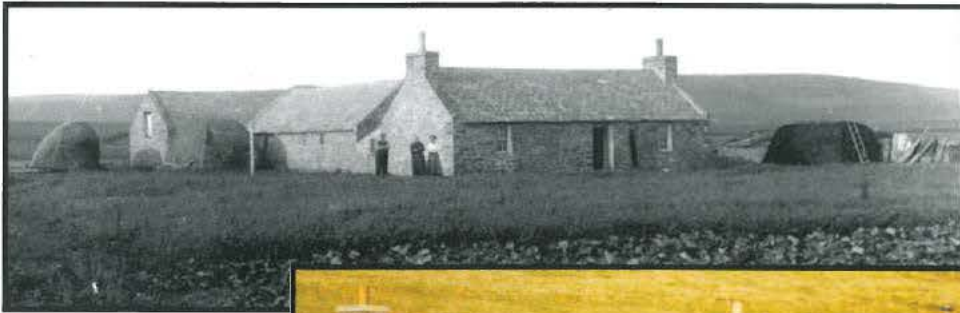


SITING AND DESIGN OF HOUSES IN ORKNEY'S COUNTRYSIDE



ORKNEY
ISLANDS COUNCIL

DEPARTMENT OF DEVELOPMENT AND PLANNING
JUNE 2000

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AIMS OF THIS GUIDE

1. TO PROTECT THE CHARACTER OF THE COUNTRYSIDE
2. ENSURE THAT THE LOCATION, SITING AND DESIGNS ARE SENSITIVE TO LOCAL TRADITIONS AND LANDSCAPES.

This Design Guide aims to encourage new houses, that are built in the countryside to be located, sited and designed in a way that is sensitive to the Orkney landscape. Orkney's countryside is one of our most precious assets and we are all responsible for ensuring that it remains unspoilt. Hopefully, the reader will find this guide a clear and concise way to help maintain and even enhance the Orkney countryside. The guide criteria relates to Policies H1, H2, and H3 of the policy document "Housing Land Provision in Rural Orkney" (OIC 1999), namely defined housing clusters, replacement housing and housing for rural business. It will also relate to policies LP/H3, LP/H8, LP/H9 and LP/H10 and LP/H13 in the Orkney Development Plan 2000 when finalised

This guide does not wish to stifle interesting modern design as modern architecture can add vitality and variety to the landscape, provided that the basic ingredients of scale, setting and massing are sympathetic to the surroundings. However if a standard block built or kit house is proposed, then there are ways that the design can follow more typical forms and proportions and reflect the local architecture and landscape.

From observing the way in which buildings over the last three hundred years have been positioned and designed into the landscape, much can be learned on how new buildings could contribute to maintaining a sense of place and local identity. The objective here is not to re-create the rural Orkney of previous eras. From observing the way in which buildings over the last three hundred years have been positioned. The countryside is not a museum piece, but the design and siting of new buildings should respect and learn from what has gone before. This does not mean copying buildings of the past but should mean respecting historical forms and character in a modern context.



TRADITIONAL OPEN LANDSCAPES IN ORKNEY



LOCATION

Finding a suitable location for a house is the first stage of the process. Locations which conform with Local Plan Policy are described in the "Housing Land Provision in Rural Orkney" policy document. As a basic rule houses should not be located in broad, open sweeps of countryside or landscape where there is little or no existing development, and should not be located on hilltops or skylines. If a site is unduly prominent it will appear incongruous with its surroundings and alien in the landscape. New houses cannot be located beside a principal road, as this can create adverse effects on public safety and will introduce a highly visible suburban element in the countryside. If a new house is located within a defined "cluster" under the Local Plan then the aim should be to maintain the rural scatter of housing within the area and avoid a suburban look. Sites in such areas should be located so as to minimise the cumulative impact of development on the wider landscape and in normal circumstances this will involve maintaining a discrete distance between individual properties or other approved sites, which in some cases could be as much as 50 meters.

ROADSIDE DEVELOPMENTS



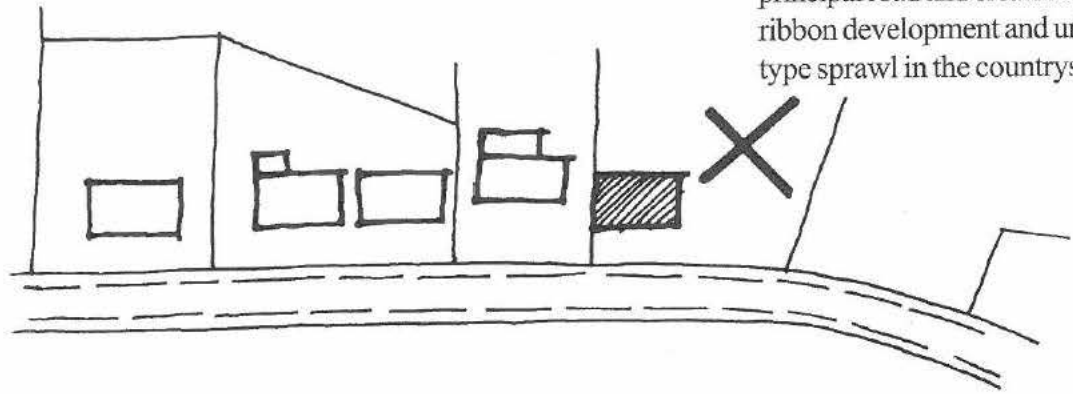
Roadside developments should be avoided as they reflect suburban settlement patterns.



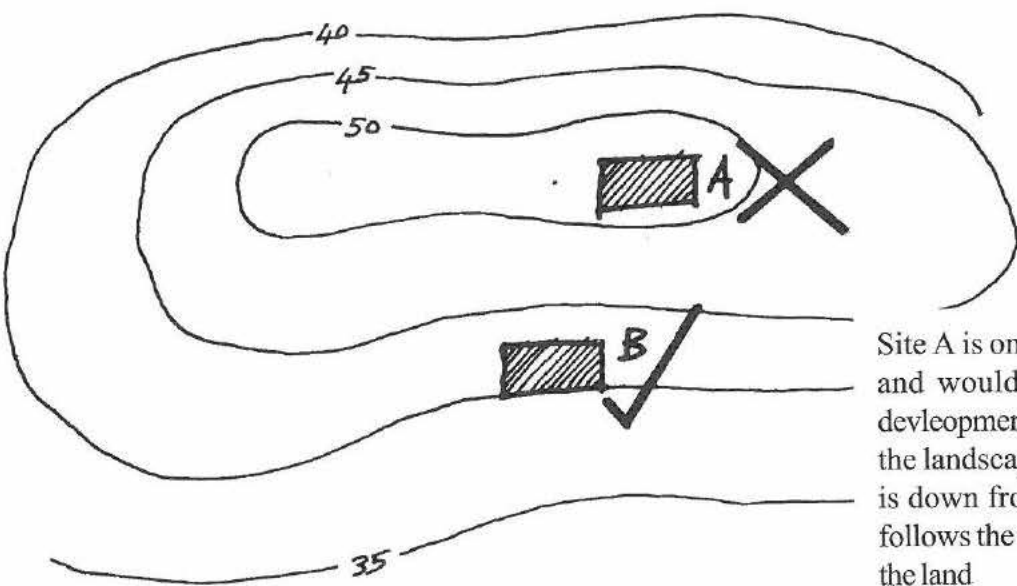
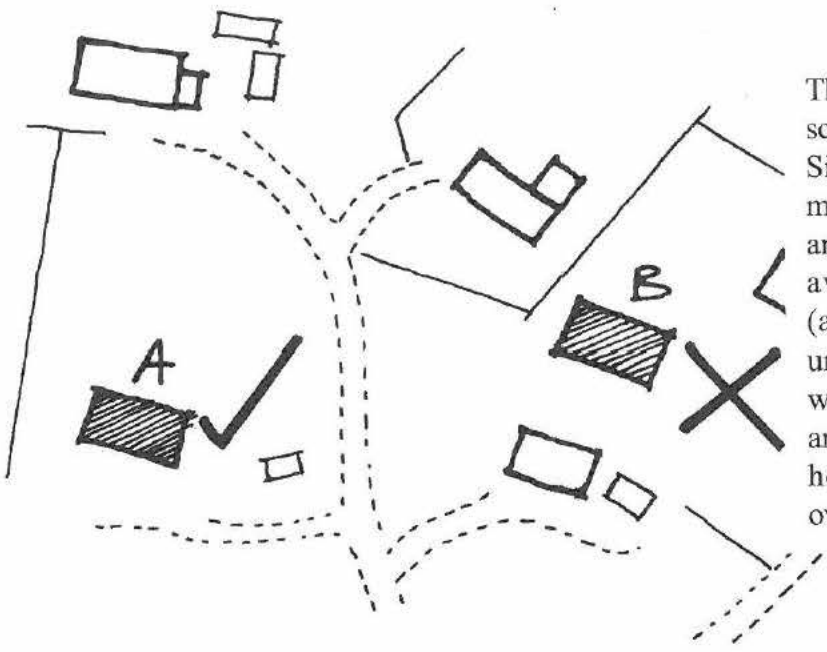
DOMINATION OF THE LANDSCAPE

New development in the countryside should be dominated by the landscape and not vice versa. These skyline houses are dominating the landscape whereas if they were positioned slightly lower on the slope this could have been avoided.

This proposed site is beside a principal road and creates more ribbon development and urban type sprawl in the countryside



This small area shows a traditional scatter of houses on the landscape. Site A is considered suitable as it maintains a similar pattern of scatter and is positioned a good distance away from the houses (approximately 50m). Site B is unsuitable as the proposed house will create a higher density of scatter and is positioned too close to other houses, and possibly causing overlooking and privacy problems.



Site A is on the crest of a hill and would create skyline development or domination of the landscape. B is good as it is down from the crest and follows the natural contour of the land

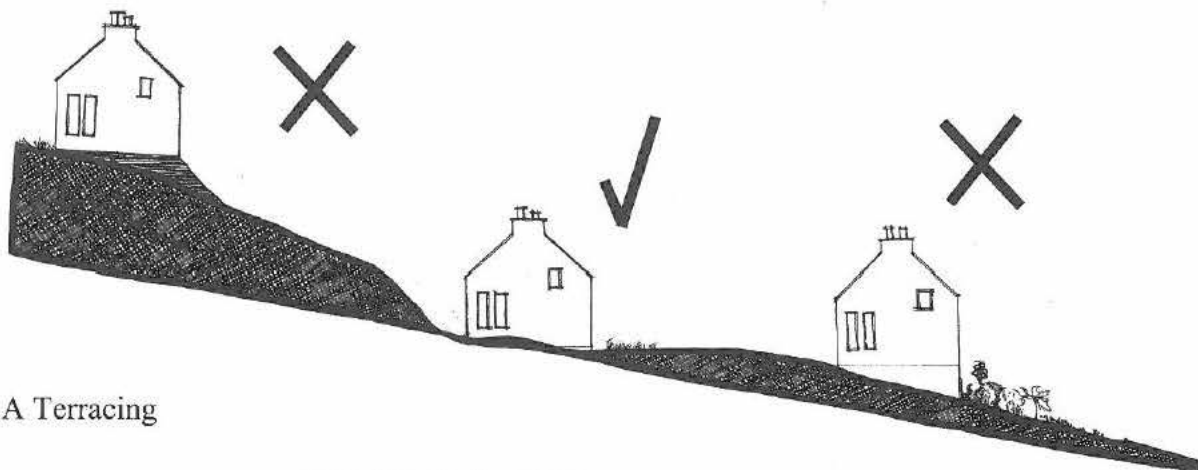
SITING

Siting a house within a plot is a very important part of the development control process. Many vital decisions need to be made at the siting stage so that the house is situated in an appropriate place, the access is accounted for and any slopes are dealt with in the correct fashion.

ANY SLOPE PROBLEMS ?

TERRACING, UNDERBUILD AND EXCAVATIONS

If the site chosen is sloping rather than flat, then care must be taken to ensure that the development will work with and not fight the contours of the land. Kit houses are often designed for flat sites only and as a result, artificial platforms have been created in some instances with extensive underbuilding or terracing, creating a distortion of the surrounding contours. Square plans, T-shaped plans and L-shaped plans are likely to be less suitable for sloping sites than fairly shallow rectangular plans. A rectangular plan aligned parallel to the contours is usually the best option for a sloping site. As an alternative, house plans can sometimes be adapted to gradients by using stepped levels, so as to avoid the need for terracing or excessive, obtrusive underbuild.

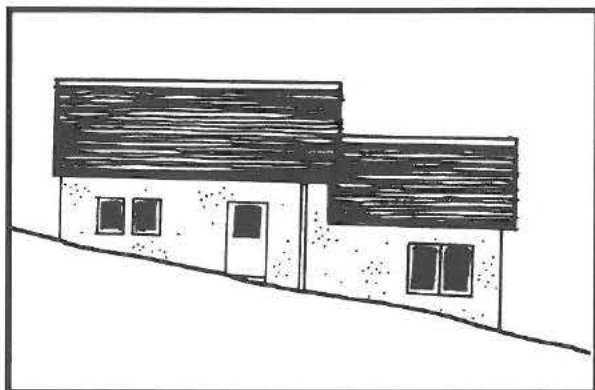


A Terracing

B Built into the slope

C Underbuilding

So when dealing with a sloping site please keep in mind that in order to maintain the beauty of the countryside we need to respect the landscape and avoid altering the natural landforms. Also in the context of design, underbuild is not traditional in Orkney as houses were either made in stepped levels or built into the slope.



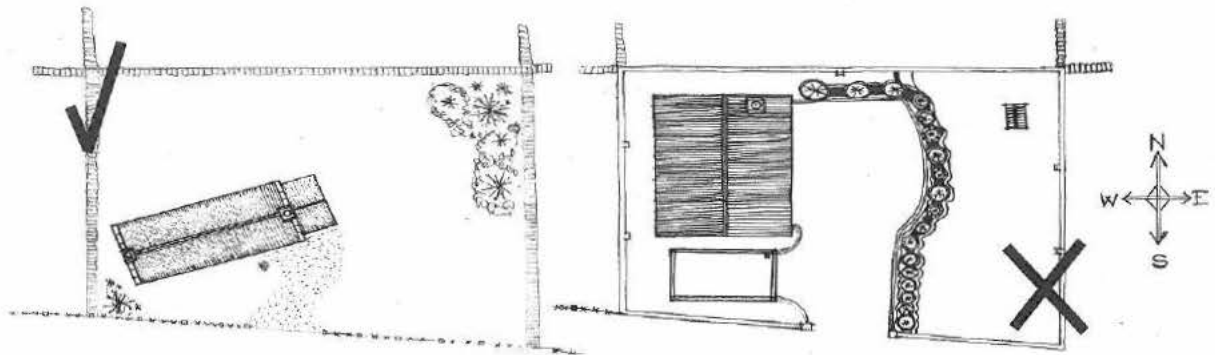
Building into a slope can reduce the effects of heat loss as the impact of wind exposure is dramatically reduced by the shelter of the slope. This shelter can also reduce the effects of weathering especially on vulnerable areas such as windows, doors and eaves. The traditional method of placing a dwelling into, rather than on top of, a slope is very much encouraged.

PLACING YOUR HOUSE WITHIN A SITE

If a house is well positioned within a site it should achieve a good outlook, obtain shelter, take advantage of solar energy but also reflect the layout of traditional rural sites.

New houses often appear foreign in our countryside not only because of their suburban style designs but also because of their harsh and formal layouts within a site. A change of some details can make a huge difference by helping a new development blend in with the surroundings. Attention to the orientation and shape of the house, surfacing materials, landscaping and boundary treatment is essential as the following illustration indicates.

A GOOD AND A POOR EXAMPLE



This house has a fairly shallow, rectangular floor plan which is sited to follow the contours and at the same time appears informal and natural in its setting. The curved driveway and the retention of existing shrubs and dry stone dykes add to the informality and reduce impact on the surroundings.

This site has a suburban, regular appearance. The house has a wide floor plan and follows the lines of the site boundary rather than the contours. This and the large, straight driveway are on a site platform or terrace which can have large impact on the landscape. The large garage is separated from the house, no soft landscaping exists and the plan shows block built walls replacing stone dykes, which can all accentuate the impact and alien appearance.

Clues as to what has been the most successful way of siting a house can be found in the surrounding area. Firstly, the best way to position a house within a site can be achieved by observing old houses nearby. You could find evidence of exposure from a certain direction by noticing the position of shelter belts or high stone dykes. You could also observe the orientation of surrounding buildings to find the best way of dealing with the elements. In Orkney houses as a rule are best positioned on a east to west axis which puts the gable into the prevailing wind and the frontage south facing. Obviously the orientation does vary according to the layout of the interior and the contours of the land.

As well as taking ideas from previous development it is also a good idea to use existing features within your site. If trees or shrubs exist it is always good for these to remain because they are often put there as a means of shelter. Also from a visual point of view leaving existing vegetation can reduce the raw and bare appearance of a new site and help the house appear less conspicuous in the landscape.

The access to your house should be a major consideration when placing a house within a site. If the house is positioned too far from the access road land can be wasted by a large driveway. A sweeping driveway is out of character in Orkney and this can be avoided by some early decision making. The materials used for a drive are equally as important as its proportions. Large tarmac drives and turning areas are not encouraged as visual impact can be severe, depending on each site situation. Other materials, such as gravel, should be considered, as informal gravel driveways appear less stark in the landscape.

DESIGN

OBJECTIVES

1. TO PRESERVE THE CHARACTER OF THE ORKNEY COUNTRYSIDE.
2. TO RESPECT DESIGN ELEMENTS THAT ARE INDIGENOUS TO ORKNEY.
3. NOT TO STIFLE NEW DESIGN: IF NEW DESIGN RESPECTS THE EVOLUTION OF THE RURAL ARCHITECTURE THEN IT CAN COMPLEMENT EXISTING BUILDINGS.

RURAL DESIGN

In the main rural housing has evolved over this and previous centuries with the needs of both domestic living and agriculture. Typical dwellings of the 17th to early 20th Centuries are stone built longhouses, designed in a linear form and usually on an east to west axis. A longhouse has the basic layout of a dwelling central and byres to the east and west gables. Inhabited longhouses were originally shared with livestock. Livestock accommodation has since been converted into living accommodation to create a larger living area. Such converted dwellings make up some of the most attractive houses in the countryside.

This guide is not trying to revert back to past living standards in any way, the message is that we should respect and use some elements of our design heritage.

CHANGING RURAL HOUSING

The design of rural housing has never remained static because designs have constantly changed with the social and economic influences of the time. As improvements in agriculture progressed house design evolved with it.

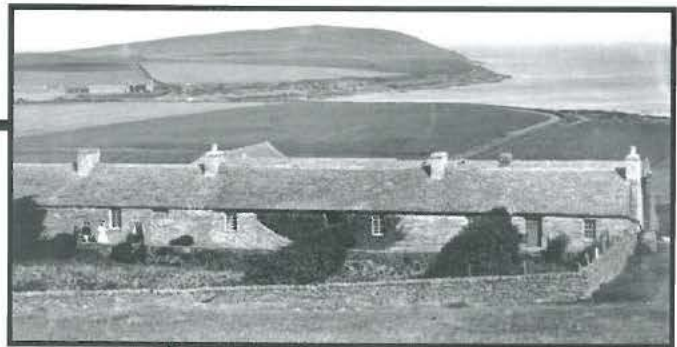
Until the 1960's the relationship between buildings and rural land was essentially a functional one. Prior to then, houses were built to accommodate the needs of farming, and this relationship manifested itself in a pattern of house building which is often referred to as 'traditional'. Demand was dictated by need and because building methods were less technological than they are now, the siting of houses tended to reflect basic considerations of shelter, access and drainage. This is one of the reasons why older houses appear to integrate so well into the landscape, because the landscape itself has largely governed their positioning.

Over the last thirty or so years, the link between living in the countryside and working the land has significantly reduced. Increased personal mobility and improvements in industrialised manufacturing released builders from the site specific requirements of earlier house building. Advances in transport have also brought new materials which are mass produced and imported into the area. New building form is increasingly losing its links with the identity which the traditional building

form in Orkney has developed over centuries. Houses are appearing in the countryside which are similar to those found in city suburbs. Designs often reflect 'suburban' tastes and kit houses, the most common form of design at present, appeal to the commercial interests of manufacturers because they can be produced quickly with a minimum of labour cost. However, because they are produced in a completely different region or country with no particular location or site in mind, there is little about their appearance which relates to the indigenous identity of Orkney.

DESIGN EVOLUTION

Early dwellings have evolved with the introduction of new materials and building methods. One and three quarter and some two storey houses have evolved from their single storey predecessors and improved single storey houses have developed.



Although vast changes have been made and houses have been substantially adapted it is clear that a relationship has been maintained throughout. The dwellings respect the advantages of keeping existing design features such as a steep roof pitch, vertically proportioned windows set deep into the wall and the use of local finishes.

There will always be improvements in housing standards but we must respect the designs that have evolved before.



DESIGN PRINCIPLES

Design principles are extremely important considerations when constructing a house and this is why professional advice is strongly recommended at an early stage. Technical principles of scale, form and proportion are what can make a house design appropriate and pleasing to the eye or otherwise. With rural house design in Orkney modesty and simplicity are the key to success.

SCALE

The first matter to consider is the appropriate scale for your house. Scale is simply the size of a house relative to its surroundings, and because of a lack of appreciation of scale, houses often appear out of place in our countryside. The relative size of a house to the surrounding landscape, the size of the plot and neighbouring buildings are the three major considerations when scaling a house correctly. Skilled designers are trained to provide enough floor space for modern living whilst minimising the impact of scale.

When houses are out of scale in relation to the landscape it is usually because they are too large. Large houses can have great visual impact, becoming the centre of the composition and detracting from the beauty of the landscape.

Some of the most vulnerable landscapes are those which are open and sweeping and have little, widely scattered, development. A site within one of these landscapes may qualify as a one for one replacement if an uninhabitable or derelict house exists within or near to the site. In these cases, the replacement should seriously reflect the traditional scale of the old dwelling it is replacing, otherwise it will not be a genuine "replacement". The obsolete dwelling need not be demolished in all cases, particularly if it is a fine example of an Orkney longhouse. In some cases, the former dwelling, and outbuildings if any can form a strong visual relationship and grouping with the new build, minimising the impact of the new house.

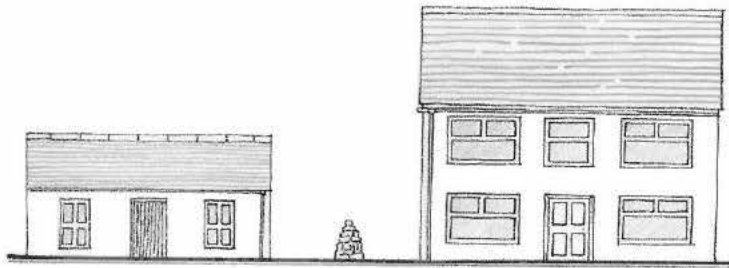


When deciding on the scale of a house relative to the landscape, as with skyline development, the landscape must dominate the houses, not vice versa.

Some people need or wish a significant amount of internal space in a house. In this case you should find a site which can absorb the scale of the house, so that views in the locality are not adversely affected. You should then think how to design your house so as to achieve these space requirements, without producing a dominating, out-of-scale building. For example, this may be achieved by designing the house in linked segments in order to minimise the overall roof height and obtain a variety and stepping down of roof heights. One or one and three quarter storeys are usually preferred to two storey constructions.

Many problems can arise when a house that is grossly out of scale with nearby buildings is constructed. An over-sized house appears overwhelming in the context of modest rural Orkney dwellings and can have a detrimental affect on the character of the countryside. Obviously, this basic error in scale can cause difficulties for neighbours and create a loss in residential amenity which could be avoided.

OUT OF SCALE DEVELOPMENT

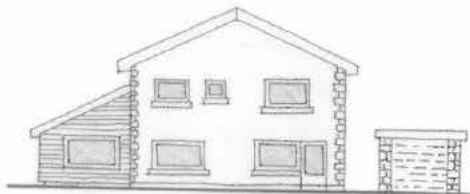


Finally, it is important that a house is placed within a site that is large enough to accommodate it, keeping in mind that houses in the countryside are traditionally sited in relatively large plots.

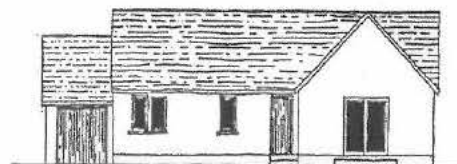
FORM

The shape of a house is an important part of designing a house for the countryside and again it is strongly advised that professional advice is sought. Basically, the form of rural dwellings is simple rectangular shapes in elevations and plan, square shapes must be avoided as they are comparable with box like suburban designs. Also the roof pitch is an important part of a dwellings shape and in Orkney steeper roof pitches are preferred. Roof pitches between 35 and 45 degrees are traditional in Orkney for slate roofs, this is because they can effectively cope with the Orkney climate.

SUBURBAN DESIGN



TRADITIONAL DESIGN



Shallow pitched (unless traditional flagstone) or flat roofs are not as effective as steeper pitched roofs against wind and rain and it is interesting to note that the further north one looks in Scotland the steeper the roof pitches become.

PROPORTION

Proportion refers to the arrangement and positioning of all the components that make up the exterior of a dwelling. The technical definition of proportion is complex but the simple awareness of its importance is the aim in this guide. If proportions on frontages or any other elevations are miscalculated this can appear displeasing to the eye. Also, if the proportions are not in keeping with the Orkney countryside and rural architecture the house will appear out of place and often uncomfortable visually.

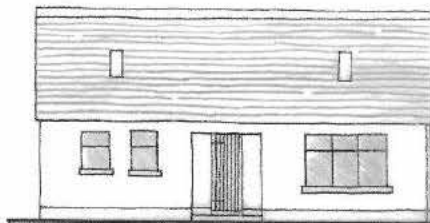
WHAT IS PROPORTION ?

Proportion is a key factor when designing an attractive house, particularly one that reflects indigenous styles. Here are some of the components that have contributed to success or failure.

The massing of a new house is important in terms of the :

- height, width and breadth of the house;
- relationship between wall and roof heights (wall to roof 'ratio'); and
- relationship between wall and window heights and widths (wall to window 'ratio').

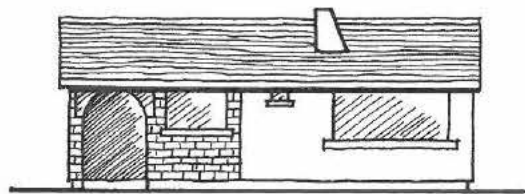
All these criteria make up the basic proportions of a house. The traditional rural dwelling has evolved and grown but the rectangular, rather than square, floor plan has maintained a constant proportion. In the main, proportions are simple and based on symmetry or balance. Window openings have a vertical emphasis in terms of height and width and have a symmetrical proportion with each other.



This shows a well proportioned new dwelling that reflects a traditional style, the reasons being that:

A The roof is of traditional pitch and does not alter the horizontal emphasis of the elevation by making it tall and box like.

B The windows are of vertical proportions and do not over dominate the wall to window ratio.



A dwelling that is more typical of a suburban style house with little respect shown for local proportions.

A The roof pitch is shallow, giving a wall to roof ratio which is not traditional .

B The glazing is proportionally unbalanced and makes no attempt to maintain Orkney's rural architecture, in terms of recreating a traditional character of wall solidity.

EXTERNAL FINISHES AND COLOUR

The importance of both wall and roof finishes cannot be stressed enough when designing a new house that will be suitable in a rural area. With an inappropriate finish a house can be obtrusive, especially in an open landscape, and will not blend into the surroundings or reflect traditional colours. For this reason, the use of traditional Orkney finishes or suitable modern equivalents is very much encouraged so that we preserve the colours and textures of buildings in our countryside.

TRADITIONAL WALL AND ROOF FINISHES IN ORKNEY



If it is not viable to use a traditional finish, such as natural slate, it is acceptable that equivalent finishes are used. There are some modern finishes that are related to the originals but it is imperative that crude interpretations are not adopted.

A timber clad kit can be unsympathetic to its surroundings, particularly in an open landscape. The wooden finish is stark and out of place in the Orkney landscape and can detract from the traditional Orkney dwellings in the vicinity. This is not to say that such houses may not be acceptable in an appropriate setting, and with appropriate finishes, colours and simplicity of detailing.



Also, token gestures at creating a traditional feel to a new dwelling is unacceptable because this can make the house look cluttered and ugly and the essence of a traditional dwelling is simplicity.

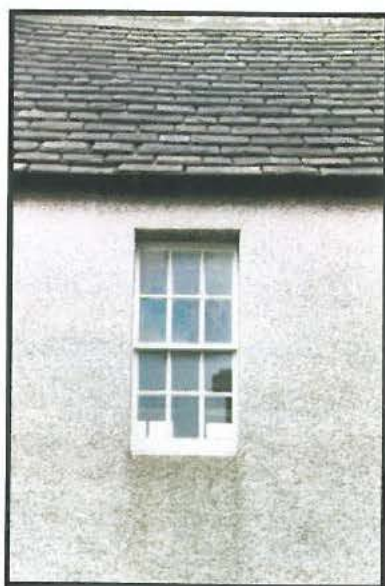
Remember that rural architecture is modest and simple so unnecessary and inappropriate features should be avoided. This should come as good news to most as decorative features add extra expense.

Generally, roofs should have earthy or deep colours, which will blend with the landscape and make houses look less conspicuous. It is best if roofs contrast with walls by being darker, to reflect the long tradition of using dark grey, natural slates in Orkney. A dark grey roof with flat profile tiles can work as a neutral, unobtrusive colour in most locations and reflect the texture of traditional slate, if slate is not used. Bright colours such as reds, oranges and yellows should be avoided, as these colours are the most visible to the naked eye.

WINDOWS AND DORMERS

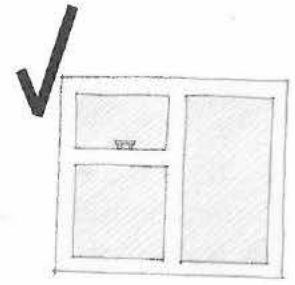
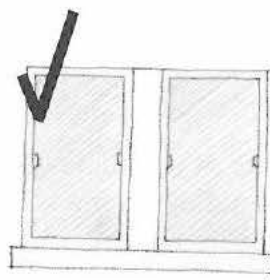
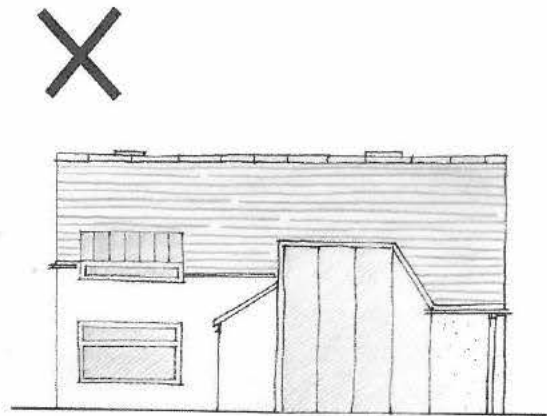
The proportions of an elevation are mostly made up by the amount of wall taken up by the doors and windows. Traditionally, windows in Orkney are vertically proportioned and delicate in appearance. Sash-and-case or fixed casement windows are common, some with thin astragals and small panes. As well as being attractive, traditional windows are designed to cope with driving wind and rain as they are set deeply into the wall (6-7 inches). Deep inlets have been backed by recent research that proves they have a positive effect on energy efficiency, especially in exposed sites. For all these reasons it is important that windows in standard kit designs are in keeping with indigenous rural architecture.

Though traditional window design is preferred, it is understood that larger horizontally proportioned windows are often more popular. The views, feeling of space and passive solar energy gained from larger windows are all advantageous but the proportions should relate to more traditional rural design. Large picture windows can destroy any sense of proportion especially when no thought is given to wall to window ratios and vertical tradition is ignored. It is not impossible to strike a compromise between a large window area and vernacular proportions and design. The use of mullions and other techniques to create a vertical emphasis can be introduced.

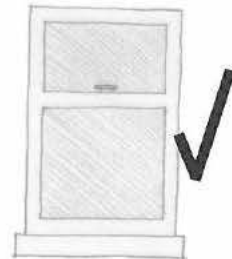
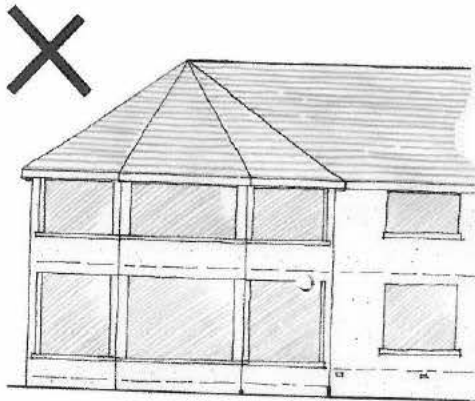


SASH AND CASE WINDOWS

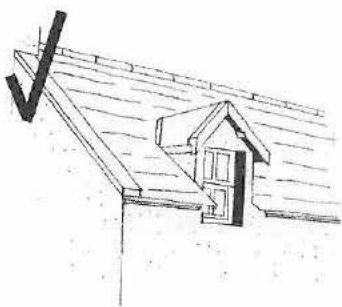
POOR AND APPROPRIATE MODERN WINDOWS



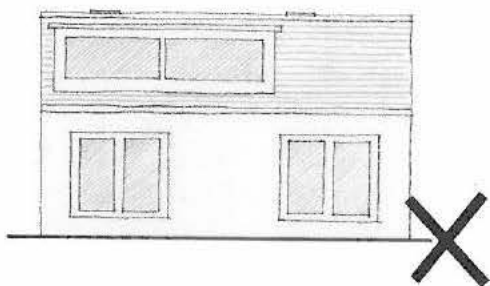
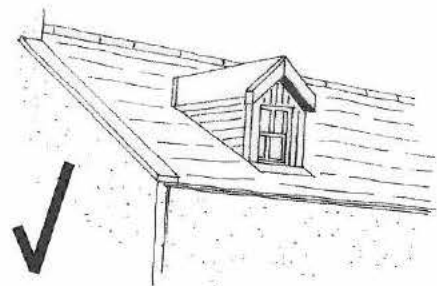
Large areas of glass dominate the walls.



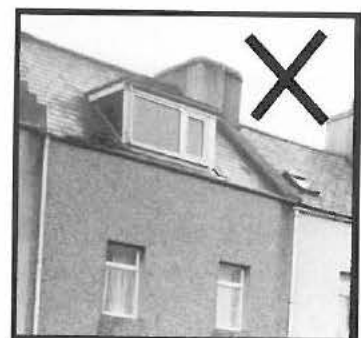
POOR AND APPROPRIATE DORMERS



These new dormers respect the scale and proportions of the building and do not dominate the roof.

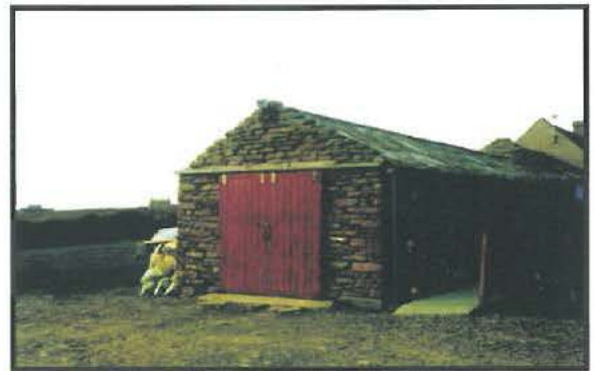


These dormers overwhelm the traditional roof of the building and are out of proportion with the windows below.



OUTBUILDINGS AND BOUNDARY TREATMENTS

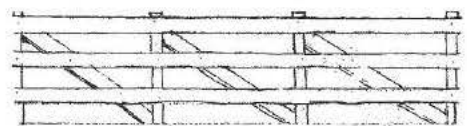
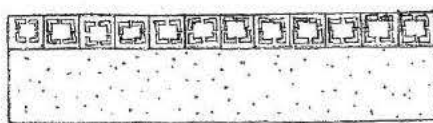
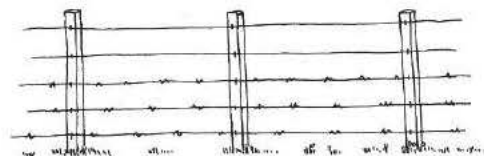
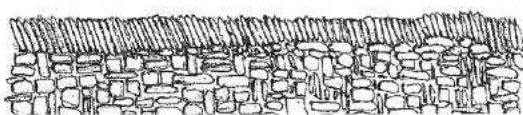
There is a strong tradition of outbuildings in Orkney as it is an agricultural area. The siting and form in which the outbuildings come is important when trying to reflect a traditional layout. Traditional small holdings in Orkney followed the pattern of the longhouse with outbuildings in line with the house, this is often integrated with some later separate buildings. Outbuildings such as garages should be built as part of the house to reflect traditional forms. This also has the advantage of allowing internal access. If a site already has traditional outbuildings, renovations of these buildings can be extremely effective and can help a new dwelling to be absorbed into its site.



RENOVATIONS OF OLD OUTBUILDINGS

Using the right boundary treatments can help integrate a new site into the surroundings. It is important to observe the kind of boundaries within the locality and to use these in your site. In a traditional rural Orkney setting this could include dry stone dykes, natural stone dykes, post and wire fencing and certain types of shrub. It is recognised that dyke building is extremely time consuming and can therefore be expensive, but a stone dyke will last for a considerable time without the need for maintenance. In some cases, grants may be available from the Scottish Office Agriculture and Fisheries Department or Scottish Natural Heritage. Introducing some shrubbery adds a welcome natural element and helps to soften a site visually.

Boundary treatments that are unsuited to Orkney should be avoided as they will detract from the character of our countryside. Decorative concrete block walls and ranch style fencing are typical of what might be inappropriately constructed in the countryside.





Dry stone dyke : traditional rural boundary treatment.



Ranch style fencing : this can look as dominant as the house itself due to the stark white colour. Other, more muted colours may be acceptable in some locations.



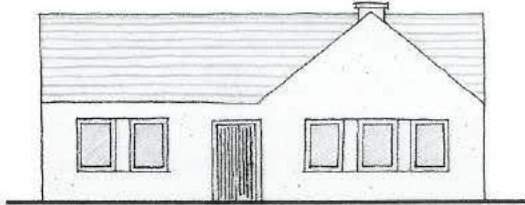
Post and wire fencing: Suitable rural boundary treatment which visually, does not dominate the landscape

SYMPATHETIC AND UNSYMPATHETIC BOUNDARY TREATMENTS

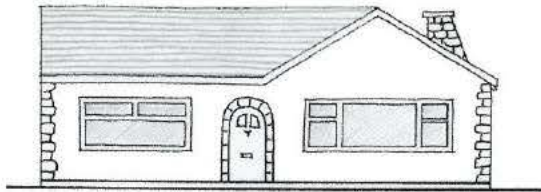
DESIGN SUMMARY

Design in rural housing must progress, and as previously stated, it is not the intention of this guide to stifle new design. The needs of modern living need to be transcribed into new designs that can be successfully integrated into the landscape. If the indigenous architecture is respected, then new houses can enhance the local landscape and not detract from the more traditional dwellings.

Dwellings in the following illustrations provide similar accommodation in terms of floor space. There is no consideration for local design in the second example:



APPROPRIATE MODERN FINISHES USED.
INDIGENOUS FORM AND PROPORTIONS TRANSPOSED INTO
MODERN DESIGN SO THAT THE NEW DWELLING CAN BE
INTEGRATED WITH MORE TRADITIONAL BUILDINGS AND THE
LANDSCAPE.



INAPPROPRIATE PROPORTIONS AND MODERN FINISHES WITH
CRUDE CORNER PANELS AND OTHER DECORATIVE FEATURES.
NO CONSIDERATION SHOWN FOR INDIGENOUS FORM OR
PROPORTIONS AND ALSO THE ADDITION OF UNNECESSARY
UNDERBUILD.

The development of a new house is an act of some permanence and must therefore be undertaken with care and sensitivity. Provided the development is located comfortably in the landform, integrated with surrounding landscape, respects the local design character and uses appropriate materials and colours, the visual and cultural quality of the rural area can be maintained and possibly enhanced.

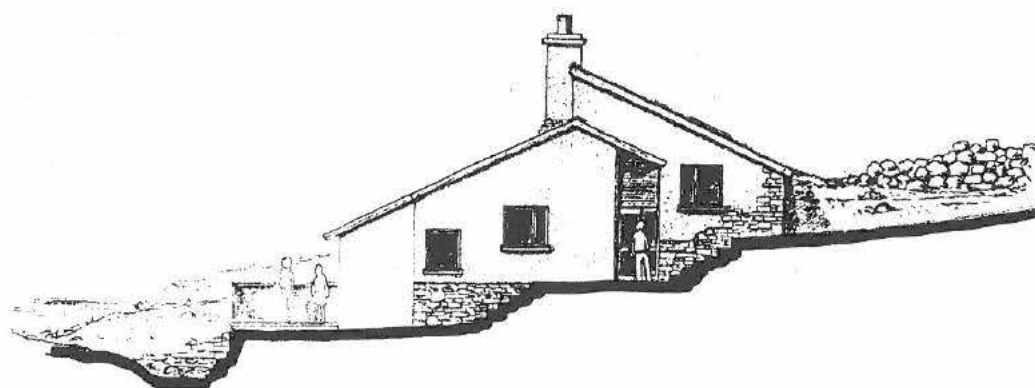


EXAMPLE OF A HOUSE KIT DESIGN WHICH RESPECTS
TRADITIONAL SCALE AND PROPORTIONS OF RURAL
ARCHITECTURE.

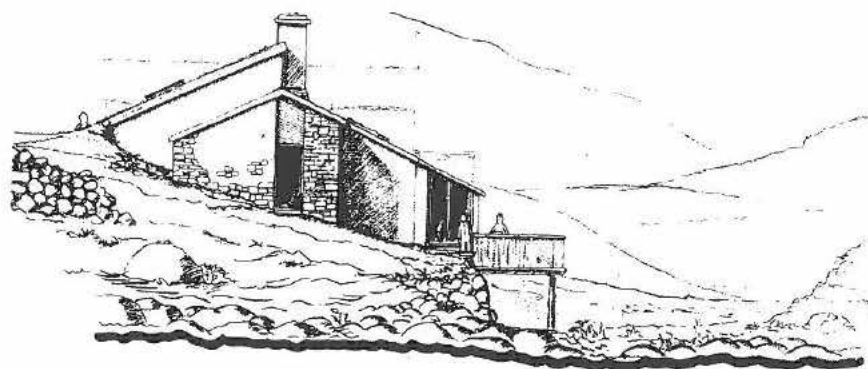
PHOTOGRAPH COURTESY OF WITTETS LTD.,
ARCHITECTS, SETE.

FRESH IDEAS FOR RURAL HOUSE DESIGN

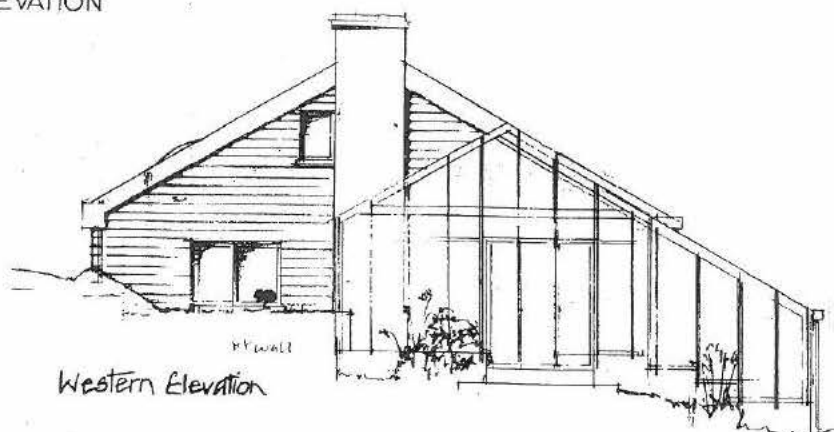
AS INDICATED AT THE BEGINNING OF THIS GUIDE, INTERESTING MODERN DESIGN IN RURAL SETTINGS SHOULD NOT BE STIFLED, AS MODERN ARCHITECTURE CAN ADD VARIETY TO THE LANDSCAPE. THE ILLUSTRATIONS SHOW EXAMPLES OF HOUSE DESIGNS WHICH HAVE BEEN APPROVED, DURING THE PLANNING APPLICATION PROCESS, IN ORKNEY. ALTHOUGH THE DESIGNS HAVE A MODERN APPEARANCE, BASIC CONSIDERATIONS OF SETTING, SCALE, MASSING AND PROPORTIONS ARE SYMPATHETIC TO THE LANDFORM AND ENVIRONMENT.



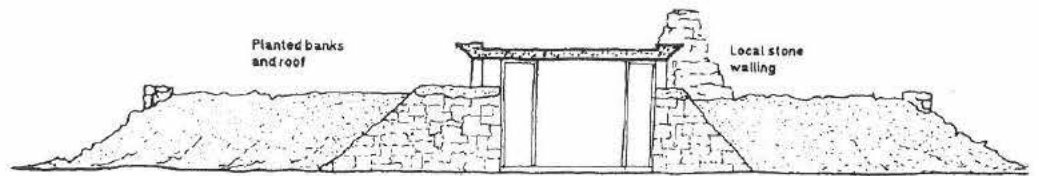
NORTH EAST ELEVATION



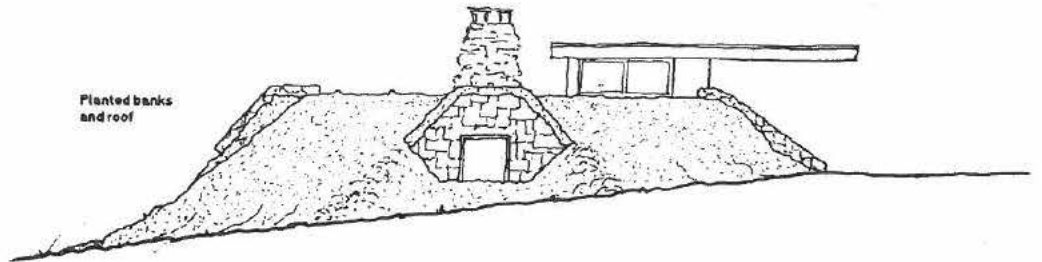
SOUTH WEST ELEVATION



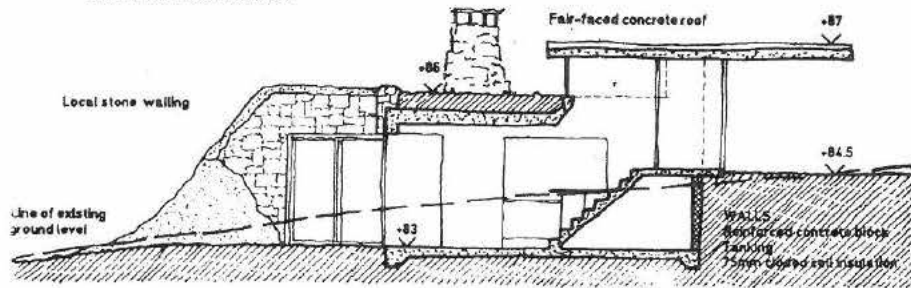
Western Elevation



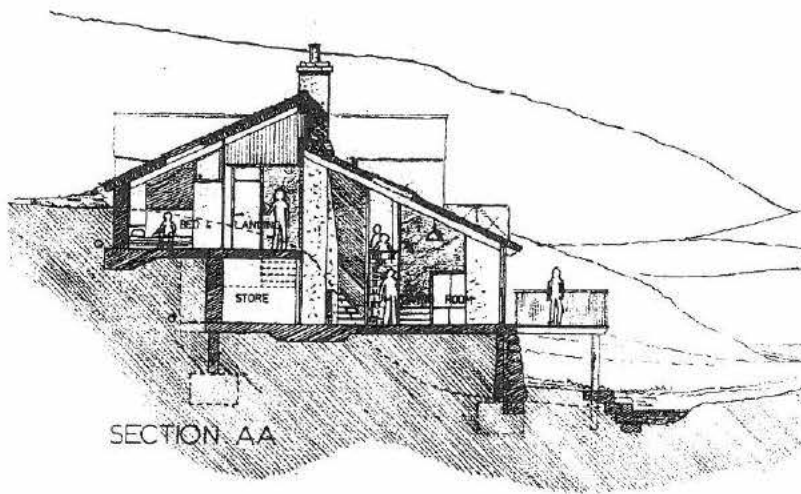
NORTH EAST ELEVATION



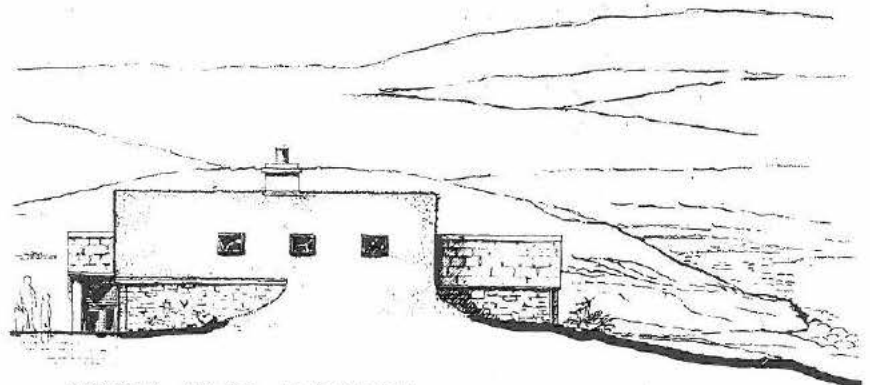
SOUTHEAST ELEVATION



SECTION A



SECTION AA



NORTH WEST ELEVATION