throughout Northern Ireland. The available references quantifying these losses have previously been highlighted in Section 2. Seed funding was secured to provide for an initial feasibility study to explore the viability of a building restoration programme within the AONB, to give examples of best practice and to endorse Planning Policy BH15 (in PPS6 see page 69) ‘Non listed vernacular buildings’:

*Buildings of character which display local traditions of architecture and design are an important part of our heritage and regional identity. It is therefore sensible to sympathetically rehabilitate and improve such venacular buildings, rather than replace them or allow them to fall derelict.*

Opposite:  
Map illustrating the designated boundary of the Area of Outstanding Natural Beauty (AONB).





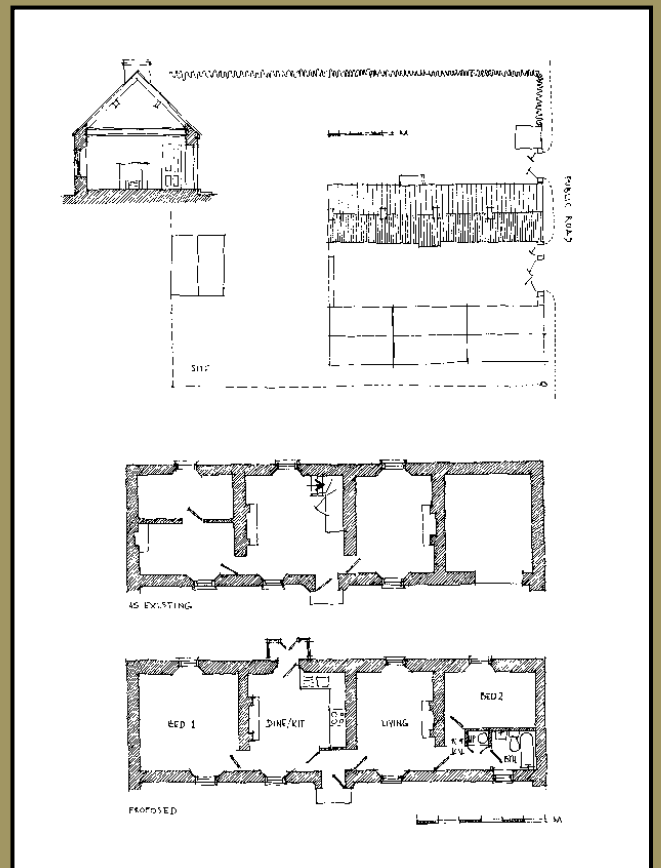
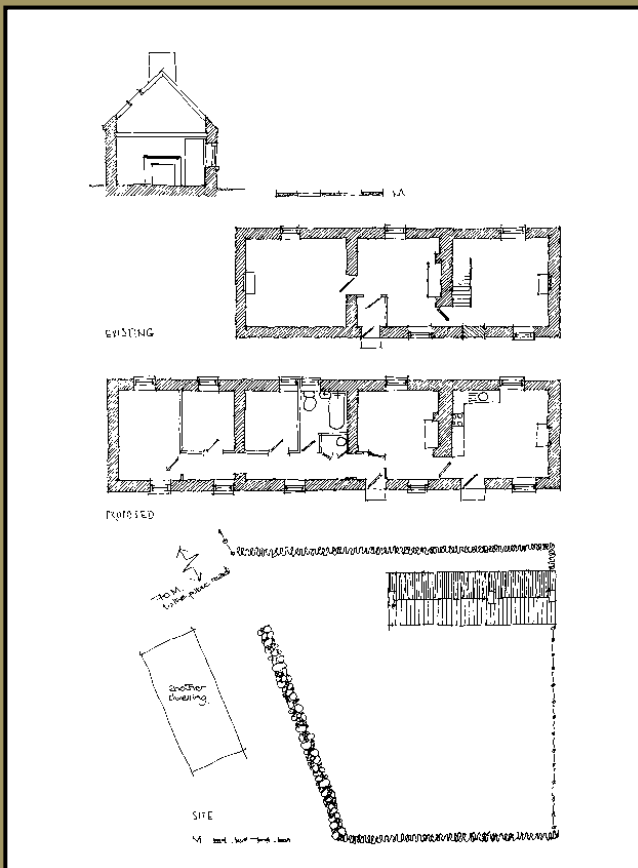
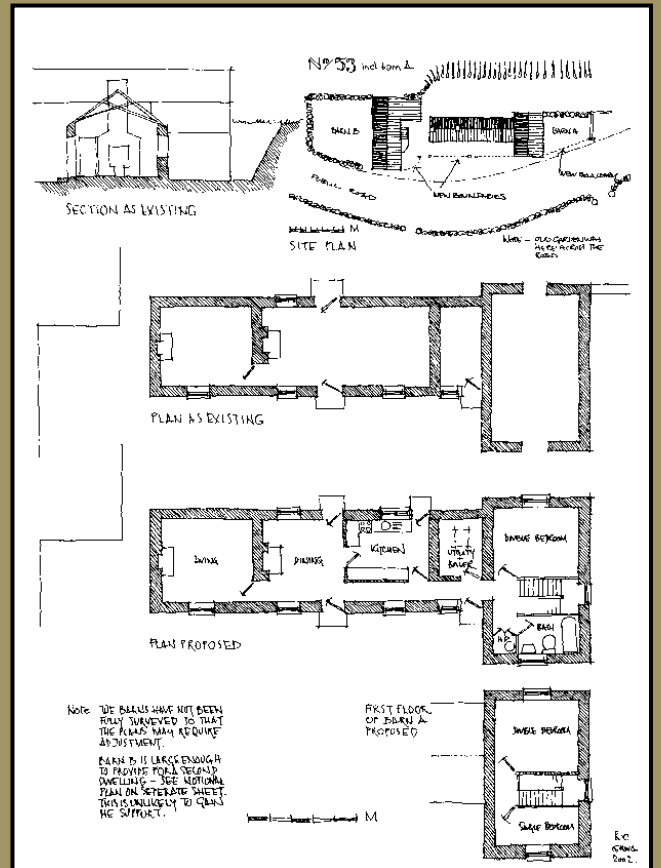
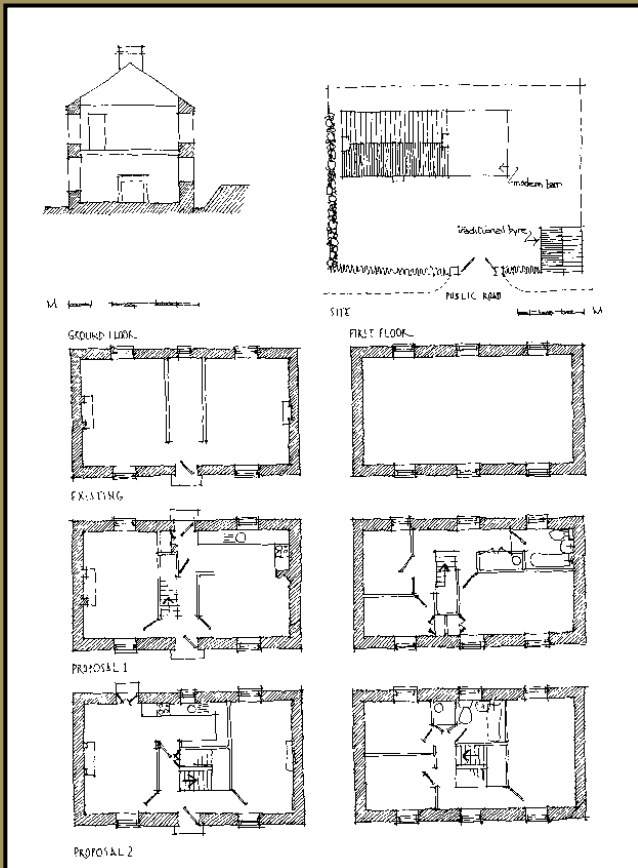
Traditional buildings are an integral part of the famed Mourne landscape. The Mourne Homesteads Scheme was launched in May 2000. In order to ascertain local support a voluntary registration was established whereby private owners of vacant traditional dwellings responded to a media appeal inviting *Expressions of Interest*. At the end of the appeal 178 expressions of interest had been received and included details on the buildings status, size, distance from services and ownership.

Opposite:  
A selection of proposals from the MHT Homesteads Scheme.

All properties were visited with almost 100 rejected outright as not meeting the essential characteristics of a dwelling. The remaining buildings were then selected following strict criteria of access, heritage merit and structural soundness. Using this selection process, a shortlist of 25 was created and from these 5 dwellings were selected for the pilot study. These demonstrated the widest possible range of building types, from the smallest two roomed cottage to the largest traditional dwelling; and broad geographical spread location within the AONB. All the buildings were unlisted and derelict and most had no amenities or services but all exhibited traditional methods of construction and materials in particular the use of granite for walling of both buildings and enclosures which is so distinctive of Mourne.

These five buildings had condition reports, outline schemes and schedules of work drawn up. They were then valued at current market value and at projected value upon completion of the outlined works and the scheme of works were costed by Quantity Surveyors. From the outset two potential options were offered to building owners: namely *refurbishment for sale* (re-sale to the original owner) and *refurbishment for rent* (retained on a lease from the original owner). In the end the overwhelming public response was the refurbishment for sale option, and as a result the leasing option was no longer explored. A legal mechanism was created to buy the buildings from the owners for a nominal sum on condition of repurchase on completion of the works at a pre agreed re-purchase price.





The design brief was drawn up to ensure that the:

- a) Form, structural composition and characteristic key elements principal fireplace/hearth, windows, doors remained
- b) To provide schemes that will allow sustainable full time occupation for family living, entailing provision of modern amenities – heating, cooking and washing
- c) To provide schemes that will restore them, providing modern user standards for full time family living without the loss of traditional character or form
- d) Intervention and alteration to be kept to a minimum compatible with the requirements for modern family full time occupation
- e) In order to achieve this, some of the small structures to be sensitively extended. In others, accommodation will be possible within the existing envelope
- f) Lifetime homes (wheelchair friendly) to be costed for one or more projects
- g) Use of alternative energy source to be explored for some selected buildings using Design Advice grant from the Building Research Establishment
- h) To maintain and restore the traditional elements of settings of each building-out offices, walls, gates, hedges and plantations.

Parallel to this programme of selection, Mourne Heritage Trust was pursuing funding. A report was drawn up outlining the proposed scale of the project and was sent to potential funders. It was found that no one agency or organisation was able to invest a large enough sum for MHT to be able to take the scheme forward on its own, consequently the project team had to assemble a cocktail of contributions. Nearly all the positive responses came with conditions; some of these conditions were in direct conflict with others. All these differences were eventually resolved.

The selection process, negotiations with the contributors and preliminary discussions with Planning Service had all taken much longer than anticipated, so that it wasn't until October of 2001 that it was possible to select the professional team that would take the project forward to contract and completion.

To date, the project has attracted over £1.6 million funding from the Architectural Heritage Fund, Cooperation Ireland, Duchas, Environment and Heritage Service, Esmee Fairbairn Foundation, the Heritage Lottery Fund, Northern Ireland Housing Executive, The Pilgrim Trust, Rural Development Council and Ulster Garden Villages. One building has been completed largely funded by the Pilgrim Trust and it is expected that the next group of buildings will be on site in 2005.

When completed, the successful project will have:

- a) saved up to nine dwellings, their outbuildings and settings from dereliction and loss and proved a first step towards a revolving programme of restoration
- b) demonstrated sustainable housing development by making best use of an existing heritage resource
- c) provided living examples of the traditional housing types of Mourne: provided sustainable housing for nine local families thus sustaining traditional communities, slowing the rate of rural emigration and ensuring by sustained use that other elements of the Mourne countryside will be retained and maintained – property boundaries, pillars and posts, walls and shelter belts
- d) influenced statutory bodies such as Planning Service (a practical exemplar of Policy BH15), the Housing Executive (hopefully leading to an equalisation of the Renovation and Replacement Grant) and District Councillors and members of the MHT Board as to the feasibility of rehabilitation
- e) kept alive and reinvigorated traditional buildings skills through the contracts and training days
- f) educated new audiences both of school children and professionals as to both the feasibility and the practical methods of vernacular restoration
- g) provided a positive influence on the attitudes of Planners, Building Control officers and the Housing Executive staff
- h) provided a new focal point for sustainable tourism initiatives
- i) contributed to and enhanced the special character of the Mourne landscape

The Heritage Lottery Fund suggested that a greater emphasis be placed on education and training and an Education and Training programme was created in tandem with the building programme. Over 25 courses have been held in traditional building skills with over 250 people in attendance including great participation from Northern Ireland Housing Executive staff. Training at all levels in the use of lime, traditional carpentry, thatching and other rural building skills was provided.

The programme of skills events ran from April 2003 until September 2004. A travelling exhibition designed by John Harrison & Associates promoted the programme and was on display at fifteen separate venues.

It is a tribute to the level of enterprise to be found in this area of South Down that the project team was able to source by far the greater part of the skills and expertise required to set up the teaching programme from resources already located in the immediate area. The following contributed to the skills education programme.

**Lime** – Lime is a fundamental component of almost all mortars, plasters and renders. The raw material was sourced from local limestones each characterised by different impurities.

All Irish limes are high calcium, non-hydraulic limes known as “air limes”. They are stored wet because they set when in contact with air. The lime made at Narrow Water Lime Service is air lime. Hydraulic qualities can be introduced into air limes by mixing in pozzolanic additives. All naturally hydraulic limes are imported into Ireland. Hydraulic limes must be stored dry because they set when in contact with water. Hydrated lime is the most commonly available form of lime. Its main use is in gauged mixes. Hydrated lime must also be stored dry.

To make air lime for building, the stone is broken and then burnt. The burnt lime, “quicklime” is slaked in water to form a putty and this is mixed with an aggregate to provide “coarse stuff” ready for tradesman’s use. The longer it is stored the finer and more workable it becomes.

Local characteristics and colour variations are contributed to, first by the choice of limestone, second by the fuel used for burning and third by the choice of aggregate.



The main facilitator and participating firm was the **Narrow Water Lime Service**. The owner and manager, Dan McPolin, received his background in traditional building while working with the DoE Historic Monuments and Buildings Branch (now EHS). After leaving government service, he set up his own lime works and kiln and today he is the only manufacturer of air lime products in the whole island. He is a leading member of the Building Limes Forum and has a passionate interest in spreading the word about lime through education and training both in the professional as well as the operational field.



**Dask Timber Products** is managed by Stephen Clarke who is also a partner in the business set up originally by his father. This firm has recognised the special challenges of the heritage building market. They pride themselves on being capable of meeting heritage standards using 21st century technology.

**Timber** – Timber is a feature of the oldest structures built by man. Only in very recent times have steel and plastic eroded its unique importance.

The crafting of timber for buildings reached a peak of perfection in the late mediaeval period. Sadly our turbulent history has seen to the destruction of all but a very few examples from these times.

A subsequent decline in carpentry skills reflected the depletion of our natural forests, however the 18th century saw an increase in the quantities of imported timbers including memel (baltic fir) and exotics like mahogany, ebony and teak. The result was that joinery and cabinet making became extremely refined, achieving standards that have never yet been surpassed.

**Dry Stone Walls** – Dry stone walling in the Mourne originated when farmers began to clear granite boulders, deposited during the Ice Age, from the land. These boulders were then used to build walls, known in the Mourne, as ditches.

These ditches divided the land and also provided shelter for animals. The first or bottom stone to be placed is known as the butt stone and this is rolled into place by hand using a crowbar on a plank known as a prise. When the bottom stones were in place they used a piece of wood approximately seven foot long by ten inches wide to start adding on the other stones. Some of these stones had to be shaped and dressed using a large hammer. The hammer was called a scabbel hammer. The name comes from the old word “to dress”.

This use of the plank (prise) in building was commonplace into the late 1960’s. After that a fork was attached to a tractor, followed by the modern day hydraulic digger.

The traditional form of the ditch has not changed in thousands of years. Ditches have no foundations, they are built on solid ground. The ditch is a tapered structure, with the bottom stone about a meter wide, the second stone a little smaller and so on to the top stone that is approximately 15 – 20 centimetres wide. All of the stones used must be in uniform and both sides of the ditch should look identical.

Dry stone walling is a skill that has been used for generations by people in rural areas. Traditionally used to section fields and parcels of land, it is very popular nowadays with new house builders to mark off the boundaries of their properties.

Dry stone walling is totally in keeping with the natural beauty of the area.



Phelim Doran is a stone mason, Mourne born and bred. He provided instruction in the construct of the Mourne style of **dry stone walls** (ditches) that are so characteristic of the area. They are made up using the glacial erratic granite boulders that are strewn all over the low Mourne. He makes full use of modern machinery to do the hard labouring work of previous generations but this in no way replaces the skills that this work demands.



Geoffrey and Maurice Walker followed in their father's footsteps to become **blacksmiths and farriers**. They are based in Ballyward and contributed their wide knowledge and skills to the course, covering from the time honoured furnace and anvil wrought work to modern styled fabricating and welding.

**Iron** – Iron became an important building material as the forest cover was cleared and timber came into short supply. A number of different skills developed around the use of iron, the blacksmith, the farrier, the nail maker and the founder.

Iron used in buildings can be summerized under three types, wrought iron, steel and cast iron. These differ princply in the amount of carbon they contain. Wrought iron is the purest form. It is traditionally smelted with charcoal and never becomes fully molten. The impurities clinker on the outer face as it cools and are beaten off by hammering. The more often this process is repeated, the purer the metal becomes.

Steel became commercially available in the 1850s. In steel, iron is amalgamated with other metals to provide different properties, nickel, chromium and cobalt are the most commonly used.

We have a valuable heritage of beautiful wrought iron gates and railings. Later examples combine cast iron embellishments. One of the finest iron founders in the world was Richard Turner of Dublin.

In the 1920s the invention of welding greatly simplified steel fabrication and in modern times new ways of protecting steel from weathering and rusting have been developed including galvanizing and plastic coating.



The **hedge laying** course was delivered by Robert Shearman from Conservation Volunteers Northern Ireland. CVNI is a charity that promotes the support, development, training and practical involvement of individuals in action to improve the environment. Activities include treeplanting, dry stone walling, path creation, woodland management, pond construction, hedge laying, building school nature areas and creating informal urban open spaces.

Patrick McAfee, **stonemason** and instructor with FÁS, The National Training and Employment Authority in the Republic of Ireland ran a stone workshop at Dan McPolin's Narrow Water Lime Service. The history, regional styles and principles of working with stone were covered along with practical demonstration of building with lime and rubble stone. Patrick is author of *Irish Stone Walls* (1997) and *Stone Buildings* (1998).

For all the stone there is in Ireland, The Natural Stone Directory only lists 18 quarries operating commercially to provide building stone.





McConnells of Carrigenagh Road, Killeel have a world wide reputation for the quality of their work with **cut stone** and they are still winning building stone from the Mourne Mountains. Stanley Annett led guided tours of the works demonstrating the range of operations catered for at their yard, from the highly skilled hand carving of decorative stones to the automated cutting of regular shaped and computer profiled stones.



Long straw – making up bundles.



Reed swept to form a verge.



Heather thatch.



Combed rye.

The Duchas Heritage Service organised and managed the most adventurous of all the courses. These were the days dedicated to **thatch** that were held at the picturesque setting of Parke's Castle, Co Leitrim on the banks of Lough Gill. Three thatchers gave demonstrations and provided hands-on training. Dermot Redmond from Wexford worked with long straw, Dougie Maclean of the Scottish Highlands Museum worked with heather and John Masters from Donegal worked with reed. They were supported by Roger Yates from Suffolk who had been

instructor on the FÁS training courses managed by the late Peter Brocket. Back up talks were given by members of MHT, Peter Kirkwood of the Northern Ireland Housing Executive, who informed owners about grant opportunities and Dick Oram, a local architect, who explained the nature of traditional buildings and suggested ways they can be adapted to meet 21st century needs.

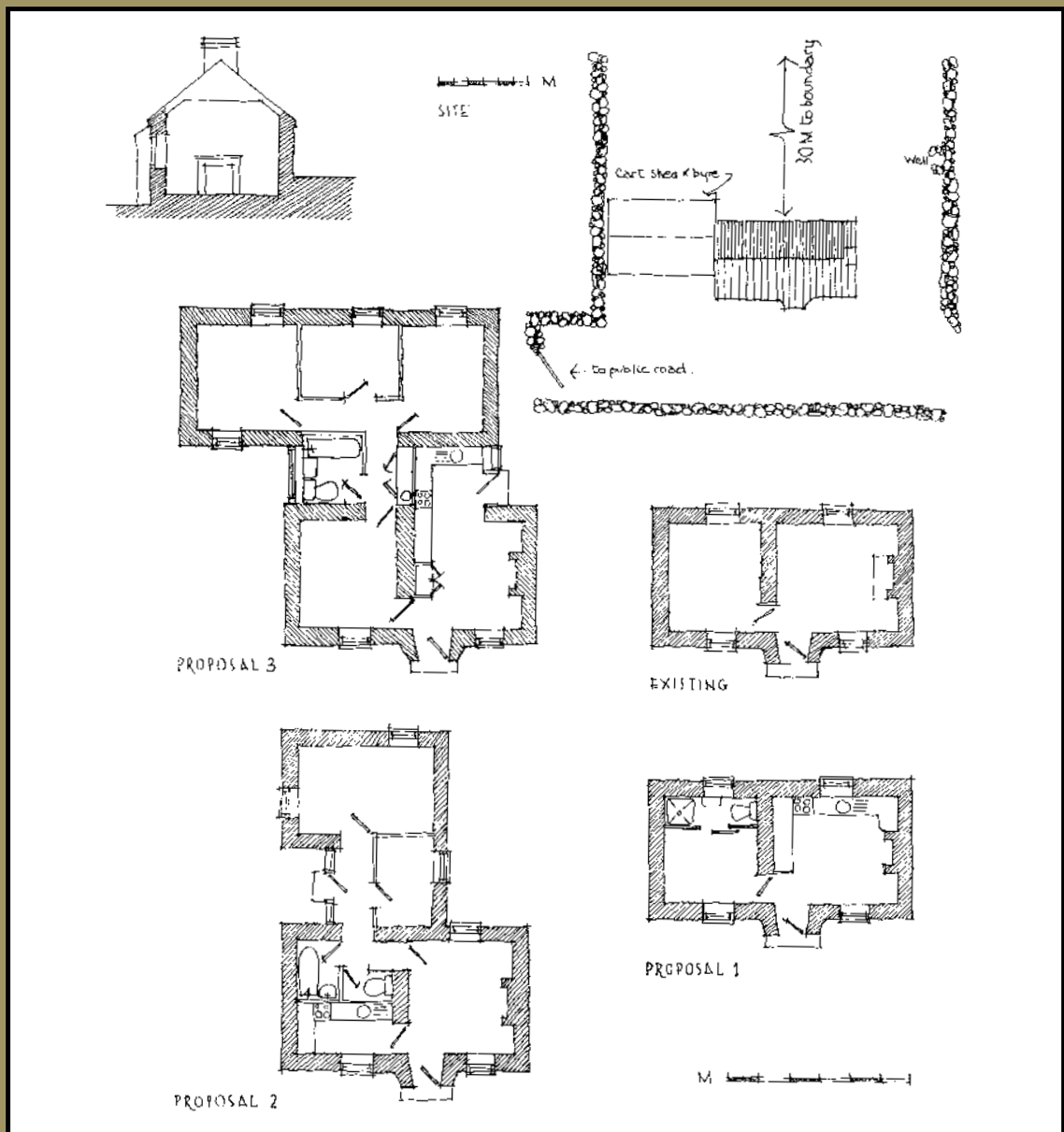
## Rock Cottage, Altnadue Road, Castlewellan, Co. Down Case Study



The detail of how the MHT Homesteads Scheme developed is recounted elsewhere in this book (Page 79).

The story of this particular project began when the owners of Rock Cottage, the Rice family, responded in June 2000 to the MHT appeal.

The building was visited by the Homesteads team. It clearly met all the primary criteria for selection onto the scheme. This was one of the smallest properties considered. It had only two rooms, the form was very characteristic of Mourne and it was placed on a very prominent site above the Dublin Road a short distance out of Castlewellan.



Preliminary proposals for Rock Cottage.

It was decided to take it onto the next stage and to accept it into the group of twenty five properties for which sketch designs would be prepared. These designs were costed and set against valuations made by local estate agents and the District Valuer. From this information a calculation was made to assess "value for money". Again Rock Cottage gained a pass.

At this point in time the MHT were still in negotiation with the Heritage Lottery Fund over the final stages of the grant application process. In the Autumn of 2001 The Pilgrim Trust made a substantial grant offer that at last enabled MHT to appoint Alastair Coey architects. An initial programme was tailored to fit the Pilgrim Trust grant. Properties in Valley Road and Clonvaraghan Road were earmarked at first; however the final decision was to proceed with Rock Cottage.

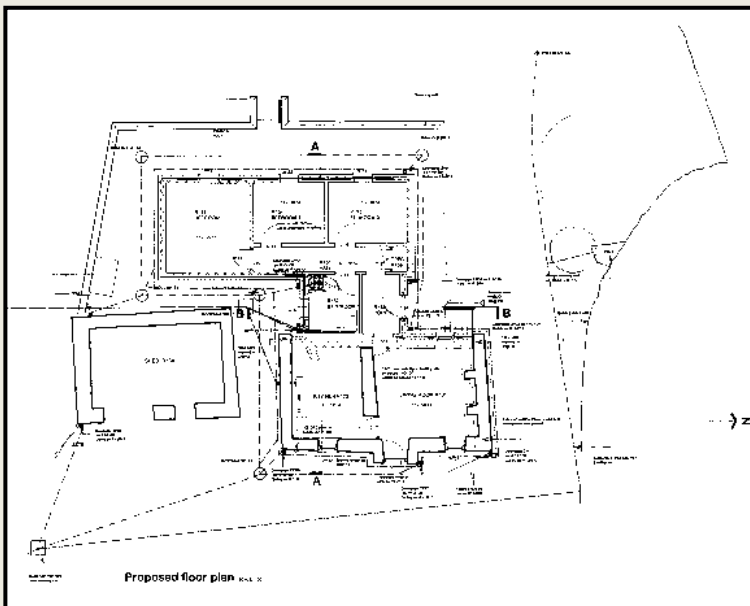
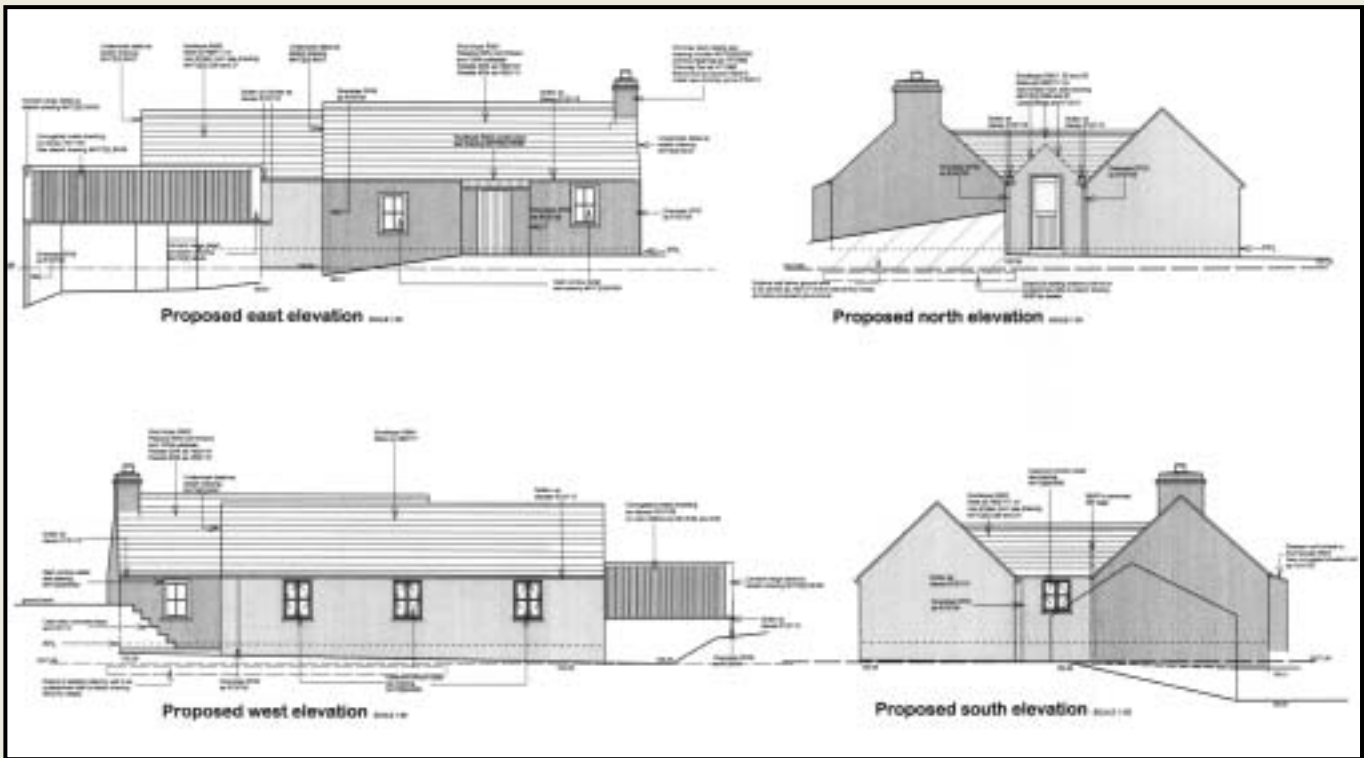


**The** property, as the Design Team found it, was in poor condition. Had it not been for the attention of the owners in ensuring the roof remained watertight, it would almost certainly have been a ruin.

Hand measurement of the house provided an understanding of the construction of the building and any alterations, additions and usage over time. A condition report was undertaken of the fabric to understand the causes of any defects. The remaining significant elements of the building were identified for retention and repair such as

roof eaves, verge, chimneys and window and door openings. The use of traditional materials such as slating and lime renders were also noted. Architectural detail was modest; nonetheless, it was faithfully recorded and reflected in the contract drawings.

Given the building's footprint, and the accommodation required in the MHT brief a proposal to extend upwards and then in length was considered and rejected in favour of a rear extension. This proposal proved very successful in allowing the original dwelling to remain the dominant feature of the site.



Contractors were pre-qualified for inclusion on the tender list by means of a vetting system to ensure they had the conservation knowledge, expertise and craft skill to carry out the work. Training in the use of lime renders was of paramount importance and was specifically noted in the contract specification. This process produced a short-list of contractors to receive tender documents.



Clear and comprehensive drawings, specification and schedules of work coupled with a standard Minor Works Lump Sum contract provided the maximum financial control for the Trust. Care was taken not to impose unrealistically tight time-scales on the contractor and it was realised that quality of workmanship and speed of construction are not always compatible with this type of work.



Frequent informal and formal meetings on site between the Contractor and the Design Team ensured the project proceeded as planned. A flexible approach avoided unnecessary work and cost but allowed the contractor and design team to react to potential difficulties as they were uncovered. After the removal of render and plaster the construction of a gable wall was confirmed as a matrix of clay, lime and small field stones. It was important this fabric was not lost as the initiative was to retain the building. Specialist advice was sought from a Structural Engineer, sympathetic to the repair of historic buildings and the structure was conserved employing specialist grouting techniques.



The conservation of traditional housing can be at odds with modern regulations and standard construction details. Through a process of compromise and understanding that included the participation of the architect, the builder, the trust, other funders, statutory bodies and the prospective owners these difficulties were overcome and the cultural significance of the building as part of a group has been retained as reliable evidence of a fast disappearing building type.



# Carrickspringan Farmhouse, Moynalty, Co. Meath

## Case Study



### Description

- The complex at Carrickspringan is an increasingly rare surviving example of a two-storey vernacular farmhouse with ancillary outbuildings within a setting which retains its front and rear laneways, front courtyard, haggard, haybarn, garden, paddock and mature planting. It sits within an historic landscape formed by a cluster of manmade structures which also includes a prehistoric promontory fort, a network of old roads and laneways and two roadside wells.
- The original structure was single storey, most likely thatched and may date to the 17th century although a date of circa 1780 is more likely. A date stone, uncovered during restoration works, indicates it was 'raised' to two storeys in 1902 and provided with a slated roof, a common development for such houses at this time.
- The house is a good example of the lobby entry farmhouse, the traditional plan form in the area, in which the front door and the main hearth are aligned with each other, creating a small 'lobby' area inside the front door.
- The house was restored between 1998 and 2000 by the Shaffrey family. Although vacant for over 30 years, the roof was sound and the building structurally intact.

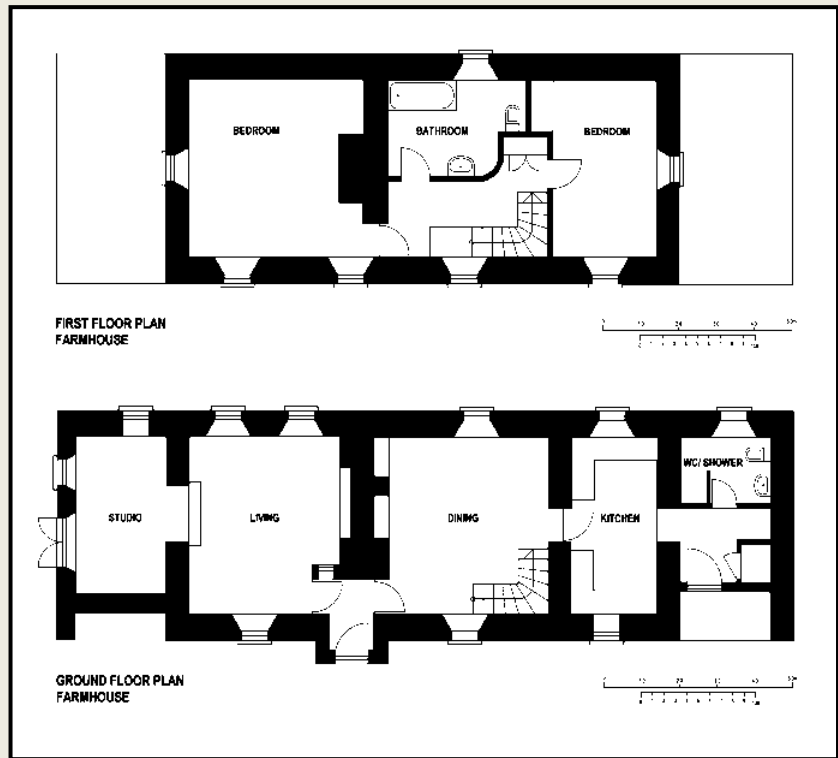
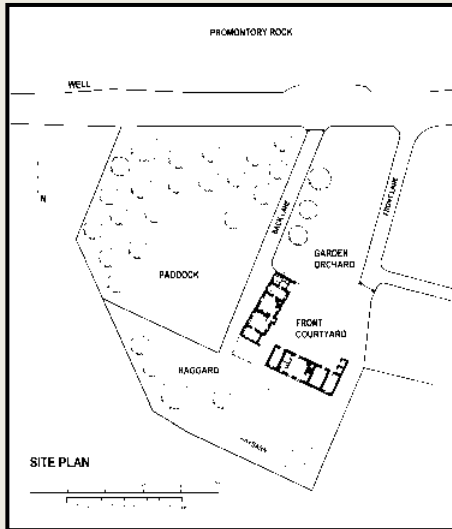




The restoration was inspired by the last writings of Maura Shaffrey on the future of vernacular buildings and is dedicated to her memory.

### The Brief

- This was essentially a demonstration project to show how such vernacular complexes can be restored and adapted to comfortable modern living standards, while retaining their intrinsic character and personality.
- Rather than ‘ironing’ out the irregularities and quirks such as the low first floor windows, the layers of varied pigmented limewash, the uneven window embrasure in the old dairy, the ‘spy’ window in the lobby entrance, the large open hearth of the former kitchen, etc., these were retained, acknowledged as distinctive aspects of the house’s personality.
- Equally, the ‘improvements’ included underfloor heating throughout, generous bathroom and bedrooms, a walk in shower – complete with inherited projecting stone as soapholder. The rooms are bright – a number of new windows were carefully added.
- Another objective was to adapt sustainable building principles in the restoration. Thus the principle of repair rather than replace was applied, with, for instance, 2 windows being salvaged from 3; window boards made from the sound off-cuts from otherwise decayed floorboards; recycled



newspaper insulation was used in the roof and a reed bed treatment drainage system was installed.

- The project also served as a laboratory to explore the varied use of lime in the mortars, renders, plasters limewash and the outbuilding floor screed.

### Statutory Aspects

- Planning permission was obtained for the new reed bed sewage treatment system and the minor alterations to the elevations where new windows were formed and the lean-to structures at either gable end were adapted to integrate better with the house. Otherwise, there were no statutory aspects of significance.

### Curtilage & Site – Access, Services

- What is important about this site is the intactness of the house within its setting. Thus the boundary walls and hedgerows, the laneways, the outbuildings, all formed part of the restoration project which was tackled in phases. The house was restored first, followed by the outbuilding which has been partially converted to further living accommodation and, running in tandem with this has been a planting programme of indigenous varieties of trees and shrubs.

### Specification – Conservation Issues

- This is a simple building with a limited palette of materials, however compatibility was a key issue in the specification of new materials. Of particular note is the exclusive use of lime/sand renders, plasters and mortars throughout. At the outset Dan



McPolin of Narrow Water Lime, held an onsite training session for the builder and client in the use of lime. This proved invaluable and Dan returned for specific aspects throughout the project – such as preparation of the limecrete screed for the outbuilding floor.

### Issues Arising in the Course of the Works

- Finding the right builder proved difficult at the start. However, Herbert Carroll, who worked with his son, Adrian, on the house over 3 years, brought a great interest and sensitivity to the project, had an orderliness in his methods and possessed the innate understanding and ingenuity of the vernacular builder.
- Other issues included dealing with a network of springs (hence the townland name Carrickspringan!) around and under the house and, most significantly, defending the setting against an inappropriate new development on an immediately adjacent site. Although the farmhouse is still not statutorily protected, on appeal the proposed new bungalow was refused planning permission on the grounds of its negative impact on the historic landscape.

### Final Assessment

- The farmhouse is today lived in full-time. It is bright and comfortable with indoor and outdoor spaces of varied character. The atmosphere is calm and settled, the bird-life rich and the buildings breathe.

## Dyan Mill Cottages, Co. Tyrone

### Case Study



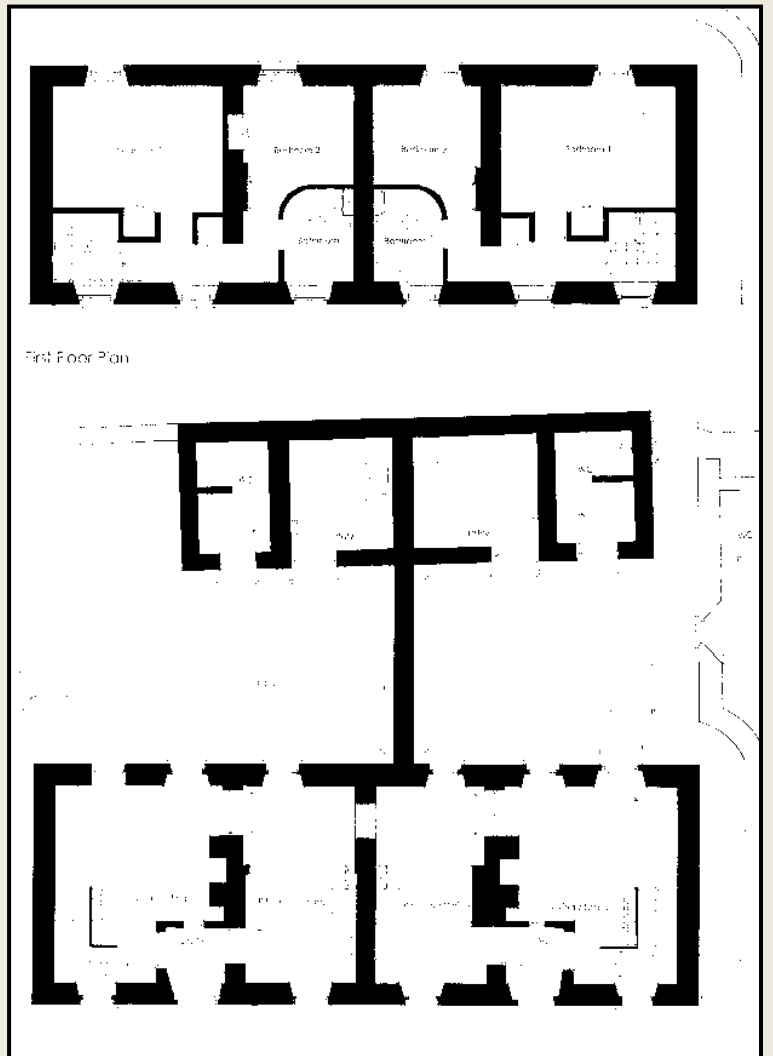
**Not** all vernacular buildings are simple cottages and there is a strong rural tradition of landlord built housing, often attached to mills as here at Dyan, Co. Tyrone. The main Mill buildings were restored first but these two workers cottages were in a sad condition when the complex was bought by its current owners.

The challenge was how to restore these small houses to a standard high enough to attract tenants without loss of character. They had no internal bathroom but the rear yard privy and outbuildings were converted into a utility room and store, and a bathroom inserted to the first floor. This necessitated a change in the staircase position to maintain two



bedrooms and this brought to bear the full impact of the Building Regulations. This meant that a 'like for like' replacement of the original staircase was not permitted and the approved staircase took up a lot more space than the original, although now in a better location to free up first floor space. This 'blanket' application of the Building Regulations is one of the great challenges of converting and adapting historic buildings.

Nevertheless, despite these difficulties, these have been very successful restorations, both now let and providing good quality accommodation while keeping the historic character. The project received historic building grant aid from the Environment and Heritage Service and recognition in '30 year' EHS Conservation Award scheme in 2000.



The preceding pages are only an introduction to our traditional buildings, their history, their components, their weaknesses, their strengths and how to give them a future. The reading list may inspire you to further study but the best way to learn more is to engage with the buildings themselves and to breathe the breath of the 21st century into their lungs.

Every abandoned house or byre has an owner somewhere. If you are one, be encouraged and take example from those who have already successfully invested in similar buildings and have brought them back to life and by so doing helped to save a unique inheritance.

Lastly, this text has focused on dwellings but the same principles apply to every building constructed this way, whatever has been its use.









## Availability of Skills and Opportunities for Training

Appendix One



**Day** to day, skills training programmes are demand led and consequently this is a moveable feast. There is no value to readers in providing here a definitive list of training opportunities currently available because it will, very quickly, be out of date. Listed below are contacts in the field of skills training and the current availability of training should be checked with them directly.

## Northern Ireland

The Construction Industry Training Board N.I.  
17 Dundrod Road  
Crumlin, Co Antrim  
BT29 4SR  
Tel: 028 9082 5466  
Web: [www.citbni.org.uk](http://www.citbni.org.uk)

The Board is a UK organisation with a provincial base in Northern Ireland. Its responsibilities include close liaison with the construction industry from which the need for training is assessed. The Board maintains links with educational establishments throughout Northern Ireland by whom the necessary training is delivered. It is the organisation with the primary responsibility for training in the construction industry and should be the first port of call for anyone looking for trade qualifications.

The following are extracts from the Board's current publications:-

The Construction Skills Foresight Report 2003 reproduces figures from a survey in 2002 undertaken by the Department of Trade and Industry indicating that 46% of the value of

construction work in GB is spent on repair, maintenance and improvement and half of that is spent in the housing sector. A large proportion of the work force in Northern Ireland is classified as General Operatives which infers that they have no special skill qualifications. One of the major objectives of the Board is to create a qualified work force by promoting NVO/SVQ training opportunities linked to the Construction Skills Certification Scheme and the CSCS Card Holders Scheme. In that context, the repair and maintenance sector is classified in the low innovation category using techniques based on traditional methods and materials. With these comments in mind, the 2000 Northern Ireland Skills Monitoring Survey described 67% of the hard-to-fill vacancies as being in craft related occupations and goes on to state that in many skills areas there is a serious shortage of training opportunities. This fact is borne out by searches to find specific training opportunities in the heritage field including thatching and blacksmithing. It was, however, encouraging to find in the CITB NI Strategic Plan 2003 – 2006, Appendix 2, a number of openings for training in stone masonry. The National Heritage Training Group (NHTG) was established in 2002 by CITB Construction Skills. In October 2003 NHTG published a three year business plan *Building in the Past: Training for the Future*. One of its strategic objectives is to develop a five year training plan for heritage skills covering the whole of the United Kingdom.

National Heritage Training Group (NHTG)  
Tel: 077 6538 5990 or 015 0928 2857  
Web: [www.nhtg.org.uk](http://www.nhtg.org.uk)

The organisations with which CITB has links include:–

The Department of Employment and Learning  
39-49 Adelaide Street  
Belfast  
BT2  
Tel: 028 9025 7777

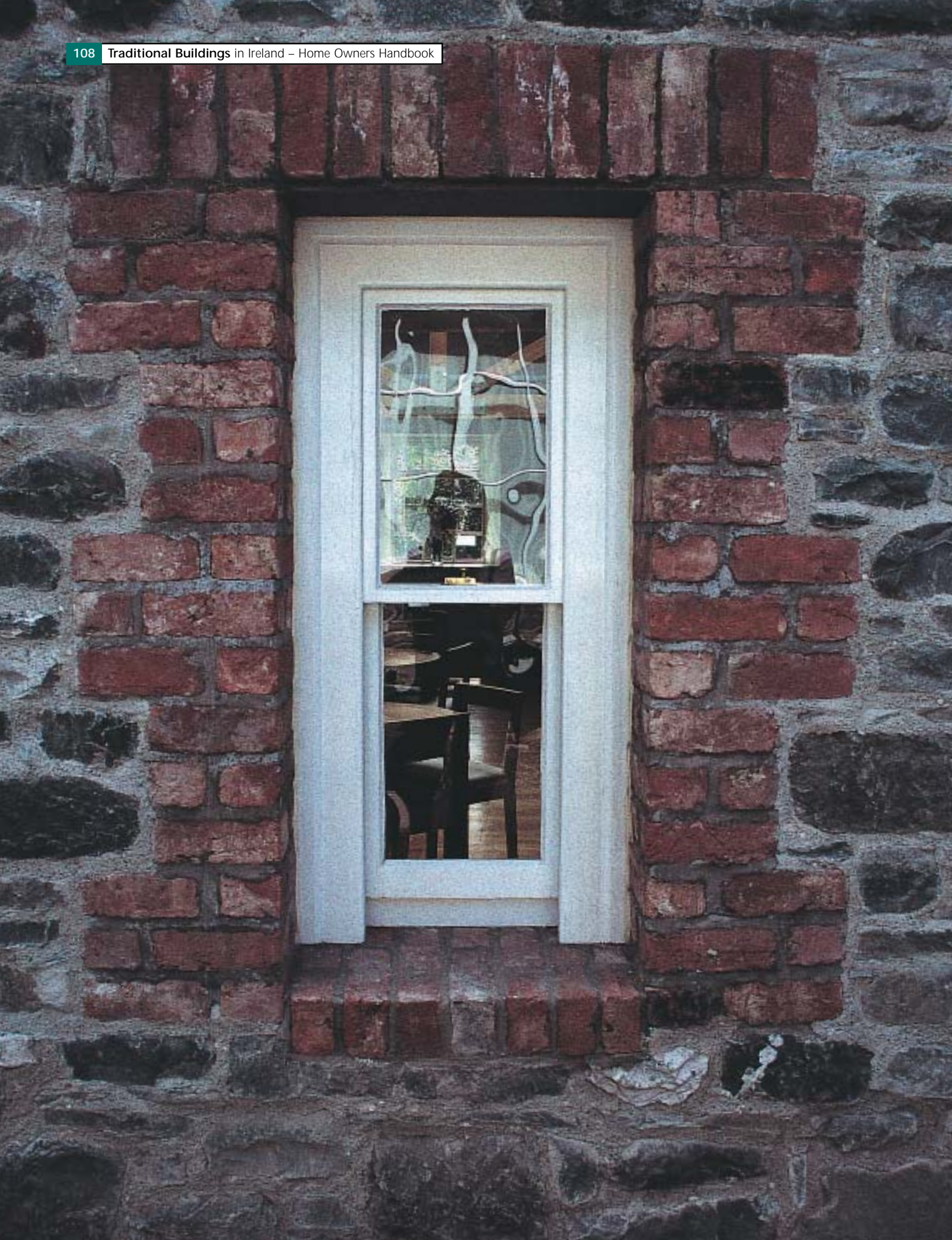
All regional Colleges of Technology

Three current training programmes are delivering some limited heritage skills training:–

1. The employer led Modern Apprenticeship Schemes
2. European Union Peace II Programme for Peace and Reconciliation, Partnerships for Reconciliation and Employment (cross border)
3. Conservation Volunteers  
Northern Ireland  
Dendron Lodge  
Clandeboyne Estate  
Bangor  
Co. Down  
BT19 1RN  
Tel: 028 9185 2817  
Web: [www.cvni.org.uk](http://www.cvni.org.uk)  
  
CVNI runs an ongoing programme of training for qualifications that include NVQs and also a programme of short courses.

Four mainland UK organisations fill a few of the gaps in training not available in Northern Ireland.

1. Scottish Lime Centre Trust  
The Old School House  
Rocks Road  
Charlestown  
Fife  
Tel: 013 8387 2722  
Web: [www.scotlime.org](http://www.scotlime.org)
2. The Countryside Agency –  
in partnership with  
Hereford College of Technology  
Folly Lane  
Hereford  
HR1 1LS  
Tel: 014 3236 5314  
Web: [www.hereford-tech-ac.uk](http://www.hereford-tech-ac.uk)
3. Scottish Conservation Bureau  
Longmore House  
Salisbury Place  
Edinburgh  
EH9 1SH  
Tel: 013 1668 8668  
Web: [www.historic-scotland.gov.uk](http://www.historic-scotland.gov.uk)
4. English Heritage  
23 Savile Row  
London  
W1S 2ET  
Tel: 020 7973 3000  
Web: [www.english-heritage.org.uk](http://www.english-heritage.org.uk)



## Republic of Ireland

FÁS  
 Traineeship Unit  
 27-33 Upper Baggot Street  
 Dublin 4  
 Tel: 01 6070712  
 Web: [www.fas.ie](http://www.fas.ie)

FÁS (Foras Áiseanna Saothair) Ireland's National Training and Employment Authority has the government remit for delivering training in the construction industry in conjunction with the National Qualifications Authority of Ireland and FETAC. The organisation works closely with Colleges of Technology across the country and Enterprise Boards.

An encouraging recent development is the creation by FÁS of a Heritage Contracting Category for training. All related courses can be sourced using the code – CPV45 451 0.

Other organisations with an interest in heritage skills training include:–

1. The Heritage Council  
 Rothe House  
 Kilkenny  
 Tel: 056 70777  
 Web: [www.heritagecouncil.ie](http://www.heritagecouncil.ie)
2. The Irish Georgian Society  
 74 Merrion Square  
 Dublin 2  
 Tel: 01 6767053
3. Dublin Institute of Technology  
 Faculty of Built Environment  
 Bolton Street  
 Dublin 1  
 Tel: 01 4023000
4. Bord Glas  
 The Organic Centre  
 Rossinver  
 Co Leitrim  
 Tel: 071 9854338  
 Web: [theorganiccentre.ie](http://theorganiccentre.ie)
5. Crafts Council of Ireland  
 Castle Yard  
 Kilkenny  
 Tel: 056 7729288  
 Web: [www.ccoi.ie](http://www.ccoi.ie)





## Further Reading and Useful References

Appendix Two



- UCD – Traditional Architecture in Ireland – proceedings of conference 1993
- ECOVAST – Our Countryside, Voices of Change – proceedings of conference 1994
- Belcoo and District Historical Society – Living Buildings, Living Places – proceedings of conference 1998
- Belcoo and District Historical Society – Historic Buildings – proceedings of conference 2001
- UAHS – Bliss or Blitz – proceedings of conference 1998
- Aalen, F.H.A. – Whelan, Kevin – Stout, Matthew – Atlas of the Irish Rural Landscape – 1997
- BSI – British Standard 7913 – Guide to the Principles of the Conservation of Historic Buildings 1998
- CADW – Small Rural Dwellings in Wales – 2003
- Civic Trust for the North East – The House and Cottage Handbook – 1976
- Clifton-Taylor, Alec – The Pattern of English Building – 1972
- Collings, Janet – Old House Care and Repair – 2002
- Danaher, Kevin – Ireland's Traditional Houses – 1975
- Devlin, Harriet – Traditional Buildings of Mourne – 2004 (A dissertation for the RSUA Diploma in Architectural Conservation)
- DOE, Heritage and Local Government – Statutory Guidelines and Advice Notes – Architectural Heritage Protection – Draft 2001
- Dublin Civic Trust – Period Houses: A Conservation Guidance Manual 2001
- EHS NI – An Owner's Guide: Listed Historic Buildings 1994
- EHS NI – Technical Notes
- EHS NI – A Sense of Loss: The Survival of Rural Traditional Buildings in Northern Ireland – 1998
- EHS NI – Northern Ireland: Landscape Character Assessment – 2000
- Gailey, Alan – Rural Houses of the North of Ireland – 1984
- Heritage Council – Irish Thatched Roofs: Consultation Document – 1999
- Lander, Hugh – House and Cottage Interiors – 1982
- Naismith, Robert J – Buildings of the Scottish Countryside – 1989
- O'Reilly, Barry – Living Under Thatch – 2004
- Pavia, Sara – Bolton, Jason – Stone, Brick and Mortar – Historical Use, Decay and Conservation of Building Materials in Ireland – 2000
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- Planning Service NI – Planning Policy Statement 6 – 1999
- Ridout, Brian – Timber Decay in Buildings – 2000
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