

16. RURAL DESIGN



AIM

To promote architecture and design which complements and reinforces the existing character of the rural landscape through the identification of guiding principles resulting in good quality design and sustainable development.

16.1 CONTEXT

This chapter outlines guiding principles for potential applicants proposing to build, renovate or extend individual houses in rural County Kildare. The key criteria which are addressed include site selection, site layout, house design, key architectural and landscape elements.

For matters relating to an applicant's qualification under the county rural housing policy, reference should be made to Chapter 4 of this Plan.

16.2 STRATEGY

The unrestrained growth of single houses in the countryside is recognised as being unsustainable and an environmental threat in terms of water quality, loss of rural amenity and landscape, increased vehicular traffic and loss of habitats. It is therefore a key policy of this Plan to cater for genuine local housing need and channel other housing into rural settlements and nodes, thereby sustaining the vitality and viability of these rural communities.

The Council recognises that there may be circumstances where rural housing is required, and therefore seeks to promote the benefits of grouped or small clusters of housing within existing rural settlements and nodes in order to facilitate a rural housing need. In particular the Council will encourage small-scale infill development within settlements and nodes in order to consolidate these existing communities and strengthen their role, in order to provide a viable alternative to one-off housing in the open countryside and support small scale local service provision and home-based economic activity.

Where exceptional circumstances require that a dwelling needs to be located within the open countryside, the rural design strategy seeks to encourage imaginative and innovative design as well as more traditional type solutions, which complement their rural surroundings. It promotes an understanding of key design principles and the characteristics of Kildare's heritage and landscape.

The building of a new house within a cluster or in the countryside should:

- Be a positive addition to the rural environment and community;
- Reflect its location and contribute to the character of the area by acknowledging the local built heritage and using local materials;
- Embrace contemporary rural living and lifestyle as an alternative to the suburban style of many new homes in the open countryside;
- Be timeless and capable of adaptation;
- Be durable and built of materials which improve with age and which are well detailed; and
- Respect, learn and interpret from the past to achieve well designed architecture, be it in a contemporary or traditional style.

Objectives: Rural Design

It is an objective of the Council to:

- RDO 1** Prepare further guidance regarding how the principles of this chapter could be further implemented.
- RDO 2** Run a Design Awards Scheme to encourage excellence in the built environment.

16.3 THE SITE

16.3.1 The Right Site

When building a house in the rural countryside the assessment of the 'right' site requires careful consideration. Development in the countryside has tended to focus on the use of road frontage sites, often carved out of larger fields. Here buildings dominate the view and inappropriate suburban gardens, roadside boundary walls and gates are introduced into the landscape. Such development changes the character of the countryside and, when repeated, leads to ribbon development and a loss of rural character of the area.



Figure 16.1

Houses positioned parallel to the public road in the form of ribbon development and irrespective of site analysis and desirable orientation, which leads to a loss of the rural character of the area.

Existing older buildings are often a good starting point when choosing sites. With their existing boundaries, landscaping and traditional design they generally fit seamlessly into the landscape. Renovation of an existing rural building could provide a satisfactory design solution. Where additional accommodation is required it could be provided by extending the existing structure in a sympathetic and appropriate manner. Alternatively existing buildings can be retained as out-buildings with a new structure integrated into the group. Even when the original building has fallen derelict or been demolished, a well defined site with mature boundaries can be capable of absorbing and integrating the proposed dwelling into the rural landscape. Proposals should preferably allow for the existing structures to be retained and re-used in their general existing forms.

There may be other instances of such 'natural sites' where existing trees, hedgerows, buildings, slopes and other natural features provide a backdrop to development and can give new structures a sense of place.

Site Selection - Key Principles

- Choose a site with identifiable and well established boundaries (on all sides) which separate the site naturally from its surroundings.
- Reuse, adapt or extend existing rural structures where possible.
- Avoid choosing sites which are carved out of larger fields.



Figure 16.2

Avoid sites which lead to ribbon development

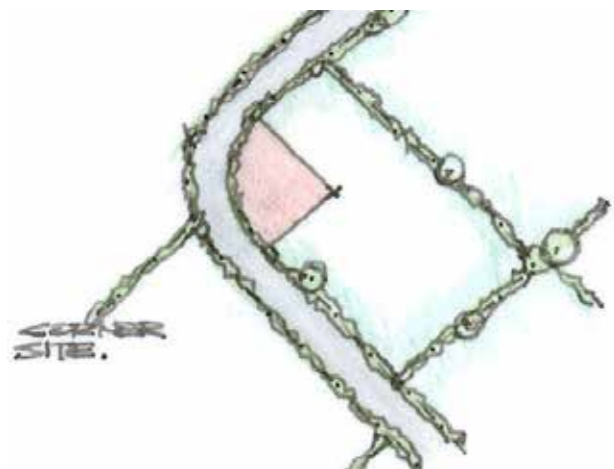


Figure 16.3
Avoid sites on corners



Figure 16.4
Avoid sites which could lead to the eventual merging of individual settlements



Figure 16.5
Site with good development potential - within an existing cluster of rural buildings

16.3.2 Site Analysis and Layout

Site analysis is a record of all the data of the site and its context. Particular site conditions should be noted and mapped, including the identification of and information on any neighbouring development as well as the traditional characteristics of development which are found in the locality. Site-specific information which needs to be collected includes:

- Orientation
- Aspect
- Topography
- Existing Buildings and Materials
- Existing Landscape Features
- Boundary Treatments
- Prevailing Wind Direction

A good site analysis will lead to an appropriate site layout and ensure that the proposed house can be absorbed more naturally into the landscape. The design of the house should therefore be site specific and evolve from a study of the location, its orientation and topography.

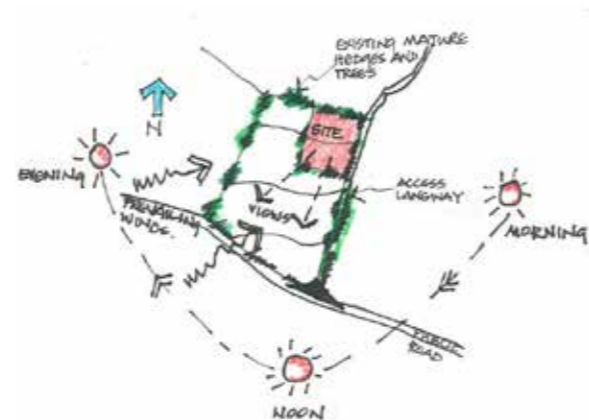


Figure 16.6
Site Analysis Sketch

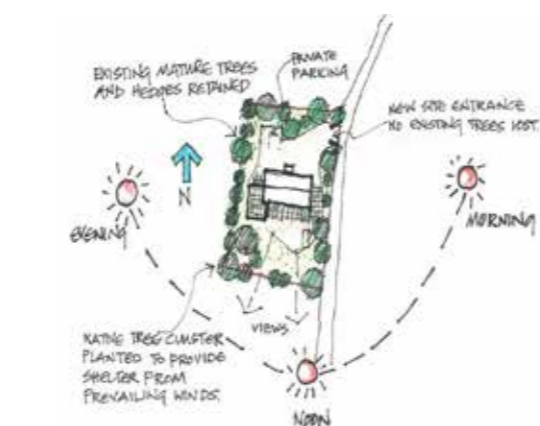


Figure 16.7
Site Layout Sketch

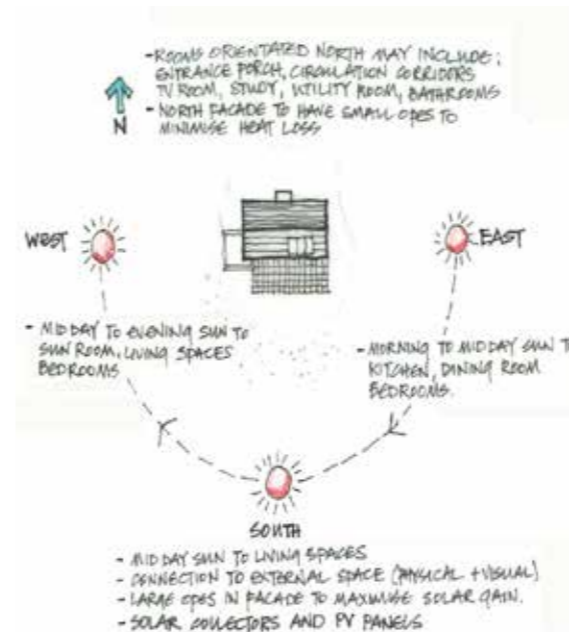


Figure 16.8
Indicative Room Orientation and Solar Gain

Occupants of the traditional rural house worked the land. As part of the rural economy these buildings sat naturally in the rural landscape and were sited for shelter. Views from the house were not the dominant factor when choosing a site.

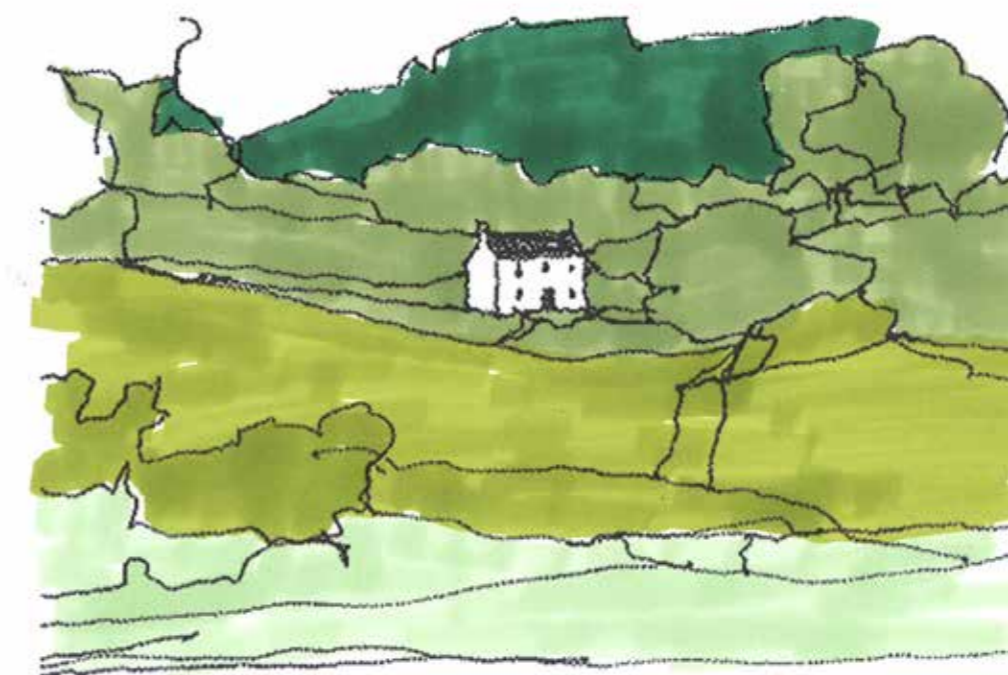


Figure 16.10
Blend sympathetically with the topography of the site

Traditional rural buildings often hug the contours of the site for shelter and use native planting to minimise the impact of the weather. A rural dwelling would rarely be located in an elevated or exposed location.

Designers should show a similar understanding of topography and the traditional approach when siting new rural housing. It is important that the site is respected. Any proposed design should respect and work with the existing site contours, established features and the existing vegetation and trees, where possible seeking shelter and integration.

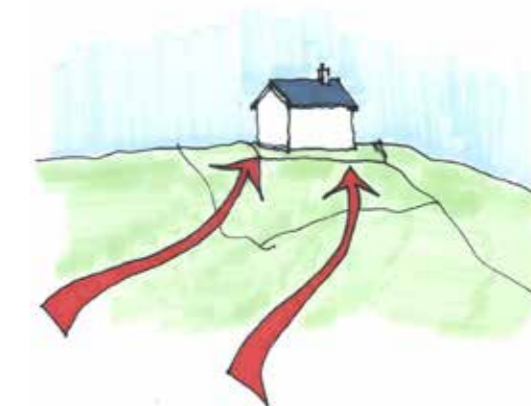


Figure 16.9
Avoid building on elevated unsheltered and exposed sites

Site Layout - Key Principles

- Position buildings along the contours of the site.
- Blend sympathetically with the topography of the site.
- Use or retain existing trees, buildings, slopes and other natural features to provide a setting.
- Site the building to exploit passive solar gain and shelter from the prevailing winds.
- Avoid sites which may impact on scenic views or detract from the visual appearance of the countryside.
- Avoid buildings on prominent hillside locations or on ridges.
- Don't artificially alter the natural levels of the site. Avoid excessive cutting and filling – locating housing on 'platforms'.



Figure 16.11:
Landscape room, Co. Sligo. LID Architects.

16.4 APPROPRIATE HOUSE DESIGN

The success of new houses in the rural landscape is measured by:

- How well new buildings reflect advanced technology and modern lifestyles; and
- How the architecture of the proposed building responds to its environment and local heritage.



Figure 16.12
Haynestown, Naas.

While it is the aim of this chapter to promote innovation through design that is both contemporary and timeless, it is important that architecture respects and acknowledges the characteristics that contribute to the rural character of Kildare.

The following sections will examine such issues as scale, form and proportions which will determine the mass of the building and ensure that it is overall aesthetically pleasing.



Figure 16.14
Gray House. O'Donnell Tuomey Architects.



Figure 16.13
Castlegrey. Denise Murray, Murray O'Laoire Architects.



Figure 16.15
Louisburgh, Co. Mayo. Cox Power Architects.

16.4.1 Kildare's Rural Houses

Rural traditions of building in County Kildare are influenced by history, climate and local geology, and were determined in the past by the local availability of materials for buildings. There are a number of existing rural building types which contribute to the county's landscape and heritage:

- Country Estates
- Classical Farmhouses
- Vernacular Cottages
- Land Commission and County Council Housing
- Modern One-off Houses from the 1960s onwards



Figure 16.16
Sketch of 1930s County Council cottage.

All contain the same general characteristics such as:

- Appropriate scale and form as well as good proportions and simplicity;
- A recti-linear plan, usually no more than one room deep, most commonly with a gable end roof;
- Extensions, stores and other ancillary structures were added with lean-to roofs or split-level roofs; and
- Two-storey dwellings such as the classical farmhouse have symmetry and classical proportions.



Figure 16.17
Linear farm complex, Caragh Road, Naas.

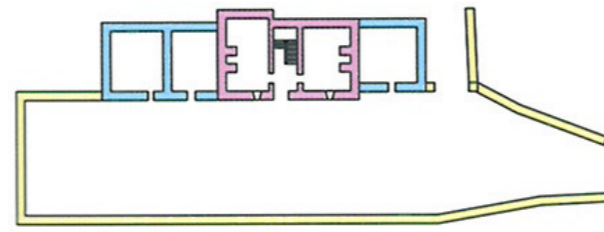


Figure 16.18
Modest farmhouse typology in plan

Overall Characteristics - Key Principles

- Design buildings which are simple in form.
- Ensure that they are well proportioned.
- Design buildings which are restrained and absent of fussy add-ons or frills
- Use quality local materials that are well detailed.
- Use simple construction techniques.
- Avoid buildings which are complex in shape and poorly proportioned.
- Avoid deep 'boxy' buildings.
- Recognise the rural nature of the site.
- Log Cabins (completely finished timber buildings) are not vernacular typologies of the Kildare countryside and are therefore not generally considered appropriate, save in suitable settings where other criteria in relation to the design and siting of the structure are met.

16.4.2 Scale, Form and Proportion

A building's size should be relative to its surroundings. Its mass should therefore relate proportionately to the landscape setting and site size. Large buildings generally are unlikely to be compatible within a small enclosed site.



Figure 16.19
Large house on a small site

Throughout the county there are one-and-a-half storey houses which previously may have been single storey. In recent years interpretation of this type has led to the design of the 'Dormer' type dwelling. Often the roofscape of dormer type houses becomes the principal feature in the landscape. The deep house plan of this type of dwelling results in a bigger, higher and wider massing of the structure.

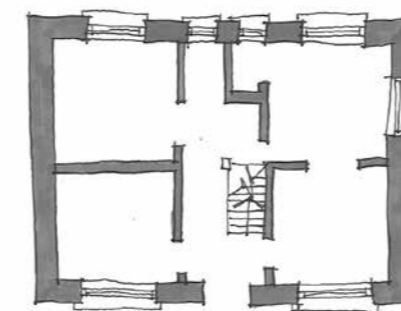


Figure 16.20
Dormer house, deep floor plan

New dwellings, especially in the more sensitive landscape areas, should try to replicate simple traditional forms, particularly imitating the narrow house plan. Care should be taken in the overall design of a dwelling to ensure that the proportion, height, scale and form are in keeping with the character of the locality, thus blending seamlessly into the landscape.

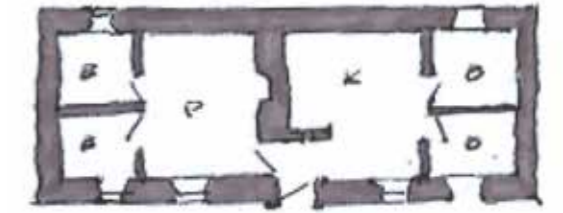


Figure 16.21
Sketch of traditional cottage – narrow floor plan



Figure 16.22
Contemporary house design based on traditional narrow plan. Louisburgh, Co. Mayo. Cox Power Architects

16.4.3 Elevational Proportions

The traditional rural house maintained a balance of proportions between the walls and openings by demonstrating the following key factors:

- Height of the building relative to its openings, with openings exhibiting vertical emphasis;
- A high solid-to-void relationship (i.e. greater wall surface area than window and doors); and
- A simple composition with symmetrical arrangement features, as can be seen in the sketch below

A comprehensive proportioning system should be applied to contemporary dwellings to ensure that the new house relates to its surroundings.

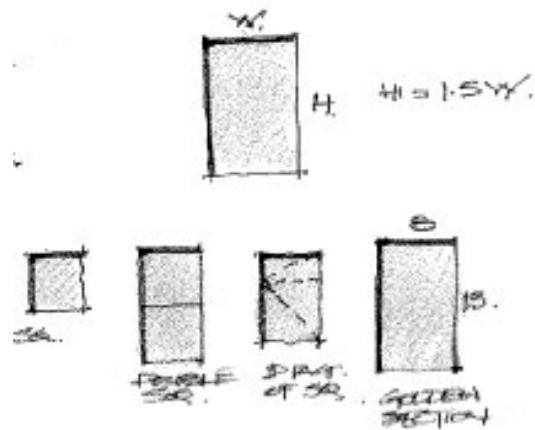


Figure 16.23
Proportioning Systems

While all building elements have a certain size, which may be predetermined by the manufacturer, the size of each element should be perceived relative to the sizes of the other elements around it.



Figure 16.24
Traditional house maintains a balance of proportions.

Overall Design - Key Principles

- Develop a house that is simple in form.
- Ensure that the dwelling relates to the rural building form of that particular area of Kildare.
- Ensure that the house incorporates the distinctive characteristics of rural Kildare.
- Achieve attractive proportions in the building design.
- Utilise a plan which will allow a good solid-to-void relationship in its windows and doors.
- Break down the massing of the house to articulate different elements in order to reduce its bulk where necessary.
- Develop a house of appropriate scale relative to the site.
- Ensure that the scale of the building is appropriate to the existing character and buildings of the locality.

16.5 ARCHITECTURAL ELEMENTS

The following section deals with design detail and construction which are essential to the success of the appearance of a new house in the landscape.

16.5.1 Roofs

Roofs in rural areas give buildings their distinctive profile. Indigenous rural houses tend to have simple roof shapes. They are mostly gabled and have slopes generally between 35° - 45°.

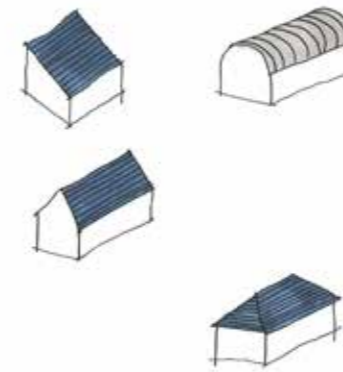


Figure 16.25
Common roof profiles

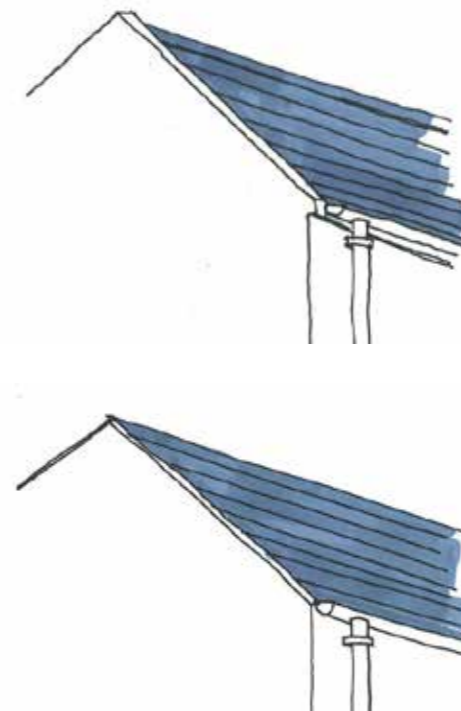


Figure 16.26
Appropriate minimal roof edge treatment

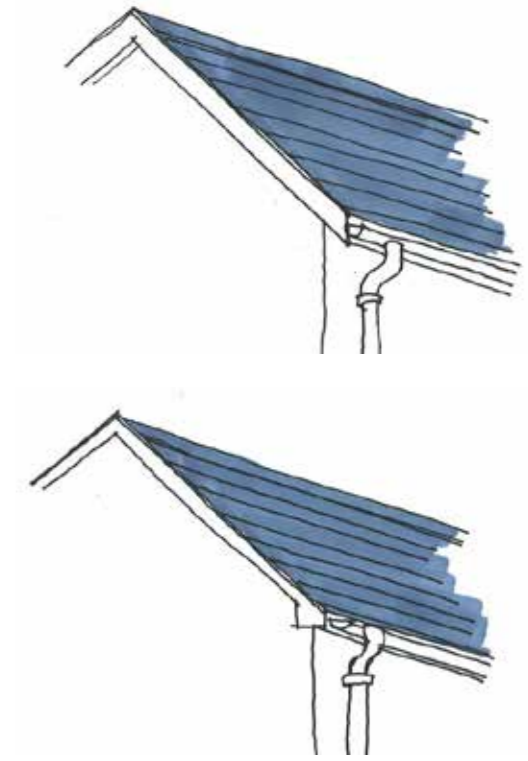


Figure 16.27
Appropriate minimal eaves and verge detail



Figure 16.28
Avoid roofs with large overhangs which result in the roof sitting like a 'lid' on the building.

While pitched roofs are most commonly used, other shapes of roof are of course possible, but great care should be taken to ensure that they are in keeping with the overall design concept; inspiration can be taken from the typical agricultural buildings found throughout the county.



Figure 16.29
Barrel Roof, Rosslea, Co. Fermanagh. Aughey O'Flaherty Architects.

If dormers or rooflights are used, they should always suit the roof they sit within in terms of scale and materials. Roof lights flush to the roof are acceptable.



Figure 16.30
Example of traditional rooflight flush with slate detail; Naas, Co. Kildare

16.5.2 Chimneys

Chimneys can significantly contribute to the overall design of a dwelling if appropriately proportioned and detailed. They should be located through and across the ridge. In traditional gabled houses they are generally found flush with the face of the wall.

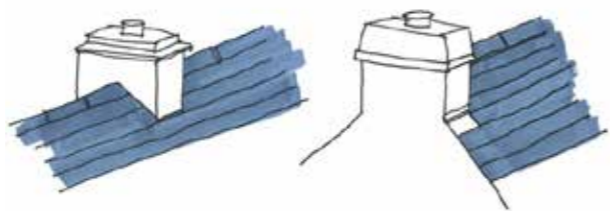


Figure 16.31
Examples of traditional chimneys

Roofs & Chimneys - Key Principles

- Roofs should be appropriately scaled and proportioned.
- Roof coverings on pitched roofs can be slate, tiles, metal sheeting, thatch, glass and zinc.
- Roofs may contain solar water collectors and/or photovoltaic systems, which should be incorporated into the overall roof design.
- The treatment of eaves should be studied carefully and relate directly to the proposed building type.
- Overhanging eaves should be avoided.
- It is preferable to use a plaster finish around dormer windows.
- Chimneys should be substantial and robust, and rise generously above roofs. Chimney materials should be appropriate for the style and material of the walls below.
- Vent stacks should be enclosed within chimneys. Where this is not practical, vent pipes should be clad in lead where they emerge above roof slopes.

16.5.3 Windows

Windows are the most important feature of a building. The choice of window style affects the overall appearance of the house. All windows and their subdivisions should relate to the proportioning system of the entire building. Windows with a vertical emphasis generally work better as they help to balance the width of the building and provide better light, views and articulation between the interior and exterior.

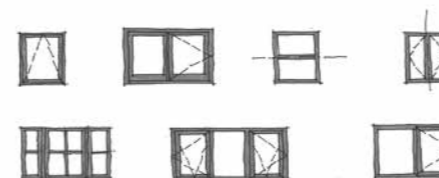


Figure 16.32
Examples of correct window division



Timber window uPVC window

Figure 16.33
uPVC windows can appear chunky and two dimensional whereas timber windows appear three dimensional.

Bay windows should be well designed with respect to proportion, scale and detail and should reflect the local vernacular.

Windows - Key Principles

- In the interests of sustainable development environmentally friendly materials should be used.
- Window ventilators must be concealed.
- Windows to bathrooms should not normally be on the principal elevations.
- Coloured glass may be used in certain circumstances but avoided on principal elevations.
- Windows with 'clip-on' glazing bars should be avoided.
- Plain frosted glass should only be used in obscured windows - not patterned or textured.
- Sash windows should be of the double hung type (a top- or bottom-hung hinge is acceptable for cleaning or escape purposes only).
- Panes must also be proportioned so that they are taller than they are wide.
- Window reveals should be a minimum of 75 mm where a subsill is used and a minimum of 50 mm where there is no subsill.

16.5.4 Doors

Doors provide a point of access to the house and thereby separate the outside and inside spaces. Traditionally they were the only element of embellishment on the exterior of a house.

Proportion, detail, colour and simplicity should be the main considerations when designing or choosing doors. The most successful type of doors for vernacular houses are tongue and groove vertical boarded doors.

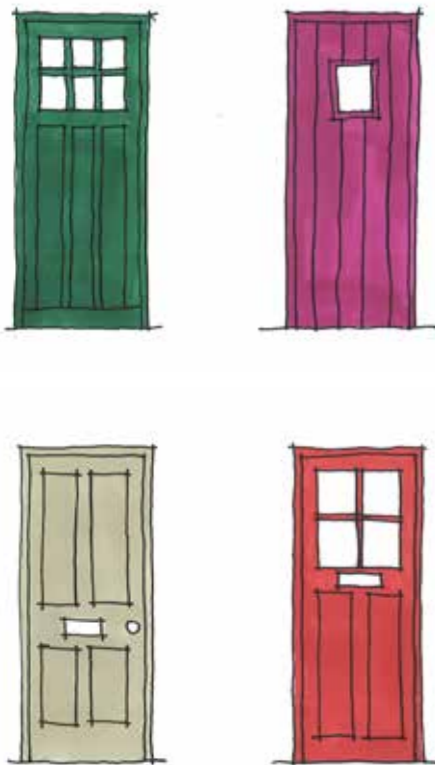


Figure 16.34
Appropriate simple design vertical sheeted doors

'Fanlights' or other glazing should not be located within the door leaf itself, with the exception of a pair of clear glazed upper panels in a 6 panel door, or a single clear glass pane with simple frame in a cottage style door. Fanlights located above the door head frame are a common characteristic in vernacular architecture, used to provide light to the hallway beyond. Half-round clear glazed fanlights are a common feature in traditional two storey farmhouse architecture.

Doors - Key Principles

- Doors should reflect the shape of the opening.
- The most successful type of doors are tongue and groove vertical boarded or panelled timber doors.
- Varnished hardwood reproduction doors, U-PVC and metal doors should generally be avoided.
- Front doors should be recessed from the front face of the house by at least 100mm and, in houses without porches, by a full wall thickness.
- Use sustainable painted or natural hardwood alternatives.
- While the door and surround needs to admit light into the hallway, avoid large glazed panels in doors which can look over elaborate. A window above or beside the door (used traditionally) is a good alternative.
- Avoid bulkhead lighting. Instead explore other locations of light fittings such as beside the door or recessed above.
- Design ESB meter boxes so that they are recessed.

16.5.5 Porches

Porches and door surrounds were relatively rare in traditional vernacular architecture in Kildare, particularly among traditional two storey houses. Porches, however, play an important role in the energy efficiency of a house. They provide a buffer area between inside and outside by providing a lobby, thereby minimising heat loss from the house.

Many older two-storey houses internalised porches in the form of a lobby within the house. This solution should be explored in new designs for houses. Where porches are required they should be closely integrated with the vocabulary of the building and their materials should relate to the main house.



Figure 16.35
Contemporary Porch. Louisburgh, Co. Mayo. Cox Power Architects.



Figure 16.36
Traditional House with Porch, Naas

Porches - Key Principles

- Avoid introducing a different material for this element only, such as brick or stone.
- Roofing on door hoods and porches should reflect the roofing material of the principal structure.
- The use of fake classical style porches should be avoided.
- The shape and size of the porch should be well proportioned. Small roofs do not need rainwater goods.

16.5.6 Conservatories

Conservatories can form attractive features of new houses. Many new 'eco-houses' and passive houses are designed with a sun space as a central part of the house in order to maximise solar gain. Care should be taken to ensure that conservatories and sunrooms are an integral part of the design and not merely an add-on to the side of the houses.

Where conservatories are required as an addition to an existing house, proportion, size and spatial layout size require careful consideration - sunrooms immediately beside kitchens are the most extensively used.

Conservatories - Key Principles

- The shape and scale of the conservatory should be consistent with the house.
- uPVC conservatories should generally be avoided due to their bulky sections and harsh colour.

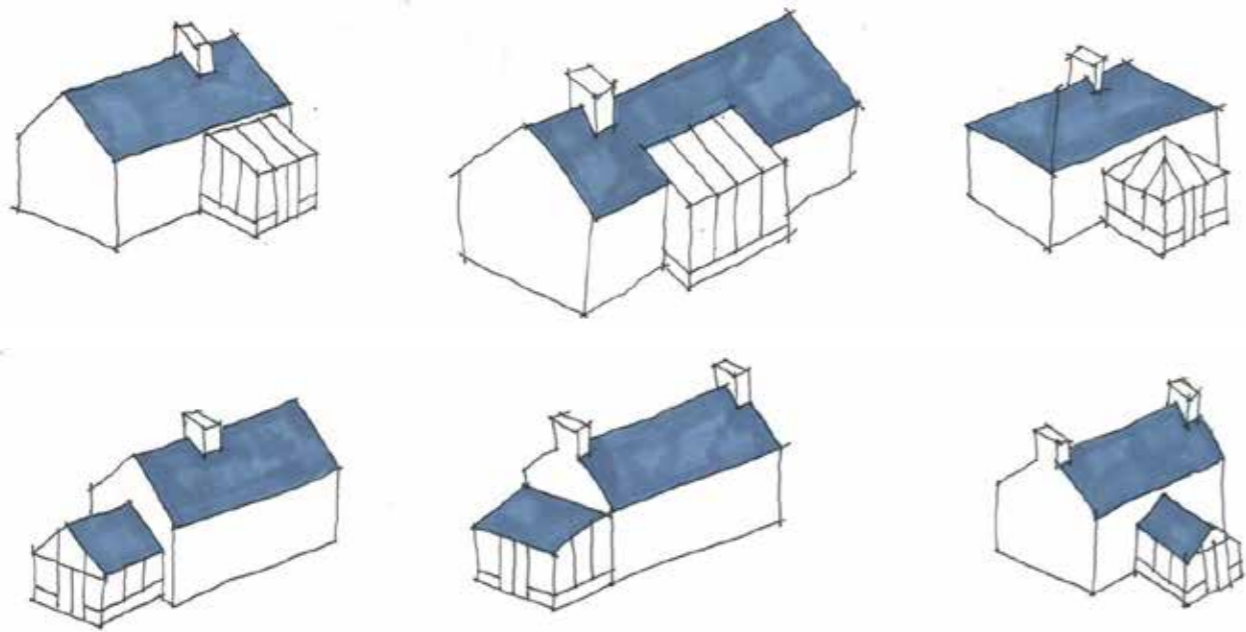


Figure 16.37
Appropriate Conservatories



Figure 16.38
Conservatories to avoid

16.5.7 Finishes, Materials and Colours

Not only does the shape and form give a building its identity, but also the finishes, materials and colours used need to be carefully considered.

The palette of materials, in particular those used in the elevations of any one dwelling, should be kept to a minimum. Locally sourced materials should be used where possible, e.g. stone and timber. Indigenous materials have a natural harmony and should be selected with care to ensure that they improve with age and weathering.

The palette of materials used in the structure should be specifically chosen to respond to the setting.



Figure 16.39
Successful combination of traditional and contemporary materials. Castlegrey. Denise Murray, Murray O'Laoire Architects.

Finishes, Materials And Colour - Key Principles

- Use a small number of high quality finishes.
- Minimise the use of uPVC, particularly white fascias, soffits and rainwater goods.
- Avoid dry dash, brick and artificial stone. These finishes are generally not suited to rural areas.
- Avoid quoins which are generally not suited to rural areas.
- Use natural, soft colours on external walls. They provide an attractive contrast to dark roofs and strong window and door colour.
- Avoid bright and garish colours.
- Use natural slate where possible as it is durable and improves with age.
- Slates should be a dark colour; do not mix colours of slate.
- Avoid expensive add-ons and frills which are often added to compensate for poor design.

16.6 ELEMENTS OF LANDSCAPE

The following section deals with the importance of linking the dwelling with the landscape through appropriate boundary treatment, landscaping and entrances.

16.6.1 Boundary Treatments

Boundaries and the materials used on them can impact the rural nature of an area. Boundaries can provide a significant level of richness and add to the character of a dwelling site and therefore attention should be given to their design.

The objective in site selection is to ensure that a majority of the boundaries should already be in place in the form of existing hedgerows and trees. Where boundaries need to be completed care should be taken to link the buildings to the landscape. By landscaping the boundaries of the house the visual impact of the development will be softened and it will be more easily absorbed into the surrounding countryside. New boundaries should be planted before or at least simultaneously with the building work in order to anchor the new building to the surrounding landscape.



Figure 16.40
Image of traditional stone wall at Devoy Barracks, Co. Kildare

In general high walls and fences, – in particular decorative brickwork, should be avoided. Stone walls may be appropriate in certain parts of the countryside. Timber post and rail stud fencing may be acceptable where it is planted with indigenous hedgerows.

The Council will actively discourage high roadside boundary walls, entrance gates and piers which appear incongruous and dominating in the Kildare landscape.

16.6.2 Entrances

Vehicular entrances to new rural houses must provide clear visibility. The entrance must comply with the policies and controls set out in Section 17.7 of Chapter 17 Development Management Standards, of this Plan.

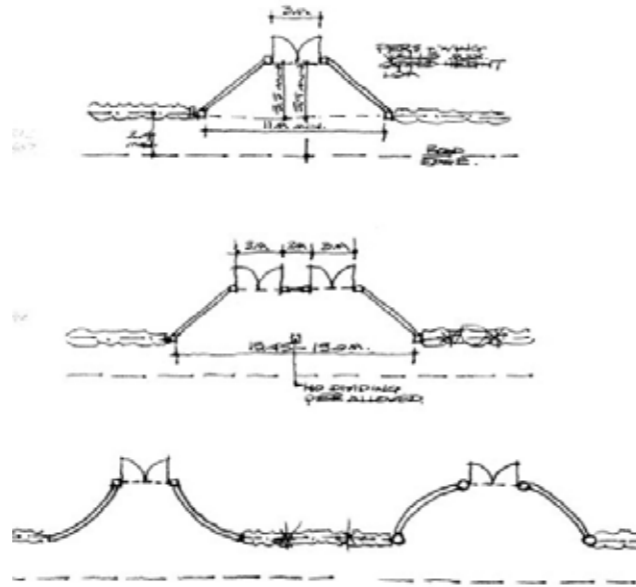


Figure 16.41
Sketch of Entrance Driveways



Figure 16.42
Stone wall, pillars and gate, Naas

Where existing boundaries need to be removed in order to achieve required set-backs they should be replaced with an earth or sod and stone boundary or the planting of a new semi-mature hedgerow of indigenous species. Existing stone walls should be relocated behind the line of vision.



Figure 16.43
Gates to farmhouse, Kildare

Boundaries & Entrances - Key Principles

- Avoid replacing boundaries with unsympathetic fencing, pre-cast decorative concrete blocks and artificial stone.
- Driveways should follow the contours of the site in order to avoid highly visible and unnatural looking straight roads.
- Driveways should be surfaced with local material rather than tarmacadam.
- Avoid fussy and elaborate entrance gates and lights as well as spikey stonework capping.
- Buffer the house as viewed from the road.
- Commence planting of the required boundaries before the construction of the house commences.
- Avoid high boundary walls and entrance piers/gates which dominate the site and the surrounding rural area.

16.6.3 Rural Gardens

Trees and hedgerows help blend new buildings into the landscape and greatly enhance the amenity and wildlife value of rural developments. Irish country gardens stand out from the traditional suburban gardens by the way they embrace the house and appear to connect seamlessly to the natural landscape.

Trees and hedgerows will provide the site with colour, texture and structure. Effective planting will screen unattractive views, absorb road noise and provide privacy. Landscaping plans should be based on prevailing site opportunities and conditions. The following key elements should be incorporated within the landscape plan in order to produce a cohesive and effective layout:

- Native tree planting; and
- Shelter from the prevailing winds

Plant native species; they do not require a lot of maintenance to survive and provide enormous benefits for wildlife habitats. For information on native species please refer to Kildare County Council's publication, *Good Practice Guidelines for Householders – Biodiversity and Development in County Kildare*.



Figure 16.44
Country Garden

Landscaping - Key Principles

- Avoid suburban type landscaping – formal symmetrical layouts, straight lines are not appropriate in rural areas.
- Design informal layouts.
- Plant wild meadows or strimmed grass areas which are more natural to rural areas.
- Reduce or avoid large areas of mown lawn.
- Plant native trees in groups of three or more.
- Avoid planting non-native single species such as Leyland Cypress
- Retain ponds and ditches on the site.
- Create new mixed hedgerows of native/local species to maintain biodiversity.



Apple Tree



Gooseberry



Blackberry



White Ash



Whitethorn



Willow



Alder



Blackthorn



Raspberry



Plum Trees

Figure 16.45
Indigenous Species

16.7 SUSTAINABILITY AND ENERGY EFFICIENCY

Rural housing has significant energy impacts. The dwellings themselves tend to be above the national average in terms of floor area, hence requiring more energy. There are also increased transport requirements as rural housing is further away from towns and villages with their services, e.g. schools, shops and places of employment. However, they also present an opportunity to integrate a wide range of sustainable energy approaches and technologies.

Rural houses should therefore be designed and built so that they use as little energy as possible, by minimising heat loss and increasing solar gain. This will ensure that the householder is investing in a future-proofed home.

16.7.1 Energy Efficiency in Buildings

The EU Directive on the Energy Performance of Buildings (EPBD), contains a range of provisions aimed at improving energy performance in houses. The incorporation of good design is considered as being the key in achieving optimum energy performance of buildings.

As part of the Energy Performance Building Directive, a Building Energy Rating (BER) certificate, which is effectively an energy efficiency label, is required for all houses. Similar to electrical appliances there are ratings A, B, C, D and so on with A being the most efficient. Houses should be designed to achieve the highest possible energy rating, which will reduce the over all running cost of the house as well as being good for the environment.

16.7.2 Solar Siting

Microclimate is the variation in local climate around a building. It therefore has an important impact on both the energy requirements and the performance of a building. The design and orientation of buildings and space can bring about more sustainable communities and reduce the operational costs throughout a building's life by reducing the need for artificial lighting and heating.

In some cases, site planning and appropriate orientation alone can almost halve the energy demand of a dwelling.

16.7.3 Solar Energy

The Council will support the development of solar energy in the built environment as it has the capacity to make a significant contribution to energy production.

Additionally, planning applications for buildings should incorporate basic passive solar design principles to:

- Maximise solar gains in building through good orientation, layout, and glazing;
- Avoid heat losses through ensuring a high level of insulation and air-tightness of buildings; and
- Ensure a high degree of comfort by using controlled ventilation and day lighting.



Figure 16.46
Image of roof solar panel

Sustainability and Energy Efficiency - Key Principles

- Achieve the highest possible energy rating for your house.
- Ensure that the house is orientated to achieve the maximum benefit from solar gain and provide large areas of south facing glazing.
- Provide enhanced levels of insulation in order to reduce energy consumption.
- Incorporate solar water heaters and/or photovoltaic panels into the design of the roof.
- Explore other renewable energy sources such as micro wind turbines, heat pumps, heat recovery systems, biomass – such as wood burning stoves and wood pellet boilers. Information on renewable energy sources and possible grants available can be found on www.sei.ie.
- Reduce water consumption by rain water recycling – rainwater collected from the roof which can be used to flush toilets.
- Use sustainable building materials such as locally sourced natural materials and recyclable building materials.
- Use intelligent heating systems with time/temperature/zone/function controls.
- Incorporate energy efficient lighting systems into the design of the house.

16.8 Accessibility / Lifetime Adaptability / Extensions

Buildings should be designed with flexibility and adaptability in mind. The following section looks at the accessibility of the house for both the owner and visitors and explores how houses can be adapted and extended as the needs of occupiers change.

16.8.1 Accessibility

All new houses should be reasonably accessible for older people, the very young and people with disabilities.

The house should be able to provide for the needs of people with moderate mobility difficulties and the normal frailty associated with old age.

16.8.2 Lifetime Adaptability

Designers should consider not just the immediate needs of the occupiers but also their changing needs over their lifetime. The design of the new house should provide flexibility in use and adaptability.

Ensure that the house can provide for the needs of older people who may wish to remain independent in their homes by planning for a future bedroom downstairs during the design phase so that costly remodelling of the house is avoided at a later stage. This room could also facilitate 'working from home' possibilities.

Ensure that the house at the very least complies with the requirements of Part M of the Building Regulations.

16.8.3 Extensions

The new house should be designed so that it is capable of absorbing a sensitive future extension if necessary, rather than building a new dwelling.

A distinction should generally be made between the old and the new so that the various building phases can be seen as a harmonious progression of development with the external form and historic character of the building being maintained.

Care should be taken that the proposed extension does not compromise the daylight, natural ventilation or structural integrity of the original building. A good design should not confuse the legibility of the original building footprint and form.



Figure 16.47
Refurbishment and Extension. Ballymahon House. ODOS Architects.



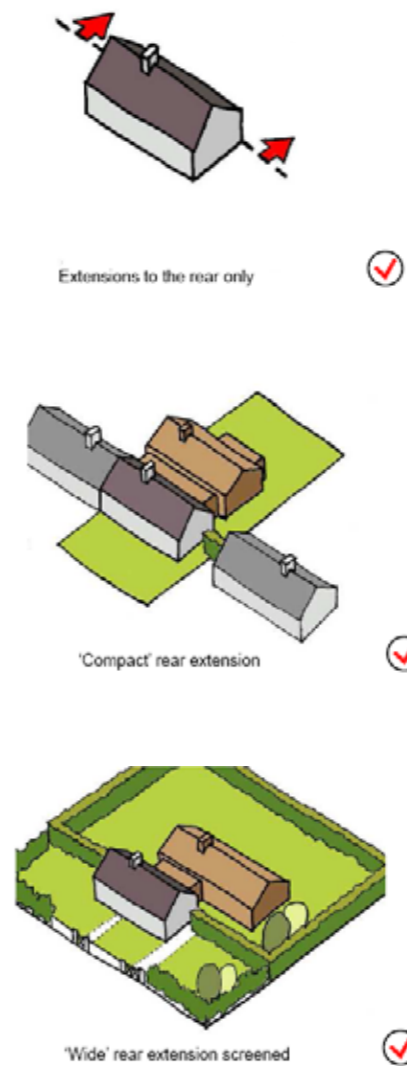
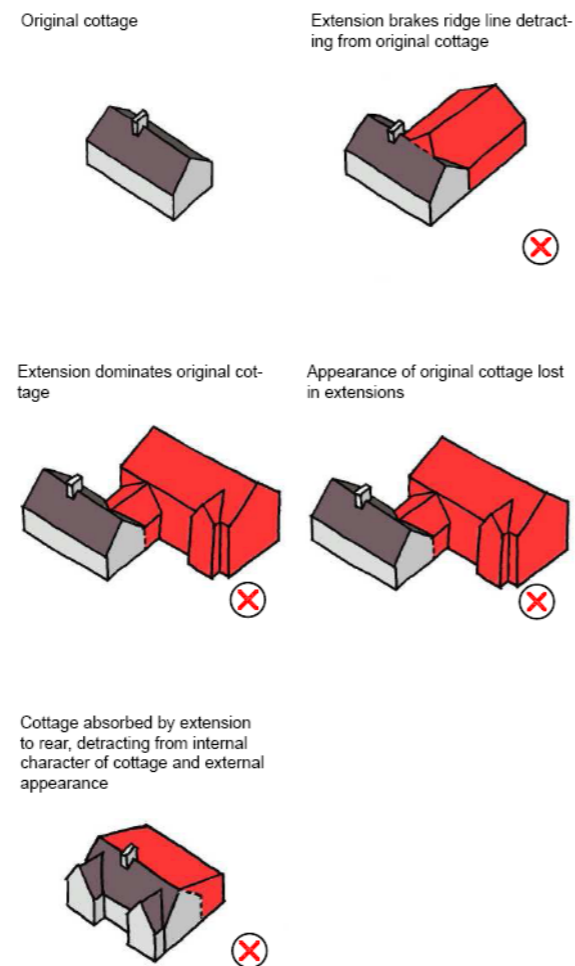
Figure 16.48
Cottage Renovation and 'Barn' Roofed Extension. Michael Kelly Architects.



Figure 16.49
Extension to side of house. Glengowla, Co. Galway. Boyer Kennihan Architects.

Where extensions are proposed to an existing cottage care should be taken so that the extension does not detract from the original character of the building.

As a rule, extensions to the front and gable of cottages are to be avoided. An extension to the front can mask original detailing or it can alter the proportions of the front facade which detracts from the original character. An extension to the side can upset the symmetry of the cottage, or can result in the loss of the original scale of the cottage. An extension to the rear that is visible from the road or above the original ridge line can also detract from the character of the cottage. Rear extensions should take account of side and rear views from a public road, and the extension should not dominate the existing cottage.



Accessibility, Lifetime Adaptability and Extensions - Key Principles

- Plan for change.
- Aim to ensure that the house can meet the changing needs of the occupants over their lifetimes.
- Ensure that the house is capable of providing for the needs associated with moderate mobility difficulties.
- Ensure that the house can provide for the needs of older people without costly remodelling of the dwelling.
- Refer to documents such as 'Buildings for Everyone' by the National Rehabilitation Board or www.nda.ie, 'Meeting Part M and designing lifetime homes' by the Joseph Rowntree Foundation and 'Quality Housing for sustainable communities' by the Department of the Environment, Heritage and Local Government or on www.environ.ie
- Extensions should be simple and complement the existing building.
- Extensions are generally best located to the rear of the house.
- Care should be taken that larger extensions do not disturb the scale of the original house.
- Where possible match the existing widths of the gables of the original house and maintain a similar pitch and eaves height.
- Where extensions are being added to traditional vernacular architecture it is good practice to make the new extension demonstrably different from the old.