

# CHAPTER 13

## RURAL DESIGN GUIDE

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## Chapter 13 Rural Design Guide

**Aim:** To encourage appropriate site selection, layout, and high-quality design for rural housing in the countryside, by utilising guiding principles to ensure that rural housing complements, reinforces, and preserves the character and visual amenity of the County's rural landscape, while also being cognisant of the need to transition to a low carbon climate resilient future.

### 13.0 Introduction

In County Carlow there is a tradition of people residing in the countryside. Therefore, while the strategic objective of the Council is to accommodate growth in a network of vibrant towns and villages, it is equally recognised that a smaller proportion of the future growth in the County will be accommodated in the countryside in accordance with policies as contained in Chapters 2 and 3 of this Plan.

Development proposals for rural houses in the countryside require careful and detailed consideration in relation to site selection, site layout, and house design, so that they complement rather than dominate the rural landscape. This chapter outlines the key guiding principles which should inform proposals for new builds, or renovations and extensions to existing rural houses in the countryside.

### 13.1 Strategy

This rural design guide is not intended to be prescriptive but will be used by the Planning Department as an advisory document in the consideration of future planning applications. Each development proposals will be considered having regard to site location and characteristics of the local rural area and will be considered on a case by case basis. The guide it seeks to encourage imaginative and innovative contemporary design as well as more traditional vernacular solutions, which complement their rural surroundings. It is intended to be utilised as a tool to assist potential applicants, architects and planning agents, particularly in the areas of site selection, layout, design, and sustainable building.

Within the countryside new rural houses, together with extension, renovation and conversion projects, should:

- Be a positive addition to the rural environment and community;
- Reflect 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;
- Respect, learn and interpret from the past to achieve well designed architecture, be it in a contemporary or traditional style; and,
- Be sustainable, incorporating design features/principles to facilitate a transition

to a low carbon climate resilient future. The rural design guide should also be read in conjunction with other relevant chapters in this Plan, in particular:

- Chapter 3 (Rural Housing Policy);
- Chapter 5 and 16 (Traffic Safety);
- Chapter 6 (On-site wastewater treatment and flood risk assessment);
- Chapter 9 (Landscape character, sensitivity and capacity, and scenic views and routes); and,
- Chapter 10 (Natural and Built Heritage).

### Rural Design - Policy

It is the policy of the Council to:

RD P1: Ensure that rural housing in the countryside is appropriately located in the landscape, informed by best practice principles for siting, layout, design, scale, form, orientation, use of materials, energy efficiency and climate adaptation, thereby contributing to the preservation of the rural environment.

### 13.2 Site Selection

The development of rural housing 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, where existing roadside trees and hedgerows are removed, and new inappropriate suburban type gardens, 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 the rural character of an area.

All new development will be required to be sited in such a way that allows it to blend into the rural landscape and not form an overly visible or obtrusive feature. A good site will be one that already has a significant number

of well-established features that naturally define its extents/boundaries.

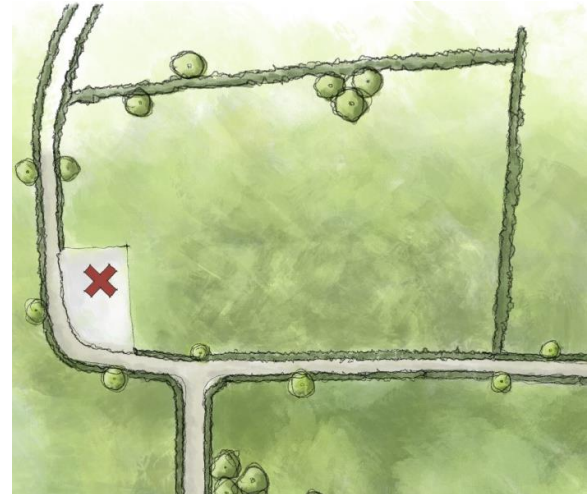


Fig. 13.1 Avoid corner sites located on dangerous bends with poor sight lines.

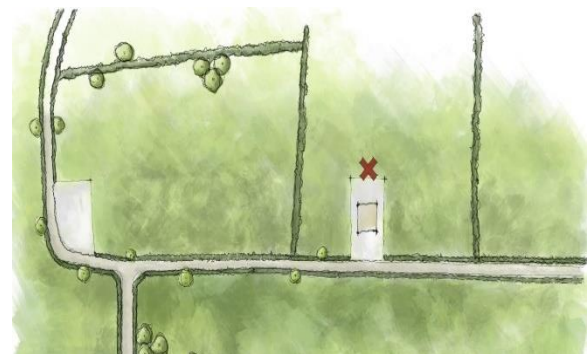
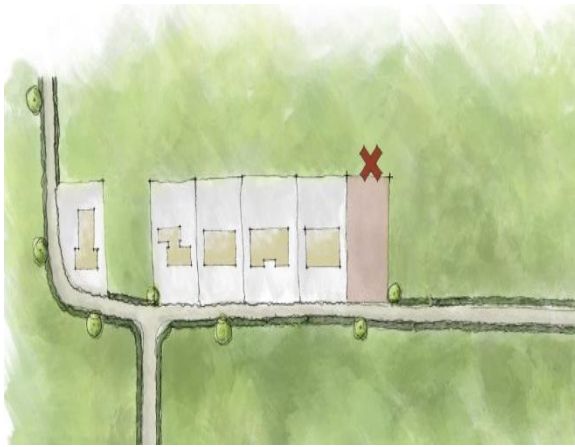


Fig. 13.2 Avoid open and exposed sites limited or no existing boundaries. Houses located in the middle of sites/fields, distant from boundaries will not be considered acceptable. Houses should be 'tucked into' the landscape close to existing landscape features such as field boundaries, trees, and hedgerows.



**Fig. 13.3** Avoid sites which lead to or exacerbate ribbon development.



**Fig. 13.4** Houses positioned parallel to public roads in the form of linear/ribbon development will, irrespective of site analysis and desirable orientation, lead to a loss of rural character.

### Site Selection

- Seek to reuse/adapt or extend existing structures where possible.
- Select a site that is visually enclosed with established trees and hedgerow boundaries. Prominent sites which are elevated, open, and exposed should be avoided.
- Consider the openness and visibility of the site in the surrounding landscape, the sensitivity or vulnerability of the landscape to new development and the existence of protected views or routes in the area.
- Consider individual site constraints e.g. landscape sensitivity, heritage features (nature conservation designations, archaeology or built heritage), flood risk considerations etc.
- Avoid areas of the countryside which are less able to absorb development without significant impact upon the character, integrity and uniformity of the landscape.
- Cognisance must be had of potential impacts on existing proximate dwellings, particularly overlooking and overshadowing.
- Avoid sites that will contribute to over-development of a rural area e.g. exacerbate or give rise to ribbon development.
- Avoid choosing sites which are carved out of larger fields.
- Choose a site with adequate entrance sight lines to facilitate safe access, and appropriate ground conditions to accommodate an on-site wastewater treatment system.

### 13.3 Site Analysis and Layout

Site analysis is a record of all the data of the site and its context. 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.

Site-specific information which needs to be considered includes:

- **Orientation:** This will enable the design to take full advantage of the southerly aspect and it's potential for solar gain. This is a key consideration when designing using passive techniques for sustainable design solutions.
- **Aspect:** This is defined as the direction of the slope of a site direction. An understanding of aspect will facilitate optimising the use of south light in a design. It will be important to note any topography, building or landscape feature that might screen daylight on any part of the site, at a given time in the day or at a particular time of the year.
- **Topography:** New houses should be designed to harmonise and work with existing contours avoiding hilltop locations or dramatic cutting and filling into hills which can leave a scarred landscape. Use lower areas and contours to screen the development
- **Existing Buildings and Materials:** May provide important contributions to the character of the area. New design proposals should be respectful of the scale, form, massing and detailing set by existing vernacular structures e.g. houses, farm buildings, stone walls etc.

- **Existing Landscape Features:** Characteristics unique to the site should be carefully considered in order to inform and influence the design of a development e.g. topography, ground levels etc.
- **Boundary Treatments:** Existing established boundary treatments e.g. old stone walls, hedgerows, trees and sod banks contribute significantly to the character of the rural environment and should where possible be retained in the development of rural houses in the countryside.
- **Prevailing Wind Direction:** Can be an important consideration in designing an energy efficient dwelling and providing shelter from the elements.

#### Key Principles

##### Site Layout

- Position buildings along the contours of the site. Blend sympathetically with the topography and avoid breaking the skyline.
- Avoid buildings on prominent hillside locations or on ridges.
- Don't artificially alter the natural levels of the site. Avoid excessive cutting and filling i.e. locating housing on 'platforms'.
- Use or retain existing trees, buildings, slopes and other natural features to provide a setting. An exposed site will result in greater heat loss and likely incur more maintenance costs.
- Minimise impacts on historic elements in the landscape that can be impacted by a proposed new development.
- Site the building to exploit passive solar gain and shelter from the prevailing winds.
- Avoid sites which may impact on elevated and sensitive landscapes, scenic views, or



detract from the visual appearance of the countryside.

- Assess and quantify the existing boundary conditions. Determine the value of the boundary elements before deciding to remove any of them. Removing parts of the existing boundary runs the risk of fundamentally changing the character of the rural area.

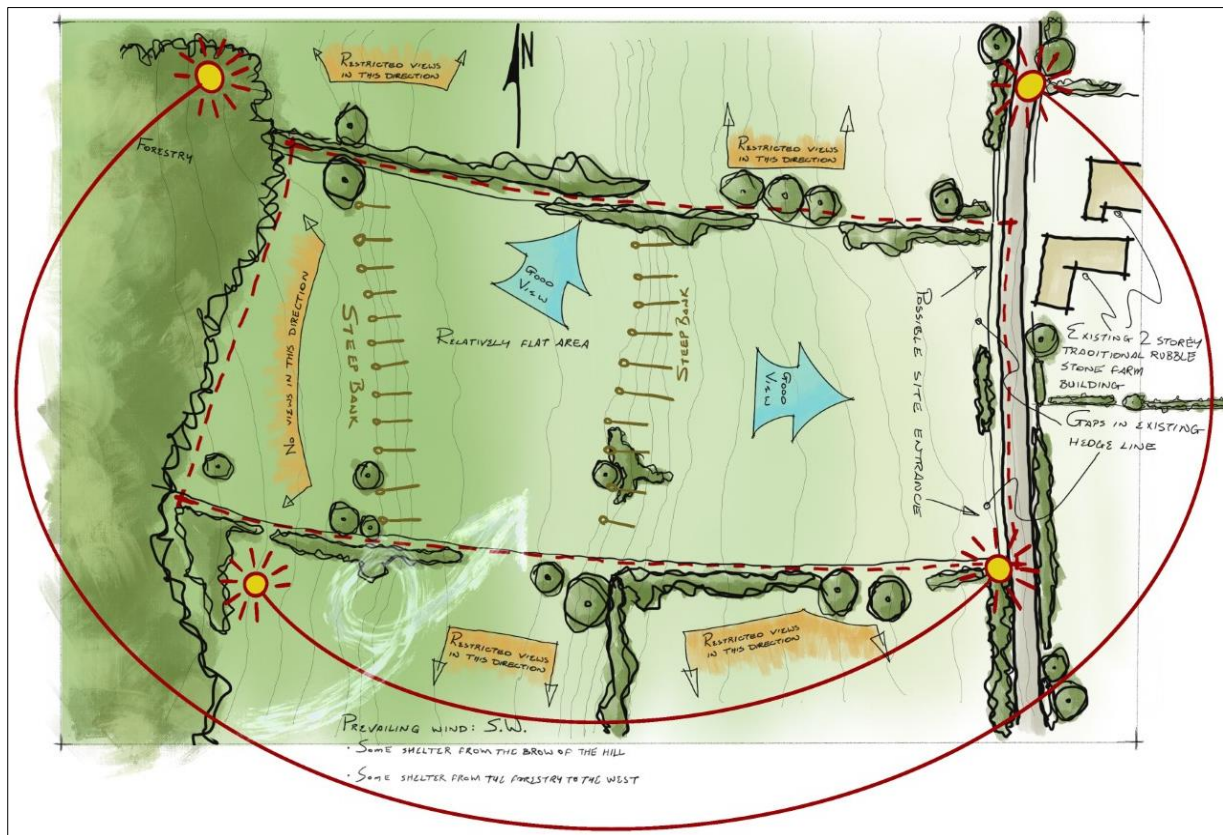


Fig. 13.5 Sample Site Analysis



Fig. 13.6 Avoid elevated, unsheltered, and exposed sites. Houses should not be above the ridge line or positioned to break the skyline or to appear highly visible or dominant in the landscape.



Fig. 13.7 A more appropriate approach is to site house on lower, more sheltered and less visually exposed ground.



Fig. 13.8 Avoid excessive cutting and filling on sloping sites. This can leave landscape scarred and give impression house has been “dropped into” an area.



Fig. 13.9 Reduce cutting and filling in sloping sites by making floor levels work with existing topography and contours.

### 13.4 House Design

The success of new houses in the countryside 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.

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 Carlow. The following sections will examine such issues as scale, height, form and shape, proportion, massing, fenestration and detailing.

#### 13.4.1 General Guidance

There are a number of considerations that should form part of the design process for an appropriate proposal for rural housing, including:

- The ability of the surrounding landscape to absorb development. This will inform the building type that is appropriate to the sites' context.
- The proposal must respond appropriately to the site. It should retain and work with the existing features of the site.

- An awareness of the colloquial style of development for the area. It should be noted however that there may be examples of development locally that could be more appropriately designed and may not be an appropriate precedent.
- Designs should be site specific and avoid replication of a generic “pattern book” design.
- Proposals should be “of their time”. A contemporary approach in style is more appropriate, or a modern interpretation of traditional characteristics rather than an imitation of an historic style.
- The forms used for a development should be simple. There should be a clear hierarchy, with the main dwelling form being the dominant one.

#### 13.4.2 Scale and Height

A building's size should be relative to its surroundings. As a result of modern demands for larger houses and building regulations which require higher ceiling height, rural houses have become larger in scale. While there is no prescribed height restriction for rural dwellings sufficient care must be taken in mitigating the impact larger scale dwellings which may appear out of context with surrounding traditional buildings and with the wider landscape. A large house will require a large site and needs to be set within a 'large landscape'. An area characterised by small field patterns and low-level vegetation is

unlikely to be suitable for a large house which will dominate the area.



Fig. 13.10 Large house out of scale on a small site

In some cases, particularly on uplands, hills, ridges and on slopes, the visual sensitivity of a landscape may only allow for a single storey house.

### 13.4.3 Form and Shape

Building forms are most appropriate by kept simple and not finished in overly ornate or fussy detailing, or inappropriate fenestration. New houses, especially in the more sensitive landscape areas, should try to replicate simple traditional forms and shapes, particularly imitating the narrow house plan.

As a general rule deep plan houses should be avoided where possible. Long, central corridors running down the spine of a building with a room either side and no natural light are not an ideal solution. The form and shape of such dwellings can often lead to substantial roof structures and dark internal spaces. They often fail to recognise the opportunities in terms of optimising natural light and passive solar gain.

There should be an obvious hierarchy to the general forms of a house, and the composition should not be such that the building looks unbalanced when considered in the context of its site.



Fig. 13.11 – Small courtyard (OLS Architects – Tullow Passive House) illustrating a series of narrow plan forms, echoing the principles of the traditional small courtyard farmyard



Fig. 13.12 – Simple forms are used to reflect typical rural cottage vernacular with a contemporary interpretation and to a higher standard such as this passive house example. (Tigh na Croit by HLM Architects)

### Key Principles

#### Scale, Height, Form and Shape

- Most appropriate designs comprise buildings which are simple in form.
- Aim to get the form right and avoid one bulky structure.
- The rural nature of the site should inform the design concepts.
- Ensure that the house design is of an appropriate scale relative to the site.
- Ensure that the scale and height of the building is appropriate to the existing character and buildings of the locality.
- Ensure that the height of the building does not lead to obtrusive visual impacts in the local landscape.
- Design detailing should be restrained and absent of fussy add-ons or frills.



- Traditional rural houses have little or no modelling to the front plane of the building.
- Use quality local materials that are well detailed.
- Use simple construction techniques.
- Avoid suburban type forms and shapes.
- Avoid buildings which are complex in shape.

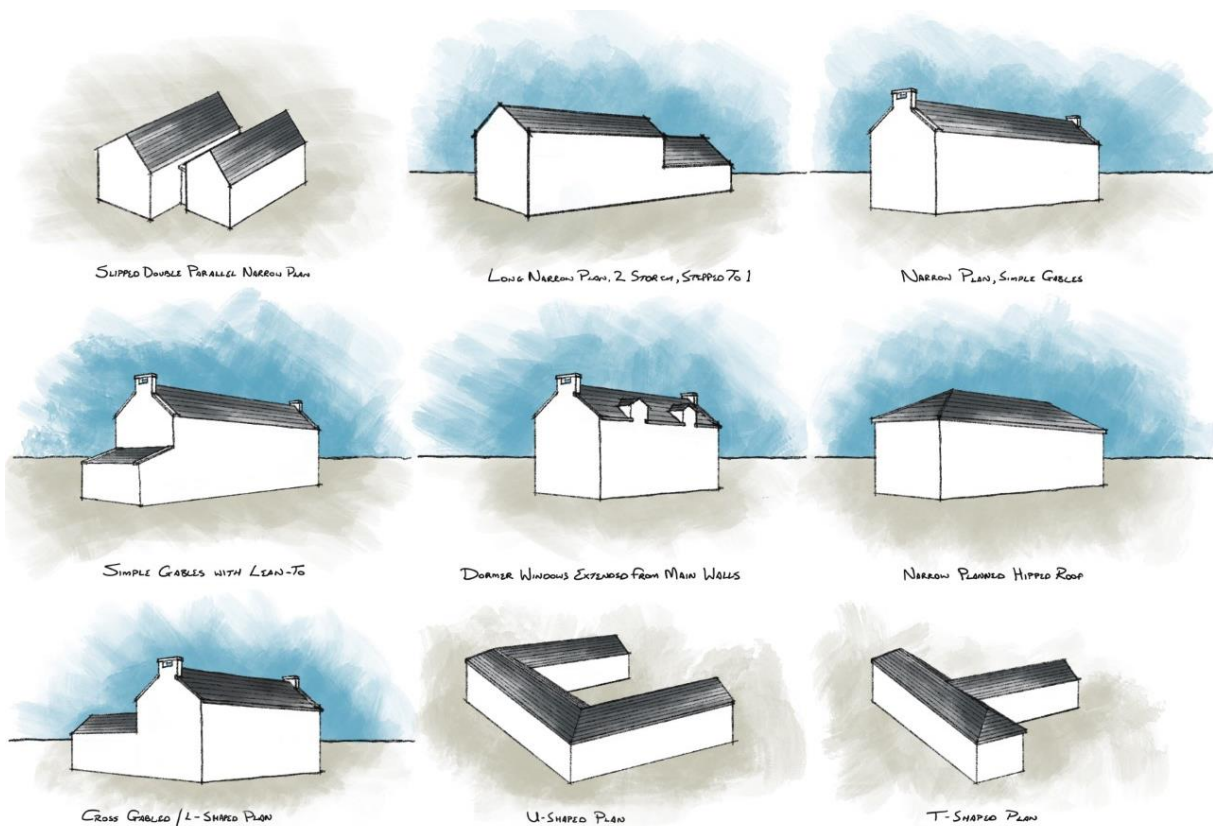


Fig. 13.13 Examples of appropriate house building forms in the countryside e.g. narrow plan, low eaves, modest scale, flat fronted, and vertical emphasis to gables.

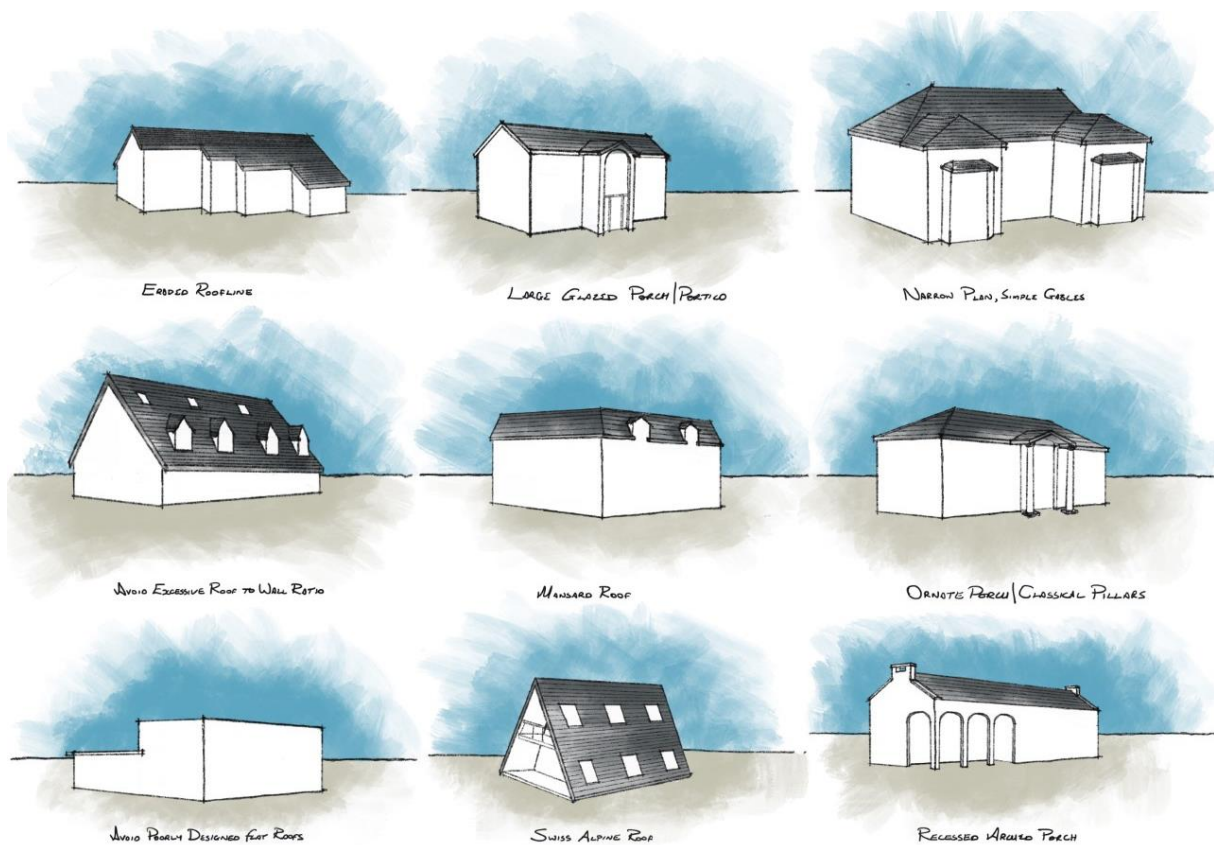


Fig. 13.14 Avoid house forms that are alien to the countryside e.g. suburban in character, awkward scales, wide gables, complex shapes, and busy roof profiles and wall elevations.

#### 13.4.4 Proportion

Traditional rural houses maintained a balance of proportions between the walls, and window and door openings. This was achieved in a number of ways, including:

- A high solid-to-void relationship i.e. greater wall surface than windows and doors;
- A simple symmetrical arrangement of features;
- Height of a building relative to its openings; and,
- Window openings with a vertical emphasis.

This balance and symmetry can be distorted through the use of larger horizontal emphasis windows that reverse the solid-to-void relationship. It can result in a structure that appears more unbalanced, and which lacks

the simplicity and strength of traditional buildings.

A comprehensive proportioning system should be applied to contemporary rural houses to ensure that they relate to their surroundings.



Fig. 13.15 Traditional house maintains a balance of proportions.

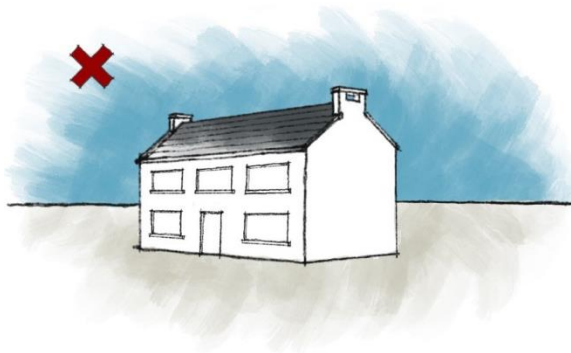


Fig. 13.16 Horizontal emphasis windows can dominate appearance producing a house that can look imbalanced and more suited to a suburban location.



Fig. 13.17 – Simple forms are used with the proportions to each other carefully considered (Scrabo Clachan by BGA Architects)



Fig. 13.18 –The proportions and expression of the chimney breast are a clever reinterpretation of the traditional forms. They offset and contrast well with the material palette used. The proportions of the glazing balance the contrasting materials used. (Simply Architecture)

### 13.4.5 Massing

Massing reflects the manner in which the elements of a house are assembled i.e. in one big bulk mass, or in an assembly of more slimmed down elements.

In a rural context, it is important that the massing of a dwelling is considered relative to the size of the site and the setting in which it is being placed.

As a general rule, one large “block” of a house is not usually suitable for most sites in terms of visual impact or architectural aesthetic.

A solution can be to break down the massing and bulk using traditional better proportioned forms.

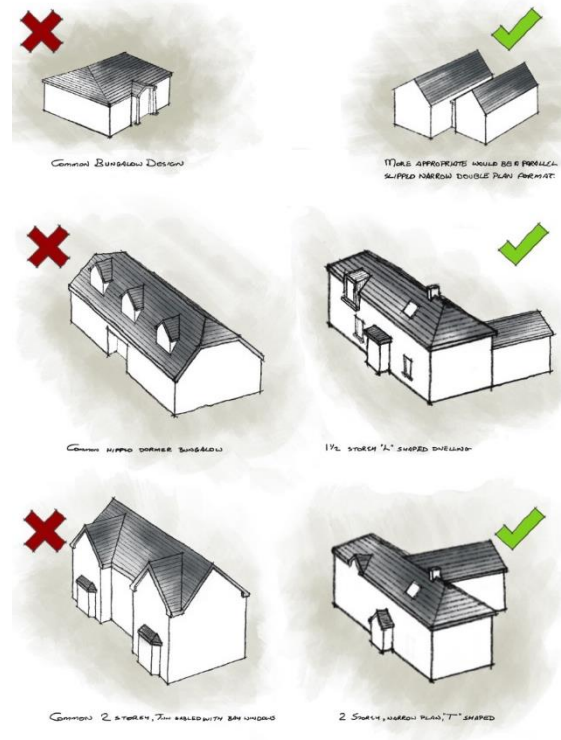


Fig. 13.19 – Breaking down bulk with use of simple forms to get the massing right.





**Fig. 13.20 – The forms and massing of each block and how they relate to each other helps define the building’s relationship to the landscape. (Tierney Haines Architects)**



**Fig. 13.21 – The transparency of some forms helps in the definition of the massing of each block. It also helps to establish a relationship with the landscape (Tierney Haines Architects)**



**Fig. 13.22 – The massing of the building forms are appropriately relaxed by the positioning of the window on the corner. The extended dormer window at first floor also has the same fenestration from ground floor carried up which break up the extent of roof at first floor. (Patrick Bradley Architects)**

## Key Principles

### Proportion and Massing

- Achieve attractive proportions in the building design.
- Utilise a plan which will allow a good solid-to-void relationship in its windows and doors.
- Avoid boxy/wide/deep plan houses. They will appear bulky and squat. Narrow plan houses are more appropriate and generally make better use of sunlight and daylight.
- Break down the massing of the house to articulate different elements in order to reduce its bulk where necessary.



## 13.4.6 Architectural Elements

### 13.4.6.1 Roofs

The roof of a rural house makes an important contribution to its profile. Traditional rural houses tended to have simple roof shapes, that were mostly gabled with minimal eaves and verge detailing, and generally sloped 35° to 45°.

New houses tend to be constructed where the roof sits as a 'lid' oversailing the external walls. In such cases the roof can present as an overly dominant feature relative to the overall house structure. Roofs with large overhangs should therefore be avoided, minimised, or mitigated by good design. More traditional and simple rural roof edges are preferable.

House types that require excessive roofing (i.e. ratio of roof-to-wall) need careful consideration. For example, deep plan houses, in the form of bungalow or dormer types, can have excessively large roofs which can also appear unbalanced relative to the overall house structure.

While pitched roofs are most commonly used other shapes of roof are 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.

To assist in integrating a rural house into the landscape, roofs are normally required to be finished with tiles or slates, using a blue/black or slate grey colour. However, in certain circumstances alternative materials such as metal sheeting and zinc may also be appropriate.



Fig. 13.23 Simple eaves with dormer window extended out flush with the façade in matching render.



Fig. 13.24 Avoid box verges and eaves and the use of cladding. Ideally dormer windows should be connected to the façade as in Figure 13.22 and not be protruding separately from the roof.

### 13.4.6.2 Dormer House

The roofscape of dormer houses, particularly where mid-roof dormer windows are used, has often become the principal feature of the rural landscape. The deep (double) floor plan of this type of house, coupled with accommodation provision in the roof, can result in a structure with larger massing and bulk, and a larger, busier and more complex roof profile. For these reasons, and depending on site context and layout, a well-designed single storey building, or full two storey building may be preferable to a dormer.

The formulation of a design for a dormer house requires careful consideration. In particular, the following should be taken into account:

- The minimisation of busy eaves lines and roof planes.
- The use of rooflights flush with the roof plane instead of mid-roof dormer windows.
- The use of traditional wall-plate/eaves dormers with a plaster finish extending from the external wall/façade, instead of mid-roof dormers.



Figure 13.25 Prominent mid-roof dormers should be avoided.



Fig. 13.26 Use of Alternative approach to mid-roof dormers can be symmetrical rooflights to simply roof profile and reduce building scale.



Fig. 13.27 This 1 ½ storey height helps reduce the mass of the building and potential proportion of the roof relative to wall area. There is also an example of a modern interpretation of the dormer window which is a much nicer detail than a typical mid-roof dormer. (Tierney Haines Architects)

### 13.4.6.3 Chimneys

Chimneys where proposed are an important element of a house but can often be overlooked when formulating a design. If

poorly designed or positioned, chimneys can detract from the appearance of a house. Generally, chimney stacks should be located through and across the roof ridge. For traditional gabled rural houses, they can be found flush with the face of the gable wall.

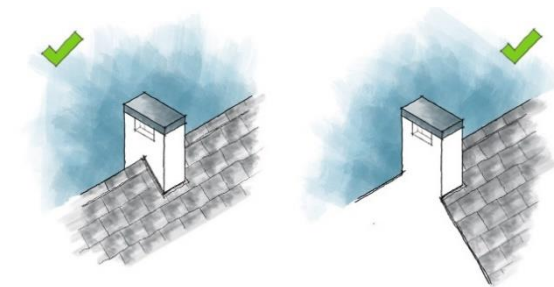


Fig. 13.28 Placement of chimney stack through roof ridge or flush with gable wall, visually integrates with the overall appearance of a house, adding more substance and presence.

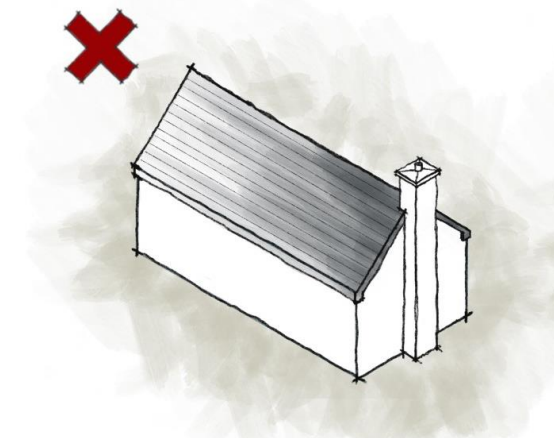


Fig. 13.29 Avoid visually prominent externally located chimney breasts.

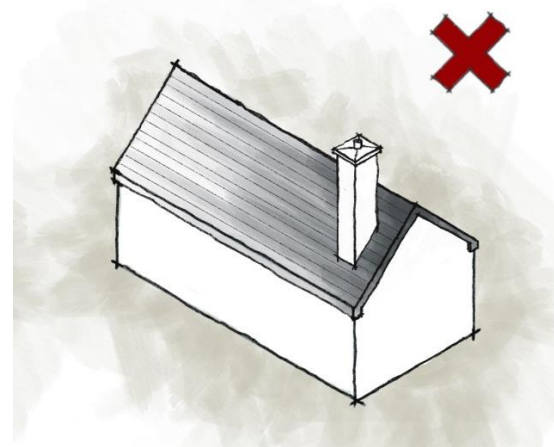


Fig. 13.30 Avoid chimney placement on the roof plane, which appears tall, spindly, narrow and weak.

**Key Principles**

**Roofs and Chimneys**

- Roofs should be appropriately scaled and proportioned.
- Roofs are normally required to be finished with tiles or slates, using a blue/black or slate grey colour.
- The treatment of eaves/verges should be studied carefully and relate directly to the proposed building type.
- Overhanging eaves/verges should be avoided, minimised, or mitigated by good design. Clean simple lines with good detailing can give a more distinct appearance.
- Chimney stacks should be located through and across the roof ridge.
- Avoid tall spindly chimneys positioned on the roof pitch and chimneys positioned along the full length of external walls.

**13.4.6.4 Windows and Doors**

Windows and doors are the predominant openings of a building, and therefore their size, shape and positioning significantly influences the scale and proportions of a house. Traditionally, rural houses had openings surrounded by large areas of solid wall giving rise to a high solid-to-void relationship. Building practices and materials are now such that larger windows can be utilised with a variety of shapes and sizes, but their appearance can look at odds within the simpler rural setting. In many cases, a series of smaller windows with a vertical emphasis, or of square proportion, sit more comfortably than large horizontal openings. Windows with a vertical emphasis generally work better as they help to balance the width of the building and provide better light and articulation between the interior and exterior.

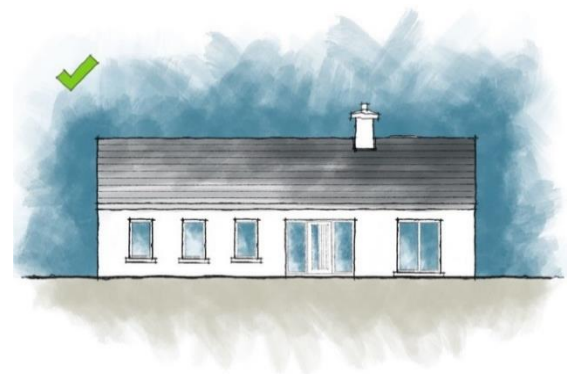
Traditionally doors were the only item of embellishment on the otherwise simple exteriors of rural houses. Proportions, colour and detail are fundamental to making doors an attractive feature of a house.



**Fig. 13.31 Vertical emphasis windows and symmetrical arrangement.**



**Fig. 13.32 Typical bungalow with horizontal windows.**



**Fig. 13.33 Vertical windows appear appropriate and can contribute to higher solid-to-wall effect.**



Fig. 13.34 Appropriate simple design panelled and sheeted doors.

### Key Principles

#### Windows and Doors

- Keep the range of window opening sizes and shapes to a minimum.
- Arrange openings to maximise a high solid-to-void appearance.
- To avoid a discordant appearance, keep the arrangement of window openings simple, observing the central axis generated by the shape of the wall.
- Vertical emphasis windows are generally preferable to horizontal emphasis.
- Bay windows were not a traditional feature of rural houses and can lead to an overly fussy appearance.
- Doors should reflect the shape of the opening and are most successful in their simplest form (sheeted or panelled timber).
- While the door and surround need to admit light into the hallway, avoid large glazed panels in doors which can look over elaborate and cluttered. A window above or beside the door (used traditionally) is a good alternative.
- Where porches are required they should be kept simple, and closely integrated with the main building in terms of size, shape, proportion, and external finishes.
- In the interests of sustainable development environmentally friendly materials should be used for windows and doors.
- “Replica” Georgian and Victorian style windows are not acceptable.



### 13.4.6.5 External Finishes, Materials and Colour

Finishes, materials and colour, in addition to the shape and form of a building, make an important contribution to the appearance of a rural house in the landscape. The palette of materials, in particular those used in the elevations of any one rural house, should be kept to a minimum. Locally sourced indigenous 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 also be specifically chosen to respond to the rural setting.

#### Key Principles

##### External Finishes, Materials and Colour

- External materials are best kept simple. Use a small number of high-quality finishes.
- Avoid dry dash, brick and artificial or reconstituted stone. These finishes are generally not suited to rural areas.
- Avoid quoins which are generally not suited to rural areas.
- Use natural, soft and neutral colours on external walls. They provide an attractive contrast to dark roofs and strong window and door colour.
- Avoid bright and garish colours.
- Avoid expensive add-ons and frills which are often added to compensate for poor design e.g. Classical porticos and columns.
- When selecting materials finishes their likely maintenance requirements should also be considered.

### 13.4.7 Landscaping and Boundary Treatments

Good site selection can be defined as one which allows a new rural house to settle into and integrate with its surroundings. The aim should be to work with the rural landscape and not against it, by keeping and appropriately supplementing (where required) features that will help visually absorb and integrate a new building into its surroundings. This includes landscape features such as trees and hedgerows, stone walls, sod banks, and existing ground levels/contours.

Boundaries, including the materials used for them, inform the rural character of an area. Trees and hedgerows in particular, help blend new buildings into the landscape and greatly enhance amenity and wildlife/biodiversity value. Irish country gardens differ from traditional suburban gardens by the way they embrace the house and appear to connect seamlessly to the natural landscape. Trees and hedgerows also provide a site with colour, texture and structure, at the same time as screening unattractive views, absorbing road noise, and providing privacy.

### Key Principles

#### Landscaping and Boundary Treatments

- Work with the landscape by formulating a layout and design that responds to existing landscape features.
- Remove as little of the existing landscaping features as possible i.e. trees, hedgerows, stone walls, sod banks, contours etc.
- Use contours of site to soften the setting of a rural house.
- Avoid suburban type landscaping and formal symmetrical layouts. Straight lines are not appropriate in rural areas.
- Avoid surrounding the house with hard landscaping which will divorce it from the natural context of the site.
- Avoid tarmacadam, concrete and brick driveways. Aim for self-draining gravel which is more suitable for a rural setting in terms of visual impact and surface water drainage.
- Design informal layouts.
- Plant wild meadows or strim 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. Create new mixed hedgerows of native/local species to maintain biodiversity.
- Avoid planting non-native single species such as Leyland Cypress.
- Retain ponds and ditches on the site.
- Avoid replacing boundaries with unsympathetic fencing, pre-cast decorative concrete blocks and artificial stone.
- Where possible commence planting of the required boundaries before the construction of the house commences.

### 13.4.8 Entrances

New site entrances must provide sightlines onto a public road in accordance with the development management standards in Chapter 16.

The setback/removal of existing boundaries to achieve entrance sightlines should be kept to an absolute minimum. Where unavoidable, the setback/removed section(s) should be replaced with similar boundary treatment to the original. This could include mitigation planting with the same indigenous tree and hedge species, and/or the careful removal and reconstruction of an existing stone wall.

The appearance of entrances shall be modest and suitable to the rural context. Overly elaborate entrances with high wing walls, pillars and gates will not be permitted.

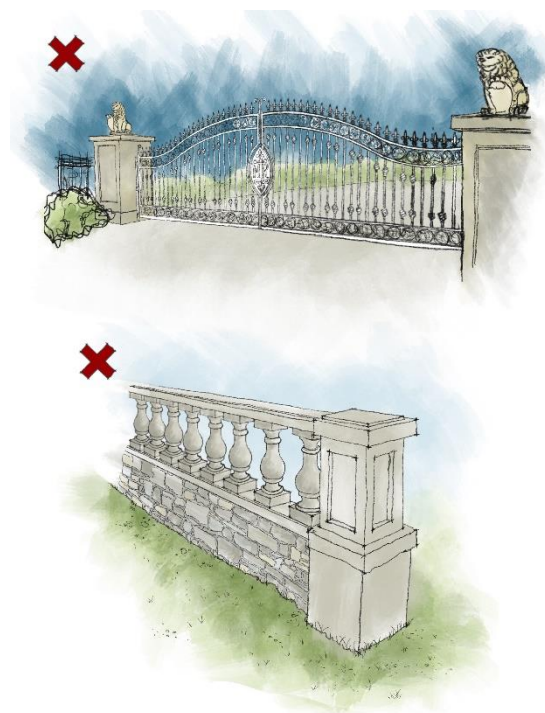


Fig. 13.35 Examples of unacceptable entrance gates.

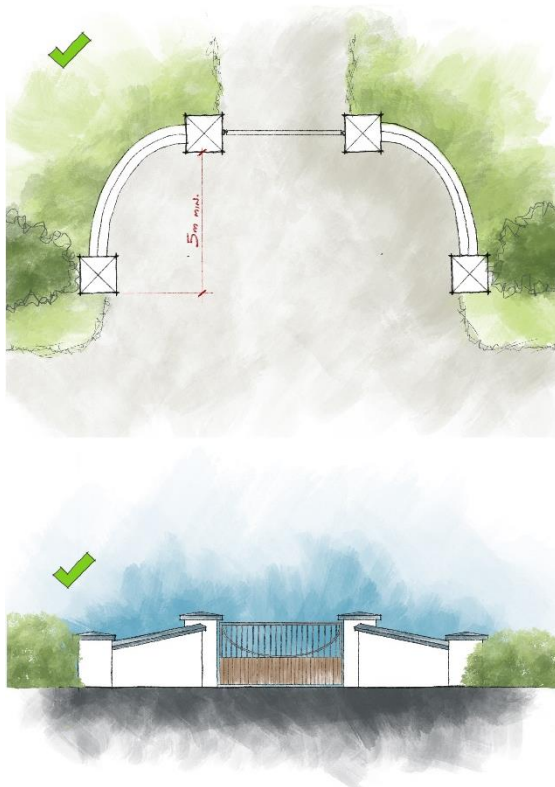


Figure 13.36 Example of more appropriate entrance design, more modest and simple approach, and using lower wall and pier heights.

### Key Principles

#### Entrances

- Aim to retain the existing front boundary where possible by just making a simple splayed or bell mouthed opening.
- If traffic safety requires that an existing roadside boundary must be setback, always aim to re-establish what is existing i.e. hedgerow for a hedgerow, stone wall for stone wall.
- Avoid high roadside boundary walls, entrance walls, gateways and piers which visually dominate the site and the surrounding rural area.

### 13.4.9 Sustainability and Energy Efficiency

Rural housing has significant energy impacts. The houses 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 often sited a distance from towns and villages with associated services, e.g. schools, shops and places of employment. However, rural housing also presents 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.

The EU Directive on the Energy Performance of Buildings introduced mandatory energy rating for houses, and the requirement that Energy labels (Building Energy Rating BER Certificates) are available for each house i.e. A, B, C, D rating etc. Houses should be designed to achieve the highest possible energy rating, which will reduce the overall running cost of the house as well as being good for the environment

The Nearly Zero Energy Building (NZEB) standard applies to all new buildings (including major renovations) since December 2020. For all new domestic builds, NZEB is equivalent to a 25% improvement in energy performance on the 2011 Building Regulations. Compliance with NZEB is expected, but proposals that can clearly define and prove their intentions of exceeding these targets in a meaningful way will be encouraged by the Council.

There are also other formal accreditation systems that look at the bigger picture of a development's overall carbon footprint such as LEED (Leadership in Energy and Environmental Design) and BREEAM, which

can confirm a projects sustainability credentials.

### 13.4.10 Solar Gain and Solar Energy

The design and orientation of rural houses 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 house. Development proposals for rural houses 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.

Development proposals are also encouraged to explore the use of renewable energy technologies e.g. solar panels, wood pellet boilers, heat pumps, micro wind turbines. Grants are available to help with some of the additional initial costs. For further information refer to the Sustainable Energy Authority of Ireland (SEAI) at [www.seai.ie](http://www.seai.ie)

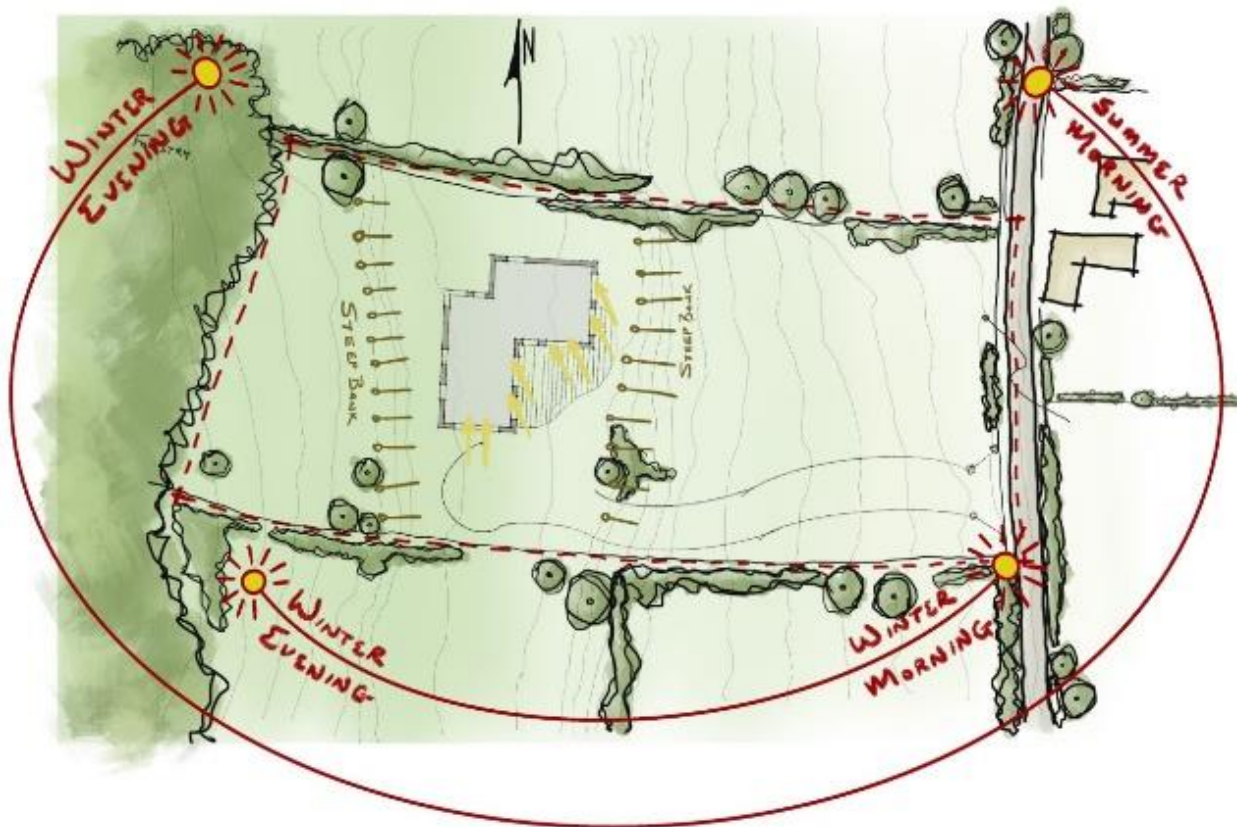


Fig. 13.37 Careful and informed site planning and house orientation to benefit from solar gain.





**Fig 13.38. Certified Passive House Co. Wexford, Uses contemporary language based on traditional elements and materials. (Source: Isabel Barros Architect)**

### Key Principles -

#### Sustainability and Energy Efficiency

- 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.seai.ie](http://www.seai.ie).
- Reduce water consumption by rainwater 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.
- Conserve vegetation and landscapes to help maintain biodiversity.

### **13.4.11 Accessibility and Lifetime Adaptability**

Buildings should be designed with flexibility and adaptability in mind. 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.

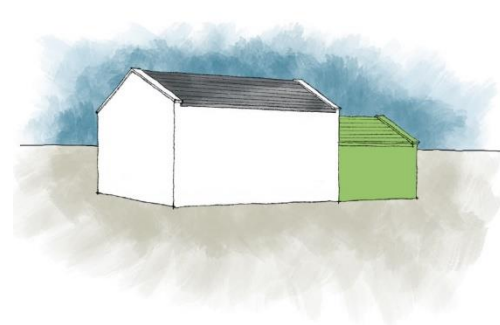
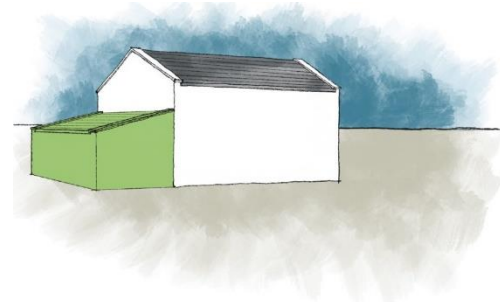
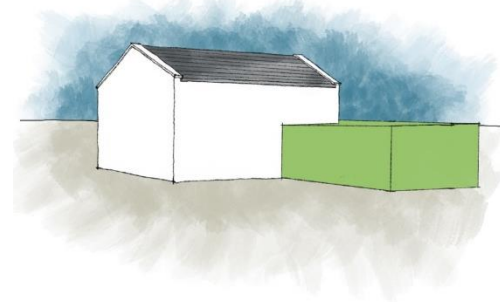
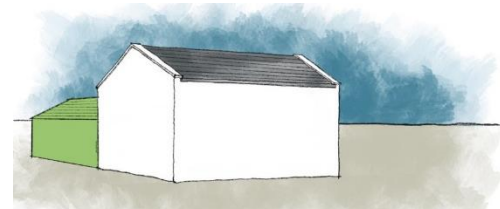
Designers should consider not just the immediate needs of the occupiers but also their changing needs over their lifetime. The design of the new house should provide flexibility in use and adaptability. Ensure that the house can provide for the needs of older people who may wish to remain independent 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.

### Key Principles

#### Accessibility and Lifetime Adaptability

- Plan to facilitate change ensuring that the house can meet the changing needs of the occupants over their lifetimes without costly remodelling of the dwelling.
- Ensure that the house is capable of providing for the needs associated with moderate mobility difficulties.
- Refer to documents such as 'Buildings for Everyone' by the National Rehabilitation Board or [www.nda.ie](http://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.

progression of development, allowing for the external form and historic character of a building to be maintained.



#### **13.4.12 Extensions**

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

The design of an extension should be sympathetic to the existing house. This does not mean that it has to exactly match the existing style, height and finishes, but that it should complement the existing house and not look out of place. A good extension is usually subservient to the main building i.e. extensions should be designed so that they look like extensions rather than a new house 'attached' to an old house. A good design should not confuse the legibility of the original building's footprint and form.

Extensions can reflect traditional aspects of the existing building, but contemporary extensions can also serve to complement the existing building. A distinction between the old and the new enables the various building phases to be seen as a harmonious

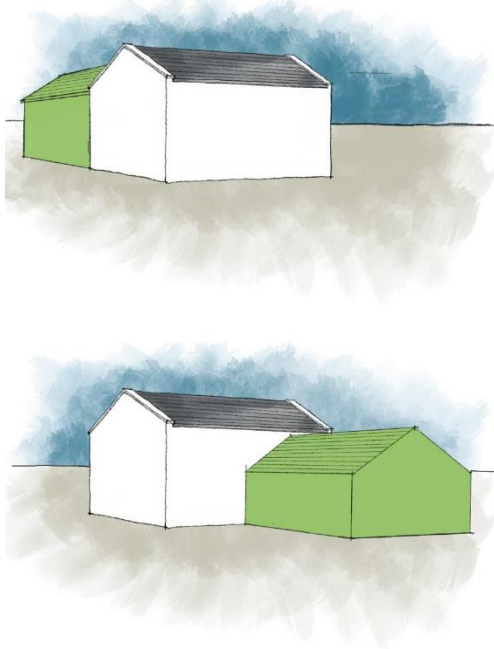


Fig. 13.39 Some simple examples of extension locations, forms and shapes that can work with existing dwellings.

Where extensions are proposed to an existing rural 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.

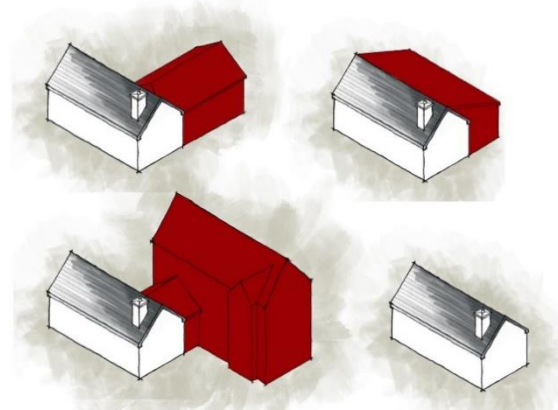


Fig. 13.40 Avoid extensions shown in this image in which character and appearance of the original cottage is lost by extension which breaks ridge line. Bu original cottage being absorbed into extension, or by original cottage being overwhelmed by poorly sized and scaled extension.

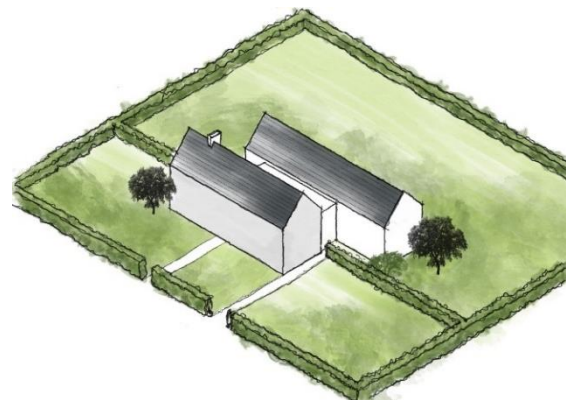


Fig. 13.41 Use of flat roof link and appropriately designed and scaled rear extension that is sympathetic to the single storey character and design of the original house.



Fig. 13.42 –Well defined forms are used with a clear hierarchical relationship to the existing dwelling. (Cairnview House Extension by BGA Architects)

### 13.4.13 Restoration and Re-Use

The Council would encourage the restoration and re-use of existing established vernacular structures for use as dwellings, as an alternative to the construction of a new rural house elsewhere in the countryside. The structure or house must be capable of being suitably restored to habitable accommodation in keeping with its original character and without the necessity to demolish or significantly alter it. The distinctive character and original historic fabric of the structure should also be retained using appropriate traditional construction methods and materials. Refer to Rural Housing Policy RHP15 in Chapter 3 of this Plan.

#### Extensions and Restoration and Re-Use

- Design a house in a manner that can allow a sensitive extension in the future if necessary.
- 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.
- The restoration of established vernacular structures should retain original historic fabric and appropriate traditional construction methods and materials should be used.