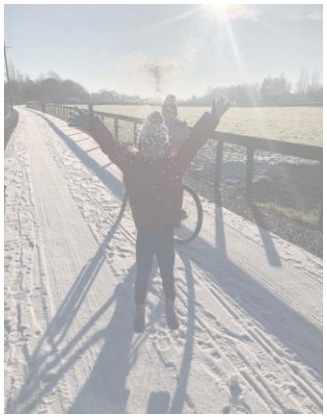
APPENDIX 4

RURAL HOUSE DESIGN GUIDE



CDP
2023
2029

OUR KILDARE
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CONTENTS

1. INTRODUCTION

The Kildare Rural House Design Guide has been prepared in accordance with Objective RO1 of the Kildare County Development Plan 2017-2023 and it forms an Appendix to the proposed Draft Kildare County Development Plan 2023-2029.

This document provides guidance on planning for a new home in rural County Kildare, with an emphasis on the importance of siting and good quality sustainable design. Advice is provided for single one-off houses and serviced site developments.

The guide should be read in conjunction with the policies and objectives contained in the Kildare County Development Plan to assist in the planning of housing in rural areas.

The purpose of the document is to aid applicants and designers by:

- Outlining the key issues to consider in terms of site selection.
- Offering helpful hints and solutions to integrate houses into the landscape.
- Highlighting good and bad design responses to common site issues.
- Presenting suitable proportions, features and materials to be considered in the countryside.
- Providing examples of successful extensions to vernacular structures which can bring old dwellings back into use whilst also offering an alternative to unsuitable sites.
- Providing advice on sustainability and energy efficiency in the home, and
- Demonstrating preferable design proposals for serviced sites.

The guide is primarily aimed at applicants intending to build a house in the countryside. Applicants are encouraged to seek the services of a skilled architect or competent design professional to advise at the earliest stage of a project.

2. SITE SELECTION

When considering building a new home in rural County Kildare, the approach to site selection is crucial. This section sets out advice in relation to the following:

- *Refining the location*
- *Filtering within selected area*
- *What to do*
- *What to avoid*

2.1 – Refining the Location

Rural Housing Policy

In the first instance, Applicants must consider if they comply with the Rural Housing Policy pertaining to the area. Applicants should familiarise themselves with the Rural Housing Policies and Rural Housing Zones (1 & 2) contained in Chapter 3 of the Draft County Development Plan (CDP). Establishing Local Need is a crucial first step in this process and applicants are advised to avail of a pre-planning consultation with the Planning Department in this regard.

If the applicant's local need has been established and the general local area has been identified, the next step should be to consider if the locality can absorb further development.

Map 3.1 in the Draft Kildare County Development Plan 2023-2029 illustrates the Rural Housing Policy Zones (reproduced in Figure 2.1 here).

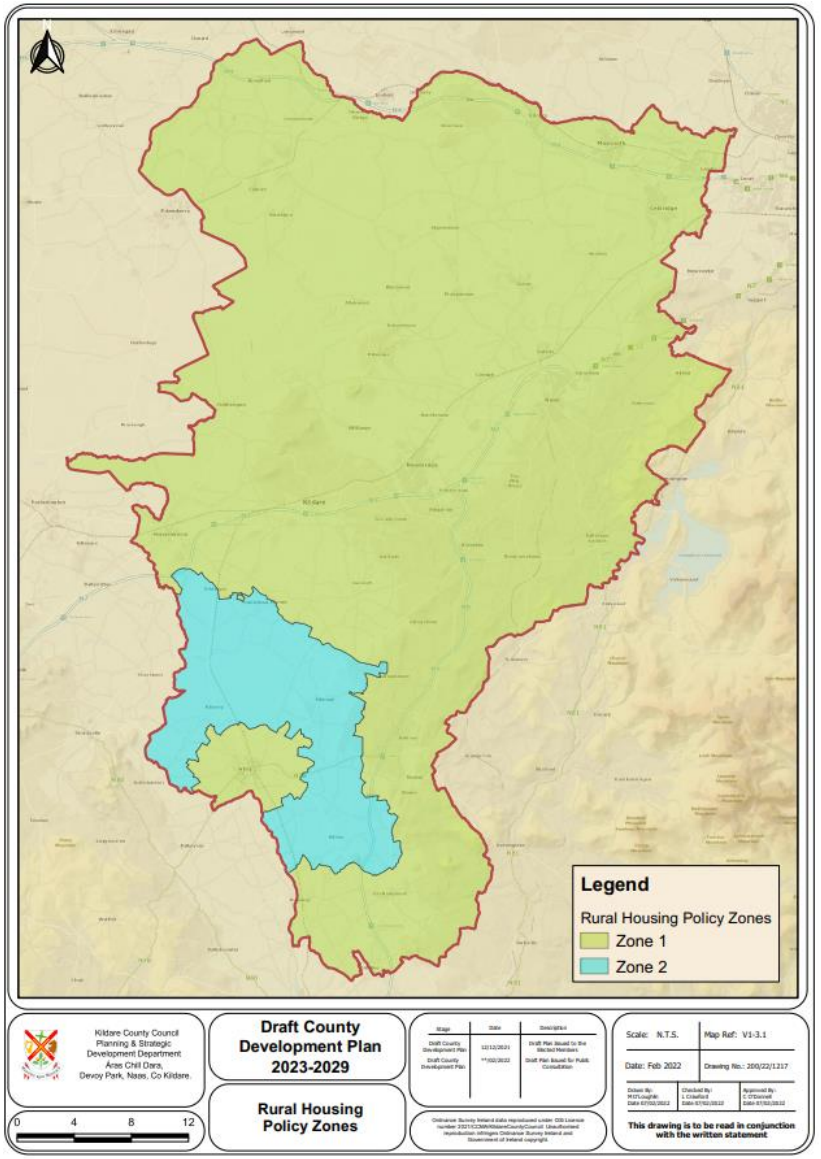

Figure 2.1 – Rural Housing Policy Zones.
(Refer to Chapter 3, Map 3.1 of the Draft CDP for further details).

2. SITE SELECTION

It may prove more difficult to find suitable sites in '*Zone 1 – Areas under Strong Urban Influence*'. Many parts within this area already have a high density of one-off rural dwellings. Applicants in these areas may find it difficult to find sites capable of absorbing further development.

'*Zone 2 – Stronger Rural Areas*' do not have the same level of one-off housing built in comparison with Zone 1 and is therefore more likely to have capacity to absorb further development.

<u>Landscape Character</u>
Applicants and designers should also check the type of landscape their locality is in. The County's Landscape Character Areas are set out in the proposed Draft County Development Plan 2023-2029 (reproduced in Figure 2.2 here).

Localities in unique, special, or high sensitivity landscapes may find it difficult to integrate with the surrounding area (e.g., Western Boglands, Eastern Uplands etc.). Design proposals for sites located within sensitive landscapes will need to be of a high standard to integrate with the surroundings without injury to the landscape character.

Scenic routes and Protected Views throughout the County are included in Chapter 13 of the County Development Plan and applicants should familiarise themselves with these also.

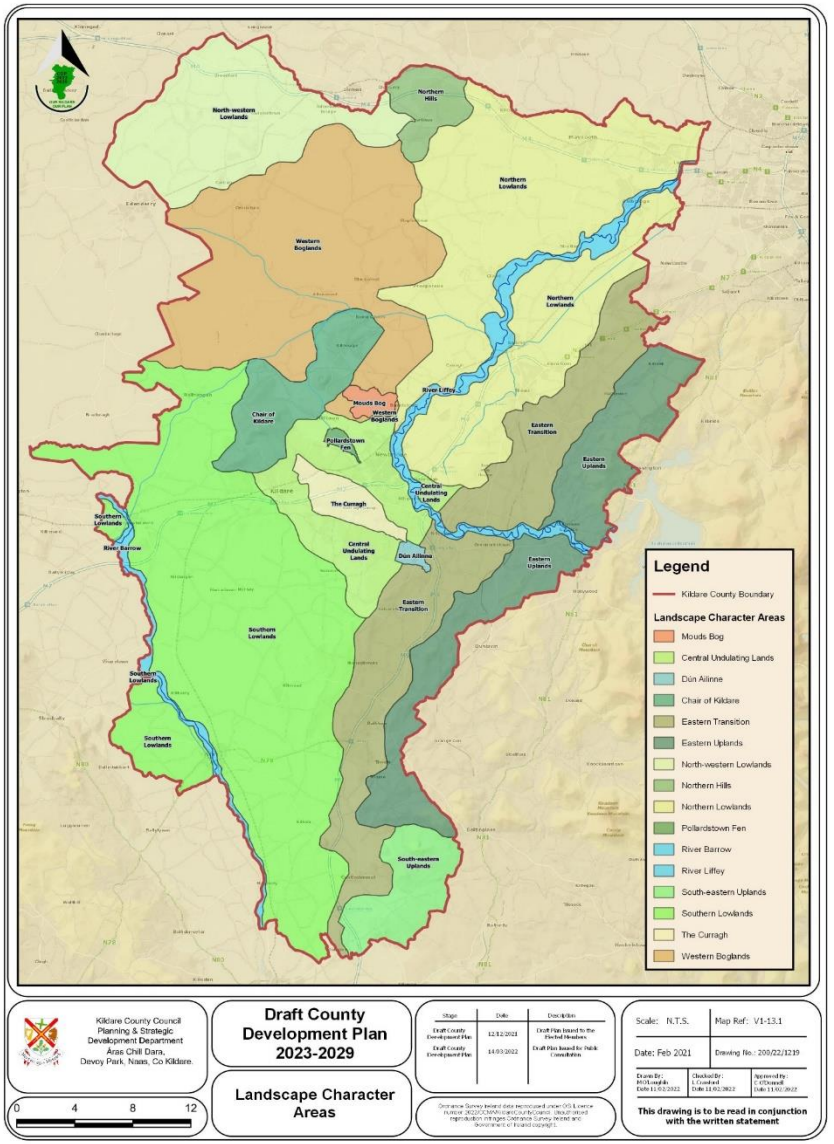

Figure 2.2 – Landscape Character Areas in Kildare
Refer to Chapter 13. Map 13.1 of the Draft CDP for further details).

2. SITE SELECTION

2.2 – Filtering within selected area

The following guiding principles should be incorporated into the site selection process. A list of key considerations is outlined at the end of this chapter to help applicants and designers in this regard.

Reuse of existing buildings

In the first instance, applicants should consider whether there are existing dwellings or buildings in the locality that can be renovated or extended to meet their housing need.

Renovation of an existing rural building could provide a satisfactory solution to housing need. Where additional accommodation is required this could be achieved 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. This is considered further in Section 8 of this Guide. Further advice is also available from 'Reusing Farm Buildings: A Kildare Perspective'.

An advantage of bringing derelict traditional vernacular structures back into use is that applicant(s) are not required to comply with the Rural Housing policy (i.e., local need criteria).

Clustering

Clustering involves the location of a new home close to an existing dwelling(s), farm buildings or other structures. The benefits of this arise from borrowing existing screening from site boundaries and vegetation, thus reducing the visual impact of a new structure on the landscape.

Some examples of clustering can be seen in Figures 2.3 and 2.4 below. All sites within a landholding should be assessed having regard to the criteria listed in Section 2.3.

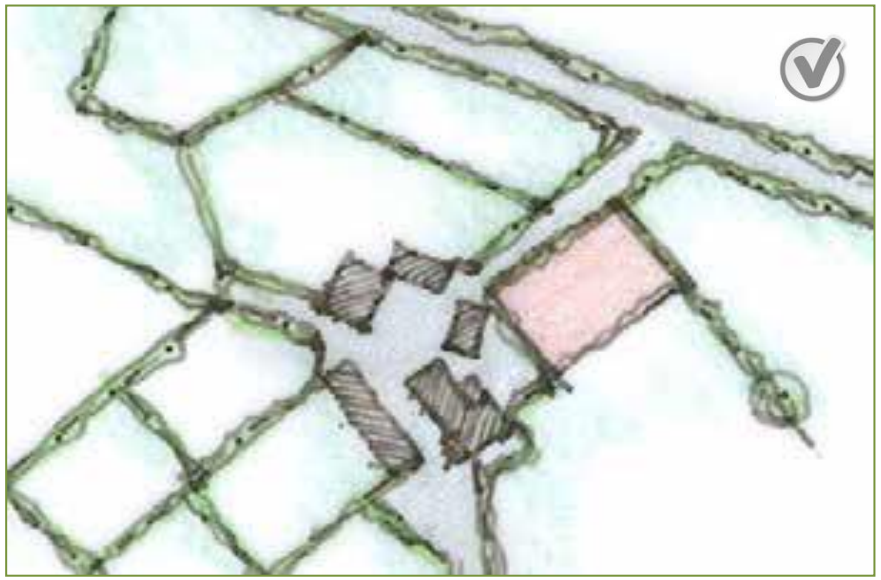

Figure 2.3 - A site with good development potential within an existing cluster of rural buildings utilising existing boundaries.

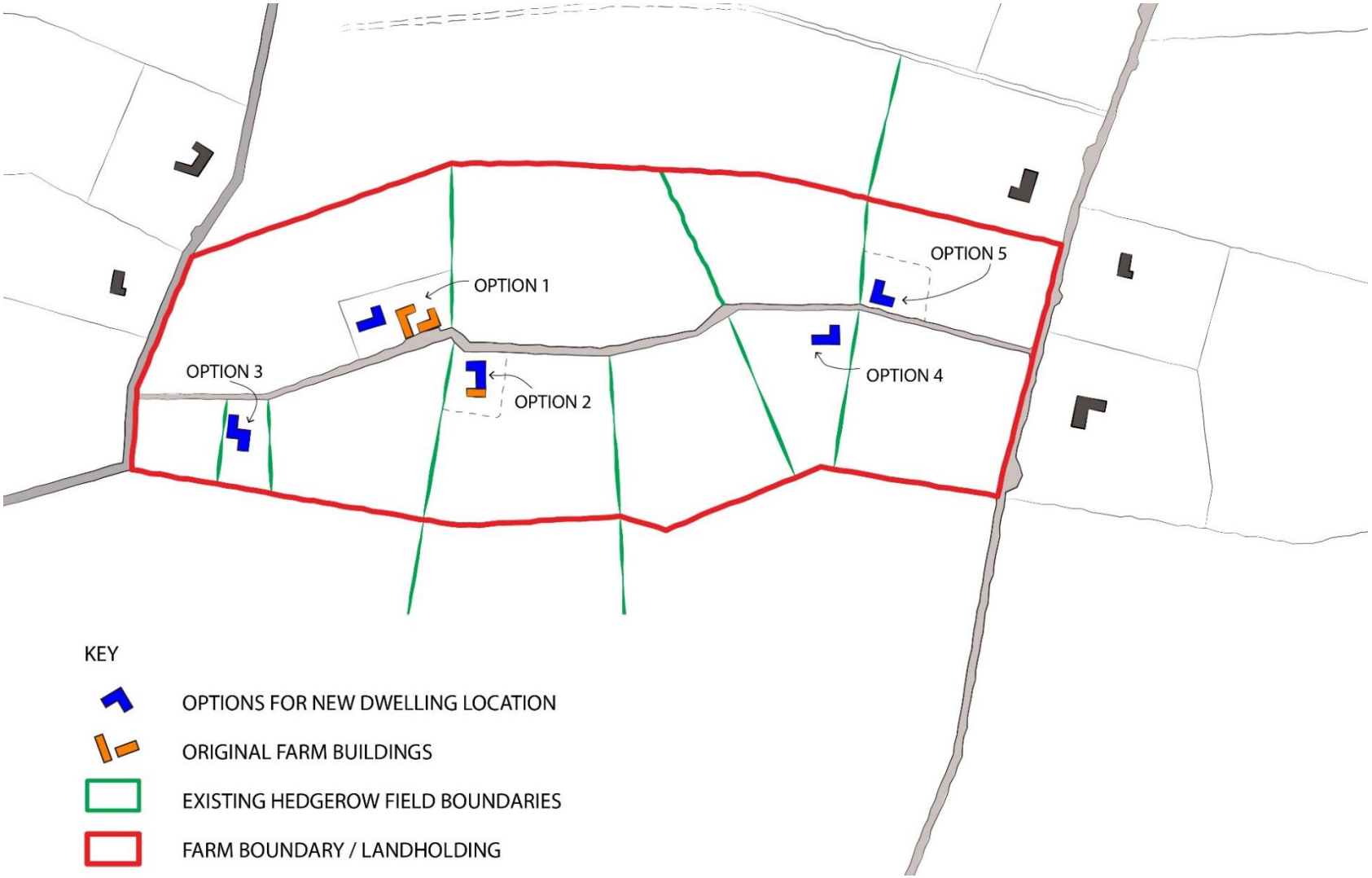

Figure 2.4 – Example of suitable sites within a farm landholding

2. SITE SELECTION

'Greenfield' sites

Where the re-use of an existing building or clustering is not feasible or viable, a greenfield site may be considered. When building a house in the rural countryside the selection of the 'right' site requires careful consideration.

Development in the countryside has tended to focus on the use of road frontage, often carved out of larger fields. Here, buildings dominate the view and inappropriate suburban gardens with discordant roadside boundary treatments and gates are introduced into the landscale.

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 2.5* illustrates an example of ribbon development.

Figure 2.5 - Ribbon Development

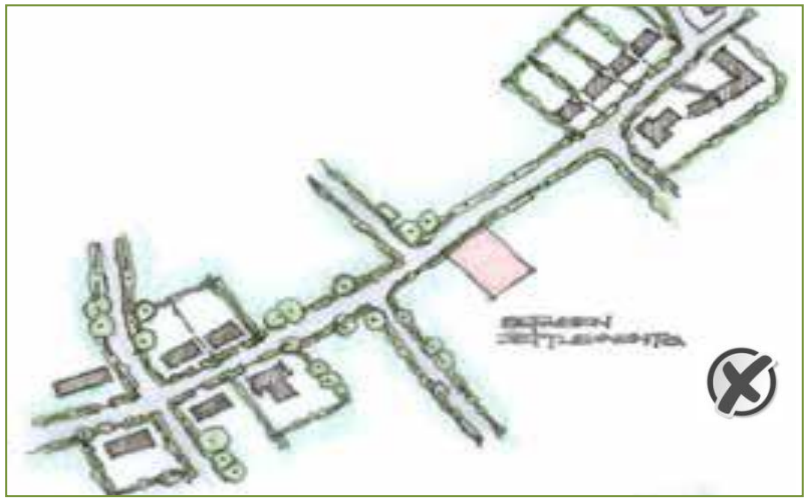

Figure 2.6 - Avoid Sites which could lead to the eventual merging of individual settlements.

It is preferable to choose a site which has existing mature boundaries, established trees and vegetation, hedgerows, buildings, and other natural features as these provide a backdrop to development and can give new structures a sense of place.

Rather than addressing the road frontage directly, applicants should consider locating the dwelling further back within the depth of the site and perpendicular to, or at an angle to, the road as this can often create a more interesting approach to the dwelling, improve orientation for solar gain and improve privacy and residential amenity.

2. SITE SELECTION

2.3 - What to Do:

- Applicants should first consider re-using, adapting, or extending existing rural structures where possible in the first instance.
- Explore the idea of clustering a new house with other houses or structures.
- Choose a site with identifiable and well-established boundaries which separate the site naturally from its surroundings. Look for sites with at least two boundaries in situ and preferably three.
- Look for sheltered locations beside woodland, mature hedgerows, lines of trees / shelterbelts.
- Carefully consider the siting and design of the dwelling so as to achieve good passive solar gain.
- Applicants should use existing site features and topography rather than clearing away elements that give the site interest and character.
- It is important to maintain and supplement existing structure planting, boundaries, hedgerows by using recommended species outlined in Section 7, of this document '*Elements of the Landscape*'.

2.4 – What to Avoid:

- Prominent / exposed sites or sites that would impinge on a protected landscape or view.
- Impacts on adjoining properties (e.g. overlooking or overshadowing.
- Development located near heritage features, archaeological or protected sites.
- Sites that require more than one new boundary.
- Exposed and open sites.
- North facing sloping sites as they are difficult to achieve good passive solar gain.
- Sites carved out of larger fields as this has a significant visual impact.
- Sites which could lead to the eventual merging of individual settlements and contribute to ribbon development and urban sprawl (see figure 2.9).

Figure 2.7 - A site carved out of a large field

2. SITE SELECTION

Key considerations:

- Check the Kildare County Development Plan prior to identifying the preferred location to ascertain the following:
    - Rural Housing Policy for the area
    - Landscape sensitivity
    - Concentration of one-off houses in the area (see appendix 11 'Single Rural Dwelling Density' Toolkit).
- Check the locality for existing vacant houses/buildings that could be renovated.
- Avoid a site that would contribute to ribbon development (i.e., five or more houses along 250m on one side of any road) or urban sprawl.
- Consider the relationship between the size of the site and the size of the dwelling that is needed. Small sites generally cannot absorb large dwellings.
- Choose a site that has existing boundaries and avoid carving a site out of a large field.
- Utilise existing contours and boundaries to screen the dwelling and protect it from the elements.

3. SITE ANALYSIS AND LAYOUT

This section aims to help the applicant analyse the preferred site and its characteristics to inform the most appropriate layout for the dwelling.

Site analysis should also be used when assessing the merits of alternative sites and may help to identify at an early-stage sites that are not suitable for accommodating development.

A good site analysis will lead to a better understanding of the site, a more appropriate site layout and ultimately a more sustainable house design.

Site analysis should help inform the design approach to be taken rather that trying to impose a pre-determined design onto the site. The design of the house should therefore be site specific and evolve from a study of the site's location, orientation, and topography. Topics considered in this Section are:

- Orientation & Aspect
- Topography, heritage & existing landscape features
- Designing for sloping sites
- Setback distances
- Infill / backland sites

3.1 – Orientation & Aspect

The path of the sun should be mapped on a site layout plan, showing the sun rise in the east and set in the west. This will illustrate how a new home could exploit passive solar gain which has many benefits including improving the energy efficiency of the home.

Environmental and sustainability considerations such as heating requirements and heat loss should be considered when deciding on the overall size of the dwelling.

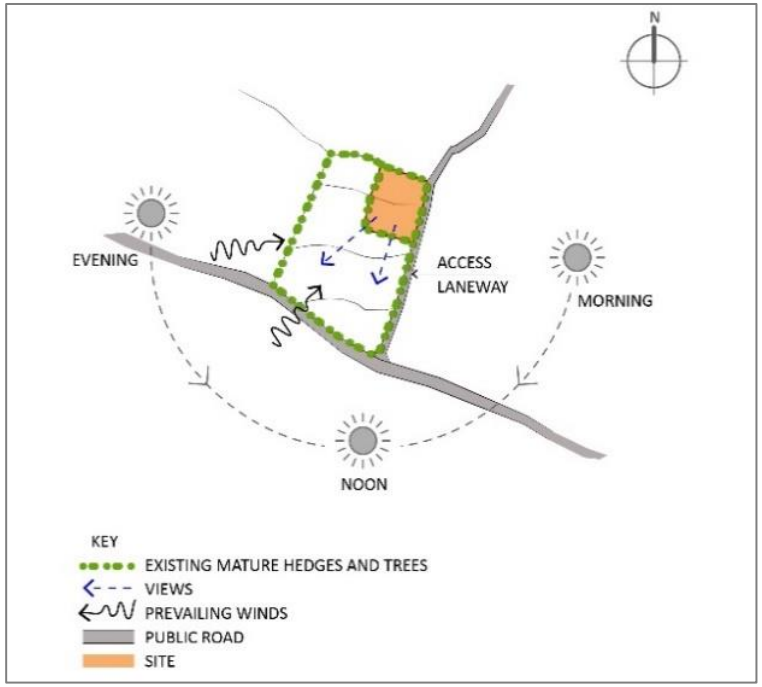

Figure 3.1 – Site Analysis Sketch

Siting of dwelling, orientation and placing of active spaces in the house such as living rooms and kitchens should consider principles of passive surveillance and security considerations.

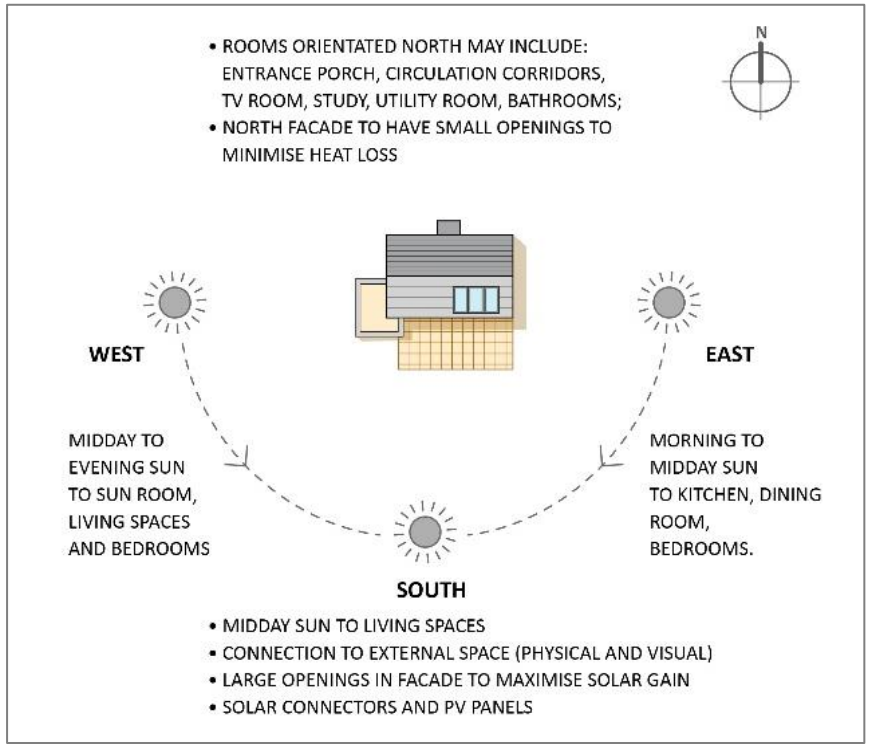

Figure 3.2 – Indicative Room Orientation and Solar Gain

Prevailing wind directions should also be shown. This will indicate how a new home should be sheltered. Examples of a Site Analysis Sketch are shown in figures 3.1 and 3.2 above.

3.2 – Topography, heritage & existing landscape features

Traditional rural buildings often hug the contours of the site for shelter and use native planting to minimise the impact of the weather.

Designers should show a similar understanding of topography and the traditional approach when siting new rural housing, in addition to considering the local rural vernacular context.

Any proposed design should respect and work with the existing site contours, established features and existing trees and vegetation, where possible seeking shelter and integration. This will also avoid unnecessary cutting or filling of the site. The protection of the sites natural and built heritage assets and biodiversity should be integral to the site analysis.

Aim to:

- Position buildings along the contours of the site. Work with contours not against them.
- 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.
- Excessive cut or fill may indicate that the site is unsuitable for a dwelling.

- Carefully consider the position of the dwelling. Position structures in line with or behind the established building line.
- Utilise existing natural heritage and biodiversity as a site asset.

Figure 3.3: Existing trees retained to screen and shelter the house.

Figure 3.4: The benefit of shelter; mature trees on the side of prevailing winds.

3.3 - Design for Sloping Sites

Managing Contours is a key consideration in the design of any new dwelling on a sloping site. On such sites, dwellings will normally be required to be built into the slope of the site, or within the lee of the hill.

Deep excavations should be avoided as such works can scar the landscape. Where a steeply sloping site cannot be avoided a suitable design solution must be developed to minimise the impact. Such measures may involve stepped or split-level house designs.

Figure 3.5: Example of excessive cutting to facilitate driveway.

The design of narrow plan houses results in the minimisaiton of cut and fill and this is encouraged. In such cases the excavated material can be re-used as part of the landscaping proposals for the subject site.

Figure 3.6: A narrow plan house design on a sloping site maximising existing screening.

Figure 3.7: Design working with the site.

3.3 – Set back distances

It is advisable that applicants seek input on the position and design of access and sight lines at an early stage of the design process.

The minimum setback distances from roads are outlined in the development management standards of the County Development Plan. They are as follows:

Motorways	91m
National Primary	91m
National Secondary	91m
Regional Road	31m
Urban / County Road	18.5m
Distributor	18.5m

Table 3.1 – Building lines from Public Roads.

Designers and applicants should also follow a general rule of thumb whereby the larger a dwelling the further it should be set back from the road. Appropriate screening should also be incorporated.

Avoid:

- Excessively large dwellings on restricted sites.
- Using road frontage sites, carved out of larger fields where buildings dominate the view and inappropriate suburban gardens, roadside boundary walls, and gates are introduced into the landscape.
- Ribbon Development
- Sites which may impact on scenic views or detract from the visual appearance of the countryside.
- Buildings on prominent hillside locations or on ridges.
- Artificially altering the natural levels of the site.
- Building in front of the established building line.
- Excessive cutting and filling or locating a house on a 'platform'.

Figure 3.8 – Large house on a small site

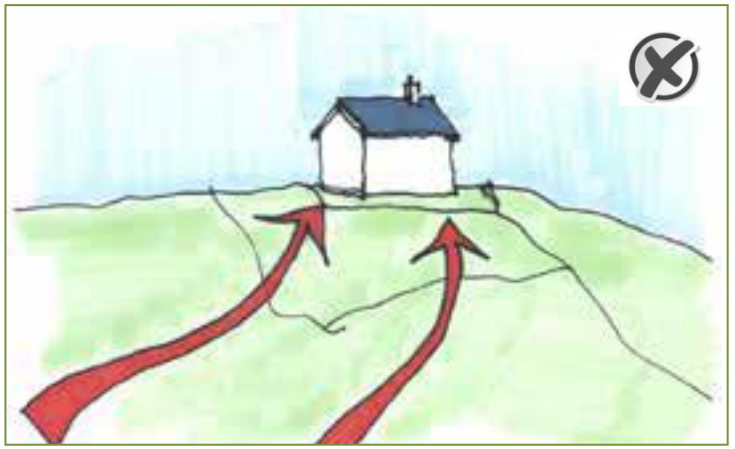

Figure 3.9 - Avoid Building on elevated or unsheltered/exposed sites

Figure 3.10: Example of a dwelling located on a platform.

3.5 - Design for Infill/backland Sites

Where a proposed development site currently forms part of an existing dwelling (i.e subdividing a plot) the following should be considered:

- The size and capability of the site to cater for an additional dwelling and associated services.
- Dual access arrangements making use of the existing access is encouraged.
- The new dwelling should sit comfortably within the curtilage of the existing dwelling.

In general, backland development will be discouraged. However, where a proposal uses the depth of a site, this would be preferable to ribbon type development.

In instances where backland development is proposed for a family member, the provisions of policy HO P16 in the proposed Draft Kildare County Development Plan 2023-29 must be taken into consideration. Particularly sensitive design approaches should be considered in these instances.

3. SITE ANALYSIS AND LAYOUT

Key considerations:

- Utilise the sun. Use the site's southerly aspect to warm your home.
- If the proposal requires significant cutting and filling, the site may not be suitable for a dwelling.
- Work with site contours, not against them.
- Work with existing site features, such as hedgerows and trees.
- Is the site the right size to accommodate the size of house that is required?
- Can the site accommodate the required set back from the road?
- Consider whether a dwelling on the preferred site could have a negative impact on any significant mid or long-distance views.
- Capacity of a site to accommodate foul and surface water drainage should be checked at an early stage in the design process.

4.HOUSE DESIGN

This section examines the importance of house design and offers guidance on the elements contributing to this.

The success of new houses in the rural landscape is measured by how the architecture of the proposed building responds to its environment and character of the rural area.

It is the aim of this section to promote innovation through design that is both contemporary and timeless, whilst respecting and acknowledging the special character of rural County Kildare.

House design is discussed under the following key principles:

- Scale
- Height
- Form, Shape and Massing
- Proportions

Section 5 of this Guide looks at architectural elements in more detail.

Key Principles of house design:

- *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. Deep plans require large roof structures and generally do not benefit from solar gain and light penetration.*
- *Avoid including large feature rooms that are rarely used which will increase area, cost, and bulk.*
- *Recognise the rural nature of the site.*

4.HOUSE DESIGN

4.1 – Scale

The scale of a new house is a critical consideration when designing a new home.

Figure 4.1 – A nicely scaled dwelling in a rural context.

When considering the scale of a new dwelling, a balance must be achieved between the current and future needs of the occupants and the site location.

Applicants are advised to spend time thinking about their brief and ensuring each space will be useful and used. Applicants should also consider how the dwelling could be capable of being extended over time if more space is required.

There is a proportionate relationship between the area of the site and the size of the house. To accommodate a larger dwelling the proposed dwelling should be set within a larger site and absorbed within the wider landscape.

An area characterised by small field patterns and low-level vegetation is unlikely to be suitable for a large dwelling which will dominate the area. However, where existing vegetation is mature and abundant and the views are long, there may be scope for a larger dwelling.

Figure 4.2 – An over-scaled dwelling in relation to plot and distance from site boundaries.

In developing the scale of the proposed dwelling, the designer must take congnisance of the topography of the subject site and to other dwellings located near the proposed site.

A dwelling which does not respect the scale of existing dwellings in the area or results in impacts on surrounding dwellings or the landscape will not be appropriate.

4.2 – Height

The houses of rural County Kildare typically range from single storey dwellings to large two storey houses and some significant demesne country houses.

A site's location and characteristics are key to identifying the type of building height appropriate for a particular site.

On low lying lands there may be scope for a well-designed, high quality two storey dwelling whereas on more elevated areas a site may not have the ability to absorb a two-storey dwelling.

Figure 4.3 – A well-designed single storey dwelling blending sympathetically into the surrounding countryside.

4.3 – Form, Shape and Massing

A sign of a successful house design is to gauge how well it integrates with its surroundings. New dwellings should therefore blend into and not dominate the local landscape.

To achieve this, a simple form and shape is encouraged. It is advisable to avoid deep floor plans and excessive number of shapes, roof pitches, protruding blocks, or elements (e.g., projecting front gables, fussy bay-type windows, disporporationate porch designs and conservatories.)

Figure 4.4 – Side elevaton illustrating deep plan with all elements out of proportion to each other.

To accommodate larger dwellings in line with modern living needs within the countryside, consideration should be given to breaking down the massing of structures. Massing is about how elements of the house are assembled.

Deep plan, boxy shapes like *figure 4.5* should be amended to accommodate narrower plans as in *figure 4.6* that can be linked to break down the mass.

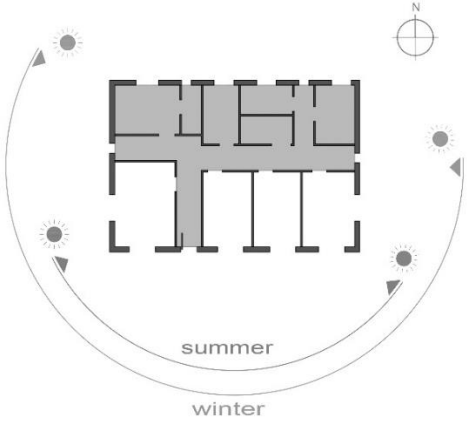

Figure 4.5 – Double deep plan. Only 50% of the house can benefit from solar gan and light penetration.

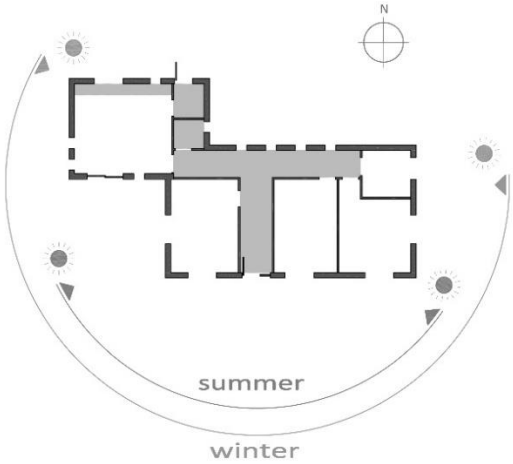

Figure 4.6 – Narrow plan design, no need to sacrifice floor area required. All rooms benefit with more exposure to light and solar gain.

Figure 4.7 – Example of a floor plan and site layout for a single storey design proposal which breaks down the mass using narrow plan elements.

4.4 – Proportions

Traditional rural homes maintained a balance of proportions between the walls and openings (windows and doors) by demonstrating three key factors:

- Height of the building relative to its openings, with openings exhibiting a vertical emphasis.
- A high solid-to-void relationship (e.g., greater wall surface area than windows and doors).
- A simple composition with symmetrical arrangement features.

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

Many building elements have a certain size, which may be pre- determined by the manufacturer, the size of each element should be perceived relative to the sizes of the other elements around it. Careful consideration of proportion should be given to solid-to-void ratio and overall elevational composition.

Irish rural houses are generally characterised as being simple buildings, with horizontally proportioned roofs sitting on horizontally proportioned walls that are counterbalanced by elements with a strong vertical emphasis such as gables, chimneys, and windows.

Roof proportion is an important consideration to allow the dwelling to be adapted if required to accommodate the future needs of a growing family. This must be done tastefully without excessive pitches or overhangs.

Figure 4.8 – Traditional house and narrow floor plan which maintains a balance of proportions.

This balance is upset by using much larger horizontal emphasis windows that reverses the solid to void relationship (i.e., the windows dominate) producing a structure that looks weak and unbalanced, lacking the simplicity and strength of traditional buildings.

Notwithstanding the preference for a horizontal emphasis on window and door openings, a mix of vertical and horizontal openings can work in more complex and contemporary design proposals. See *figure 4.3* above.

Windows do not have to be small to respect tradition. Larger windows can offer spectacular views, help maximise light penetration and solar gain. However, the length to width ratio needs to be considered.

In many cases, a series of smaller windows with vertical emphasis, or of square proportion, sit more comfortably than large horizontal openings.

A few solutions that can be employed to integrate larger windows into rural buildings are outlined in Section 5 of this Guide.

4.HOUSE DESIGN

Key considerations:

- Ensure the dwelling is suitably in proportion with the site.
- Design a dwelling that can be absorbed by the site and of a size that sits well within the surrounding landscape.
- Provide interesting layouts, connect narrow plan elements as opposed to using deep plan layouts.
- Break down the massing of structures by using narrow plan elements to obtain the required floor area. Single storey linked with 2-storey is often a successful strategy.
- Remember solar gain and light penetration being maximised using narrow plan elements.
- Window and door openings should be proportionate with the wall area. A vertical emphasis is preferred but horizontal openings can also work.

5. ARCHITECTURAL ELEMENTS

This section deals with the architectural elements of a home and focuses on the design details which are essential to the success of the appearance of a new house in the landscape. The elements discussed are:

- Roofs/ Dormers/ Chimneys
- Windows
- Doors
- Porches
- Conservatories
- Finishes/ Materials/ Colours

5.1 – Roofs/ Dormers/ Chimneys:

Roofs in rural areas give buildings their distinctive profile. Indigenous rural houses tend to have simple roof shapes, usually with side gables and with slopes between 35-45 degrees.

A simple roof form with non-complex roof profiles is preferable. The number of ridge lines and valleys should be kept to a minimum. Some of the more common roof profiles used in the countryside are illustrated in *figure 5.1*, while appropriate edge details and treatments are noted in *figures 5.2 and 5.3*.

Figure 5.1 – Common roof profiles

Figure 5.2 – Appropriate minimal roof edge treatment

Figure 5.3 – Avoid roofs with large overhangs which result in the roof sitting like a 'lid' on the building.

5. ARCHITECTURAL ELEMENTS

While pitched roofs are most common, other shapes 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 for example.

Figure 5.4 – 3D Image of barrell roof proposed to shed at Goatstown, Naas, Co. Kildare

Rooflights and Dormers:

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

Figure 5.5 – Example of traditional rooflight flush with slate detail; Naas, Co. Kildare.

The use of rooflights is preferable to mid roof dormers especially on roofs that are highly visible. If dormers are preferred / required, a simple wall plate dormer is the preferred form. They should be in the format of a 1 ½ storey dwelling with dormer windows extending upwards out of the main walls of the house.

Figure 5.6 – Example of a well-designed dormer window projecting from the main wall

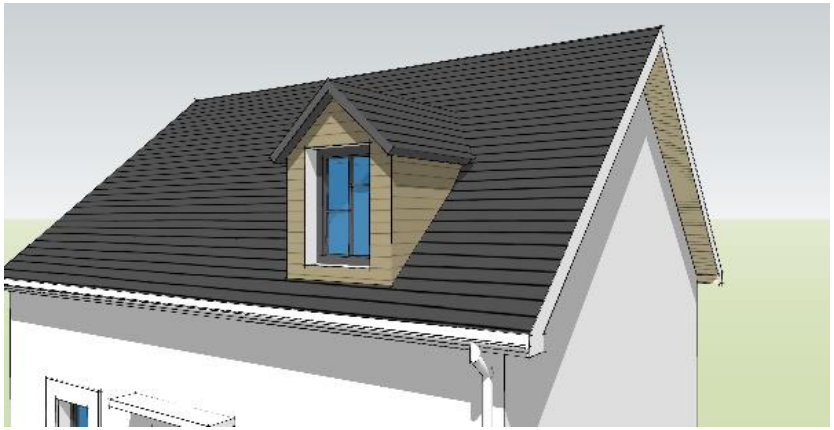

Figure 5.7 – Avoid dormers protruding from the roof

The continuation of the rendered finish helps to visually unify the dormer with the main mass of the dwelling. Protruding dormers are more visually detached, and this effect is emphasized where another contrasting material such as PVC cladding is used, as shown in *Figure 5.7*.

Figure 5.8 – Simple interpretation of a dormer building form with dormers on the front elevation projecting from the main wall.

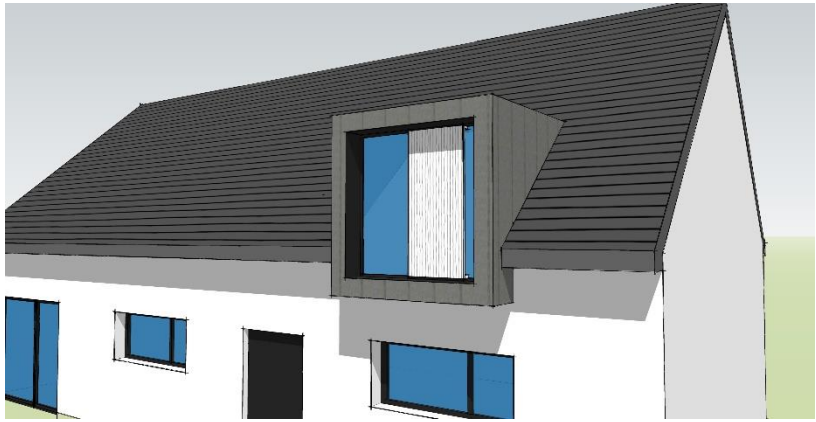

Figure 5.9 – Contemporary dormer in rear elevation

Contemporary style dormers like in *Figure 5.9* can also work well in some of the more modern design approaches.

Chimneys:

With current space heating standards, many new houses will not have open fires or stoves and chimneys will not be required. The inclusion of false chimneys for visual reasons should be avoided. Vent tiles to match the roof colour can be used to terminate ventilation stacks.

However, chimneys if required can 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.

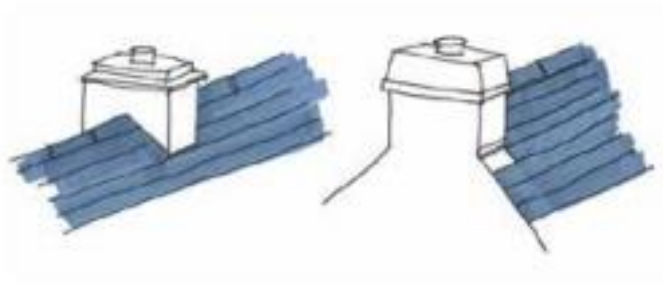

Figure 5.9: Examples of traditional chimneys, located on the ridge.

Roofs & Chimneys Key Principles:

- *Roofs should be appropriately scaled and proportioned.*
- *Roof coverings on pitched roofs can be slate, tiles, metal sheeting, thatch, glass, zinc, and sustainable green roofs.*
- *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, robust and rise generously above roofs. Chimney materials should be appropriate for the style and materials 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.*

5.2 –

5. ARCHITECTURAL ELEMENTS

Windows are one of the most important features 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.

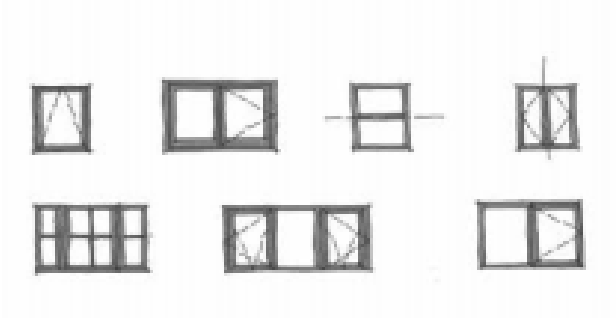

Figure 5.10 – Examples of good window division.

The arrangement of openings should be kept simple and should normally be of the same size and style across the entire façade.

Openings should be placed across the central access of the façade and should normally be symmetrical unless a high-quality design allows otherwise.

Oversized window features to certain living spaces are permissible, but only where the length to width ratio is appropriate and the integrity of the overall design and balance of the house is not compromised.
Window choice is an important design element. Frequently, uPVC windows have openings whose frames sit 'proud' of the rest of the frame and appear chunkier or less elegant than a traditional timber sash window, however there are several manufacturers that provide quality modern windows including alu-clad timber windows.

Bay windows should be well designed with respect to proportion, scale, and detail.

Figure 5.11 – Timber window and uPVC window.

<u>Window Colouring:</u>
Glazing to rooms often appears as a dark grey when seen externally and a dark neutral colour for window frames helps to lessen the contrast. This can look crisp and contemporary, particularly when seen against light coloured render.

Light neutral colours harmonise with rendered finishes, however glazing bars will be more prominent. Light / white coloured frames will be visually prominent if seen against a stone finish or darker render and should be avoided.

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 75mm where a subsill is used a minimum of 50mm where there is no subsill.*

5.3 - 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.

'Fanlights or other glazing should not be located within the door leaf itself, except in the case 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.

Figure 5.12 – Appropriate simple design vertical sheeted doors.

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 need 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.*
- *ESB meter boxes should be recessed.*

5.4 - Porches:

Porches and door surrounds were relatively rare in traditional vernacular acrchitecture 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 5.13 below is a nice example of a timeless porch. The flat profile of the porch allows the simple lines of the main roof to dominate.

Figure 5.13 – Contemporary Porch. Louisburgh, Co. Mayo. Cox Power Architects.

Figure 5.14 – Traditional House with Porch, Naas.

Porches - Key Principles:

- *Porches should be modest in scale and subordinate to the main structure.*
- *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.*
- *Pitched roofs are not always appropriate on porches particualry where it detracts from visual dominance and clear lines of the main roof.*
- *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.*
- *Placement of porches on the front elevation can work well but may be more appropriate on less prominent elevations. Double height porches should be avoided.*
- *Porches, if possible, should be internalised within the volume of the house.*

5.5 - 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 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.

It is important to ensure that the shape and scale of the conservatory is consistent with the main house.

uPVC conservatories should generally be avoided due to their bulky sections and harsh colour. Fussy glazing patterns and pastiche or historic styles should also be avoided.

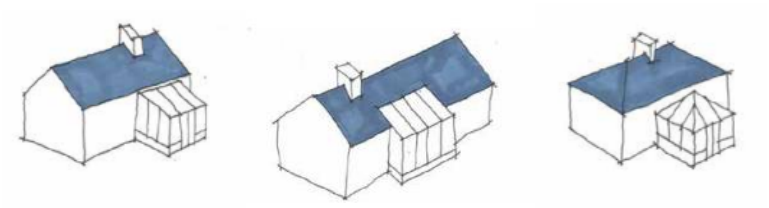

Figure 5.15 – Examples of appropriate conservatories.

Figure 5.16 – Examples of conservatories to avoid.

Winter-garden type spaces can also be successful and help encourage the use of passive solar gain. Such elements should be visually subordinate to the main form of the dwelling and generally harmonious with the language of the rest of the dwelling.

5.6 - 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, particularly those used in the elevations of any dwelling, should be kept to a minimum. Locally sourced sustainable materials should be used where possible, e.g., stone and timber.

Indigenous materials have a natural harmony that improve with age and weathering as opposed to many synthetic materials such as PVC and coated finishes which require more maintenance and in some cases replacement.

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

Figure 5.17 – Successful combination of traditional and contemporary materials. Castlegrey. Denise Murray, Murray O'Laoire Architects.

If using stone for wall finishes it is important to consider using stone on the full 3D element and not, simply applied to the front elevation only.

For example, if using stone on side wings or annexes it is important to consider applying stone on front and side elevations, as shown in *Figure 5.18*.

Figure 5.18 – Appropriate use of stone as a wall finish on all elevations of the side annex.

Stone and other cladding materials are less successful and less visually satisfying when they are clearly applied as a 'veneer' of material to decorate a surface and work better if front and side elevations are completed in the same material.

Figure 5.19 – The application of stone on projecting front gables only is less successful visually.

5. ARCHITECTURAL ELEMENTS

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.*
- *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.*

Texture, Tone and Colour:

Materials that work well in a rural context often share a subdued range of neutral colors and moderately rough textures consistent with the use of natural materials.

Where strong colours are traditionally used on doors, small details or on outbuildings for example the effect is more powerful as these colours are seen against a generally neutral and subdued context.

Materials and finishes which have extreme colour and texture such as red clay roof tiles or polished metal finishes are likely to seem out of place in a rural context.

Examples of traditional and contemporary materials used in the countryside are outlined in a series of images on the following pages.

5. ARCHITECTURAL ELEMENTS

Traditional Materials:

Natural slate, lime render and cast-iron rainwater goods.

Painted timber, dressed limestone and lime render

Natural slate, coursed rubble with lime render.

Random rubble, coursed rubble and ashlar stonework.

Wrought iron, cobbled surfaces.

Painted timber, coursed rubble and dressed stone details.

5. ARCHITECTURAL ELEMENTS

Timber boundaries – oak and larch.

Rough cast concrete.

Decorative scored render.

Stone setts

Dressed stone paving.

Rubble walling with dressed cappings, gravel surfaces.

5. ARCHITECTURAL ELEMENTS

Comtemporary Materials:

Natural slate, cast rainwater goods, nap rendered finishes.

Contermproary use of corrugated sheet metal roofing (Image Ryan Kennihan Architects).

Standing seam copper roofing. (image: Aughey O'Flaherty Architects).

External timber – untreated larch.

Painted external timber.

Contemporary window with painted steel reveal.

5. ARCHITECTURAL ELEMENTS

Rough-cast concrete

Lime render, stone setts and permeable tarmac.

Ground concrete surface finish.

Flush 'conservation' rooflights..

Contemporary steel and timber gates.

Contemporary detail in Corten steel.

5. ARCHITECTURAL ELEMENTS

Key considerations:

- Can a 35-45-degree roof pitch be achieved?
- Does the roof have a large overhang? Does it sit on the building like a lid?
- Is a rooflight / dormer required? Are dormers extending upwards from the main wall?
- Can dormers be placed on the rear elevation away from public view?
- Are chimneys located across the ridge? Are they strong and robust?
- Have the window sizes, proportions and colour been carefully considered?
- Are environmentally friendly materials used for windows and doors?
- Is the conservatory consistent with the main house? Is the use of uPVC avoided in its design?
- Are traditional / contemporary materials associated with the countryside incorporated in the design?

6. SUSTAINABILITY AND ENERGY EFFICIENCY

Rural houses have significant energy impacts as the floor area of the average rural house is above the national average. There are also increased transport requirements as rural housing is further away from towns and villages with their services (schools, shops, places of employments etc.). 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.

The overall area and volume of the dwelling is the most important consideration when determining the energy requirements of a dwelling. Consideration should be given at the earliest stages of a project to reduce dwelling size and emphasize quality of space over quantity.

This section will discuss several options open to applicants to assist the proposed dwelling in becoming more sustainable and energy efficient, under the following headings:

- Energy Efficiency
- Renewable Energy Options
- Water Harvesting/ Drainage

6.1 - Energy Efficiency in Buildings

The EU Directive on the Energy Performance of Buildings 2010/31/EU (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. Like electrical appliances dwellings are rated e.g., 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 overall running cost of the house as well as being good for the environment.

All new and refurbished dwellings will be required to comply with the relevant parts of the Building Regulations and the Nearly Zero Energy Building Standard (NZEB)[1].

[1] See Sustainable Energy Authority of Ireland (www.seai.ie) I for more details

6.2 – Renewable Energy Options

The most popular renewable sources are Solar, Wind, Geothermal and Biomass. Each are discussed below.

Solar Siting:
Microclimate is the variation in local climate around a building. It therefore has an important impact on both the energy 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 buildings 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.

By locating the principal rooms and the larger window opes to the south of the house, benefits of solar gain can be enjoyed with the larger openings acting as solar collectors.

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 loss through ensuring a high level of insulation and airtightness of buildings; and
- Ensure a high degree of comfort by using controlled ventilation and day lighting.

Solar Energy:
Applicants should consider the potential to include solar panels as part of their house design. This has the capacity to make a significant contribution to meeting the energy needs of the home and is a positive climate action mitigation measure.

Panels should ideally face south and mounted on the main property roof, or in some cases on a shed roof or floor/wall mounted.

Ground mounted panels can be unsightly and risk damage if not located in a secure part of the site. Thought should be given at the early design stage to ensure they are properly integrated.

Figure 6.1 – Image of roof solar panel.

Biomass Energy:

Biomass energy is obtained from organic materials such as wood (chips or pellets) and the domestic stove is the most common example.

A wood burner or pellet boiler is simple to install, and there is very little adjustment needed to existing plumbing if converting from a conventional system.

Wind Energy:

The efficiency of a domestic system will depend on factors such as surrounding environment. Careful siting of a domestic wind turbine is required to reduce visual impacts and impacts on neighbours.

If considering the installation of a wind turbine, applicants should check if the proposal constitutes exempted development, if not planning permission will be required and details of the turbine will need to be submitted with the planning application. The following details will be required:

- Dimensions of the turbine (including rotor blades).
- Height above ground or building.
- Material type and finish.
- Plan showing position on the ground.
- Brief technical specifications such as power and noise output (as usually supplied by the manufacturer).

Geothermal Energy / Heat Pumps:

Air-to-water heat pumps are the most likely type of heating system to be used to meet current Building Regulation and NZEB standards. Such systems do not require boreholes or site excavation associated with geothermal systems and they can easily be used in conjunction with solar systems if required.

Geothermal heat pumps transfer heat from the ground into a building to provide space heating and, in some cases, to pre-heat domestic hot water. A typical system can provide 95%-100% of a household's heating requirement.

Applicants are advised to check if proposals for a domestic heat pump constitiutes exempted development. If not, details of the heat pump system will need to be submitted as part of the planning application.

If considering the installation of a ground heat pump system you will need to provide the following details as a minimum:

- Existing and proposed ground levels in the vicinity of the system
- The total area of the heat pump
- Plans showing position on the ground.
- Brief technical specifications such as power and noise output (as usually supplied by the manufacturer)

6.2 - Water / Rainwater Harvesting:

Rainwater harvesting is a sustainable solution to surface water management when building a new home. Techniques for harvesting rainwater to be considered at the site planning stage for reducing domestic water consumption include:

Water butt – A simple, low-cost method for collecting rainwater from the roof and storing it for use in the garden (e.g., instead of a mains water hosepipe for lawns, washing cars etc).

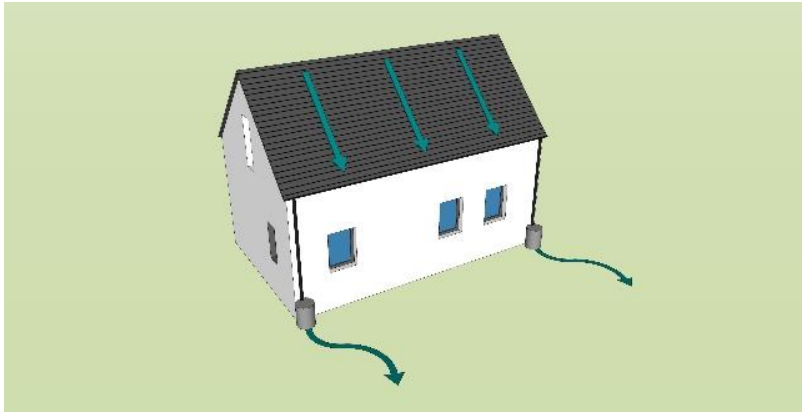

Figure 6.2 – Sketch of water butt method

Rainwater harvesting - provides an efficient and economic means for utilising the rainwater coming from roofs to supply toilets, washing machines and irrigation systems.

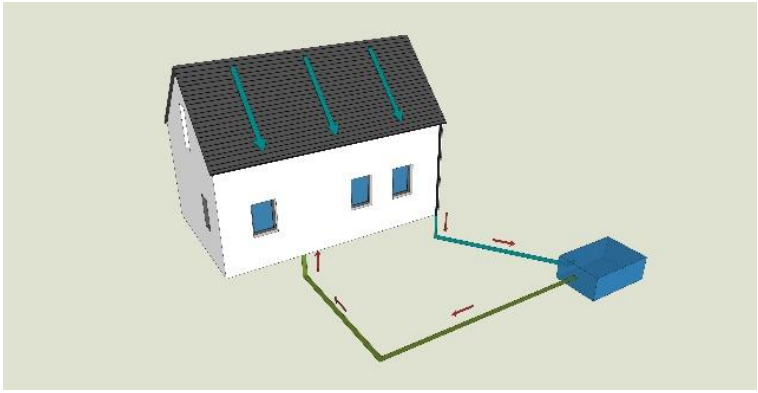

Figure 6.3 – Sketch of tank located underground for storage of rainwater which can be re-used.

Greywater recycling - enables slightly polluted water from the bath, shower, and washbasin to be reused in the house (e.g., for toilet flushing, in the wachine machine, watering the garden or for cleaning purposes). If designing a rainwater recycling system, applicants should take account that:

- For rainwater collection, the external drainage of the roof needs to be designed to bring water to a central point.
- Access for an underground storage tank and excavation is required.
- A pumping system with electrical supply and housing may be required.
- Internal plumbing should separate out the drinking water (including bathing) from the non-drinking water (WC. washing machine, outside tap).

Surface Water Drainage:

All domestic buildings should be provided with a drainage system to remove surface water from the roof, or other surfaces.

Surface water is generally dealt with using soakpits and professional advice should be sought on the design and siting of any on site foul or surface water systems.

If the site cannot drain to an infiltration system, it may be necessary to discharge to a water course. The discharge of storm water from roofed and paved areas to a foul water sewer or onto the public road is not acceptable. Surface water discharge should be carried out to a point of disposal that will not impact / endanger the building, environment, or third-party properties.

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 large areas of south facing glazing.*
- *Provide enhanced levels of insulation 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.*
- *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 minerals 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.*

6. SUSTAINABILITY AND ENERGY EFFICIENCY

Key considerations:

- Ensure solar gain is maximised by orientating the main rooms to the south.
- Try to achieve the highest possible BER rating.
- If using renewable energy sources, consider location of infrastrucutre (i.e. solar panels or wind turbine) early in the design stage.
- Check to ensure renewable infrastructure is exempt or if details / specifications are required with the planning application.
- If using a geomthermal heating system check if specification is exempt or if details are required with the application.
- Consider the re-use / recycling of rainwater and greywater and incorporate infrastructure for same early in the design stage.
- Use nature-based solutions for surface water management.

7.ELEMENTS OF THE LANDSCAPE

This section deals with the importance of linking the dwelling with the landscape through appropriate boundary treatment, landscaping, and entrances. This is discussed under the following headings:

- Boundary Treatments
- Entrances
- Rural Gardens
- Biodiversity/Indigenous Species

7.1 - Boundary Treatments:

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

The objective in site selection is to ensure that most of the boundaries are already in place in the form of existing hedgerows, trees, stone walls and/or vernacular gates.

Applicants should try to retain as much of all existing natural site boundaries. There are ecological and visual benefits for the homeowner and the rural area in general in this regard.

Where boundaries need to be completed, care should be taken to link these to the landscape.

By landscaping the boundaries of the house, the visual impact of the development will be softened and will be more easily absorbed into the surrounding countryside.

New boundaries where required should be planted before or at least simultaneously with the building work to anchor the new building with the surrounding landscape.

In general, high walls and fences, - in particular, decorative brickwork, should be avoided. Stone walls may be appropriate in certain parts of the countryside.

Recommended / Key Principles

- Existing hedgerows, trees and stone boundary walls should be retained as they are key components of rural character.
- Timber post and rail stud fencing may be acceptable as a boundary treatment where it is planted with indigenous hedgerows.
- High roadside boundary walls, entrance gates and piers are discouraged where they appear incongruous and dominate the landscape.
- Commence planting of the required boundaries before the construction of the house begins.

Figure 7.1 – Image of traditional stone wall at Devoy Barracks, Co. Kildare.

7.2 - Entrances:

Vehicular entrances to new rural houses must provide clear visibility in the interest of safety on public roads. The entrance must comply with the policies and controls set out within Sections 3.16 and 15.7 of the Draft Development Plan.

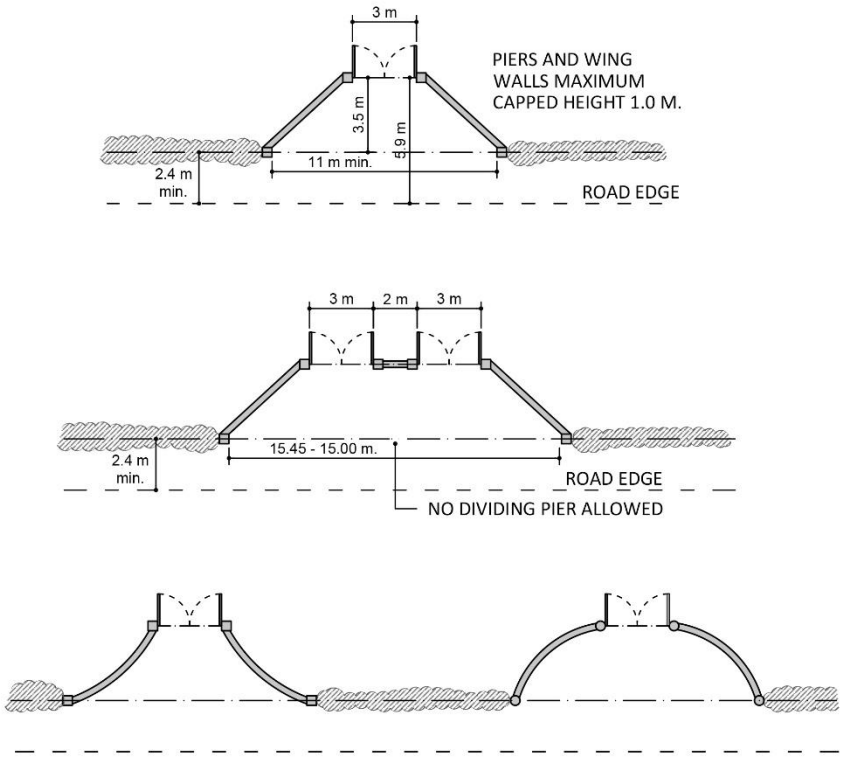

Figure 7.2 – Sketch of Entrance Driveways

The retention of existing mature hedgerows, trees and planting is encouraged in all opportunities when designing new entrances and associated sightlines.

Figure 7.3 – Stone wall, pillars and gate, Naas (note gentle lines and stout pillars)

Where existing boundaries need to be removed to achieve required setbacks 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.

Recommended / Key Principles

- Driveways should follow the contours of the site to avoid highly visible and un-natural looking straight roads.
- Driveways should be surfaced with local permeable material. Excessive use of tarmacadam for driveways and circulation should be avoided.
- Buffer the house as viewed from the road.
- Integrate existing features where possible (i.e., vernacular gates and gate post as they are of heritage value and contribute to the character of the rural area).

Figure 7.4 – Gates to farmhouse, Kildare.

Figure 7.5 – Example of a driveway surfaced with permeable material (Straffan, Co. Kildare).

Figure 7.6 – House buffered from the road with hedgerow maintained and added planting.

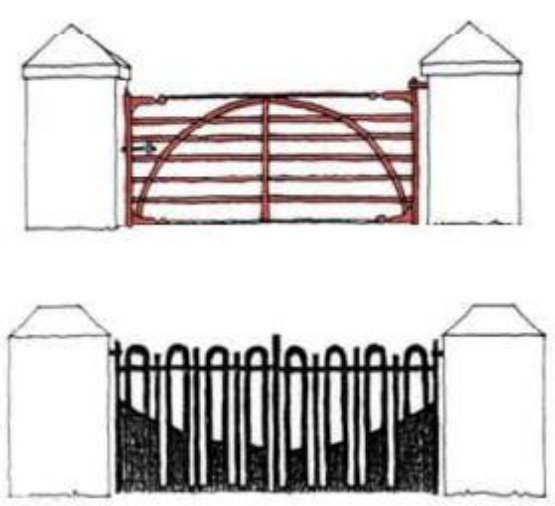

Figure 7.7 – Some good examples of traditional and contemporary entrance types with gentle lines and simple stout pillars.

Avoid

- Replacing boundaries with unsympathetic fencing, pre-cast decorative concrete blocks and artificial stone.
- Using fussy and elaborate entrance gates and lights or excessive stonework capping.
- Building high boundary walls and entrance piers/gates which dominate the site and the surrounding rural area.
- Using suburban inspired entrances which are at odds with the rural character of the area (i.e., large electric gates and excessive lighting)

Some examples of unsuitable entrances and boundary treatments are shown in *figures 7.9-7.11*.

Figure 7.9 – Avoid overelaborate entrance gates, excessive lighting, decorative walls and an unpermeable driveway.

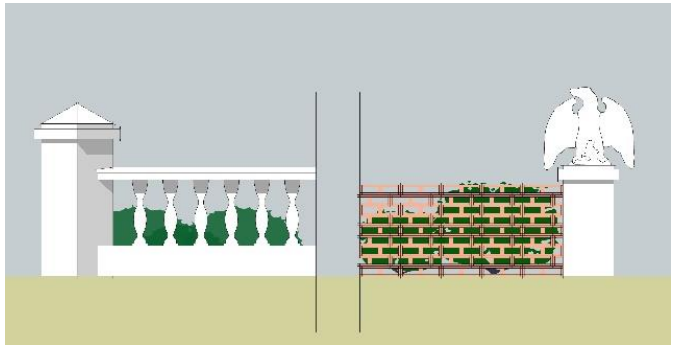

Figure 7.10 – Avoid overelaborate suburban entrances, pre-cast walling, pillars and ornamnents.

Figure 7.11 – Unsympathetic replacement of boundaries and house not buffered from the road.

7.3 - Rural Gardens:

When considering garden design, the applicant should refer to the ***'Kildare Pollinator Action Plan 2019-2022'*** which gives clear advice on how to improve the environment for pollinators for example by reducing grass mowing, by allowing hedges to bloom, by planting pollinator friendly plants and by reducing the use of pesticides.

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 to produce a cohesive and effective layout:

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

Native species should be planted as 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*. Some examples are included in section 7.4.

Figure 7.12 – Country Garden

Recommended / Key Principles

- Design informal layouts.
- Plant wild meadows or strimmed grass areas which are more natural to rural areas.
- Plant native trees in groups of three or more.
- Retain ponds and ditches on the site.
- Create new mixed hedgerows of native/local species to maintain biodiversity.
- Screen large areas of lawn or incorporate to the side and / or rear.

Some examples of these key principles are shown in *figures 7.13 below.*

Figure 7.13 – Example of garden treatment without lawn between house and the road.

Avoid

- Using suburban type landscaping – i.e., formal symmetrical layouts, straight lines are not always appropriate in rural areas.
- Large areas of mown lawn.
- It is strongly recommended to avoid planting Leyland Cypress (non-native single species) and Cherry Laurel (invasive especially in woodlands).
- Extensive areas used for driveways and paving.
- Excessive car parking areas to the front of the dwelling.

Examples of some inappropriate arrangements are illustrated in *figures 7.14, 7.15*

Figure 7.14 – Suburban garden with large area of mown lawn, inappropriate boundary treatment and no buffering.

Figure 7.15 – Series of suburban type gardens in the countryside spoiling the rural character of the area.

The illustration above highlights large areas of mown lawn with car parking and turning confined to the front of the dwellings.

7.4 – Biodiversity/ Indigenous Species:

The following are some examples of indigenous species in rural areas of county Kildare which are recommended in rural gardens and boundary treatments.

Applicants are also encouraged to consider wild garden areas and pollinator friendly species of trees, flowers and plants as referred to in the '*Kildare Pollinator Plan 2019-2022*'.

Hedgerow species common in Kildare include:

- Hawthorn
- Ash
- Elder
- Blackthorn
- Privet
- Elm
- Willow
- Hazel
- Sycamore
- Gorse
- Holly
- Beech
- Wild Plum
- Crab Apple
- Spindle
- Oak
- Guelder Rose
- Snowberry

Hedgerows provide important ecological, visual, and environmental benefits. They act as a refuge for wild plants and insects, provide habitat corridors, shelter for livestock and crops, homes for wildlife, sources of food, carbon sequestration and help to reduce flooding and pollution.

Included below are some images of native species common to Kildare.

Figure 7.17 - Apple Tree

Figure 7.18 – Whitethorn

Figure 7.19 – Blackthorn

Figure 7.20 – Alder

7.ELEMENTS OF THE LANDSCAPE

Key considerations:

- Retain as many boundaries as possible.
- Ensure minimal removal of existing boundary / hedgerow to achieve sightlines.
- Replace any section of boundary / hedgerow which has been removed.
- New boundary planting to be indigenous species and pollinator friendly.
- Entrance to be simple in form with gentle lines on gates and stout pillars.
- Use permeable material for the driveway, loose stones / gravel helps to reduce surface water run-off.
- Screen the house from the road by maintaining hedgerows and / or planting new indigenous pollinator friendly species.
- Allow part of the garden to grow wild, keep mown areas to a minimum.
- Design / allow garden to grow in an informal way.
- Ensure car parking and turning space is incorporated to the rear / side of the dwelling.

8. EXTENSIONS, ACCESSIBILITY & LIFETIME ADAPTABILITY

Buildings should be designed with flexibility and adaptability in mind. This section explores how houses can be extended and adapted as the needs of occupiers change in relation to the following:

- Extensions
- Accessibility
- Lifetime Adaptability

8.1 - Extensions:

A new house should be designed so that it is capable of absorbing 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 recognised 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 8.1 – Refurbishmnet and extension, Ballymahon House (ODOS Architects).

8. EXTENSIONS, ACCESSIBILITY & LIFETIME ADAPTABILITY

Figure 8.2 – Cottage Renovation and 'Barn' Roofed Extension (Michael Kelly, Architects).

Figure 8.3 – Extension to side of house. Glengowla, Co. Galway (Boyer Kennihan Architects).

A good extension should be subservient to the main dwelling i.e. extensions should be so designed that they look like extensions rather than a new house attached to an old house.

Extensions to Vernacular Structures:

Where extensions are proposed to an existing vernacular cottage, care should be taken so that the extension does not detract from the original character of the building. Extensions to the front and gable of cottages should be avoided.

- An extension to the front can mask original detailing or it can alter the proportions of the front façade which detracts from the original character.
- An extension to the side can upset the symmetry of the cottage and may result in the loss of the original scale of the cottage.

Figure 8.4 – Contemporary extension located to the rear of a rural 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.

8. EXTENSIONS, ACCESSIBILITY & LIFETIME ADAPTABILITY

Rear extensions should take account of side and rear views from a public road, and the extension should not dominate the existing cottage.

Figure 8.5 – Example of an extension to an old cottage designed to accommodate modern living needs.

Modern living makes demands on traditional buildings that can only be met by alteration and adaptation.

In general, amendments to the internal layout in response to the demand for services, additional and separated room space may have significant effects on the integrity of a vernacular structure or the quality of the internal spaces themselves considering the traditonal narrow plan characteristics.

Where possible, changes to the structure and layout should be minimised and improvements in the amenity accommodated within the new build elements of the project.

Below are some inappropriate design solutions for extensions to cottages.

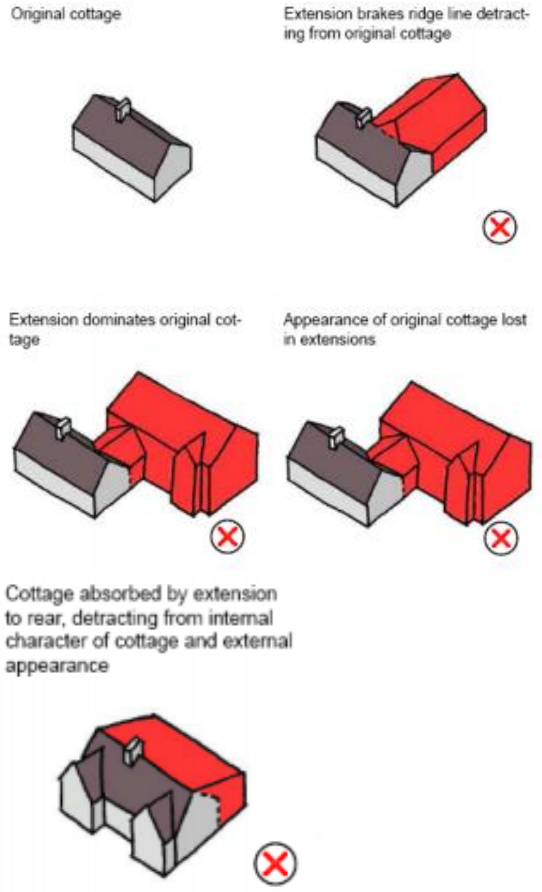

Figure 8.6 – Inappropriate design solutions for an extension to a vernacular structure

Highlighted in *figure 8.7* below are some more appropriate design solutions to vernacular structures.

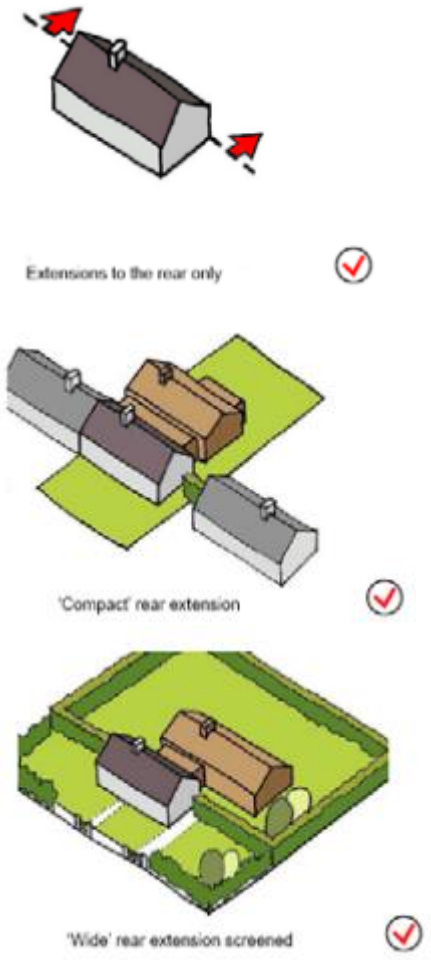

Figure 8.7 – appropriate design solutions for an extension to a vernacular structure

Extension Shape Examples:

Outlined within this section are examples of some of the preferred extension shapes. An extension should not dominate the existing structure. Flat roofed extensions may be appropriate when considered as part of a contemporary approach designed by a professional.

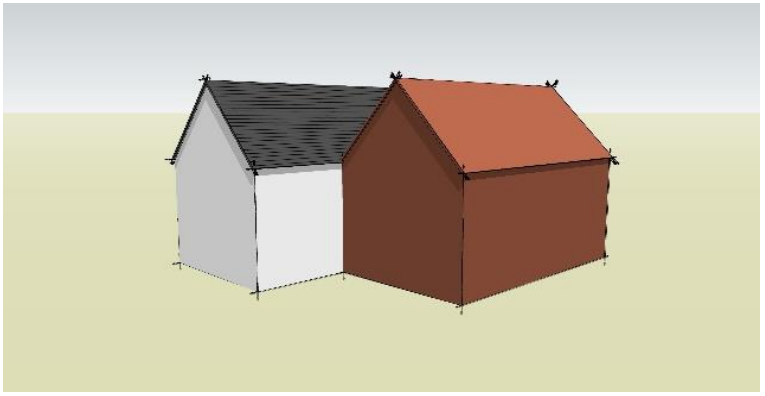

Figure 8.9 – Double & slipped roof.

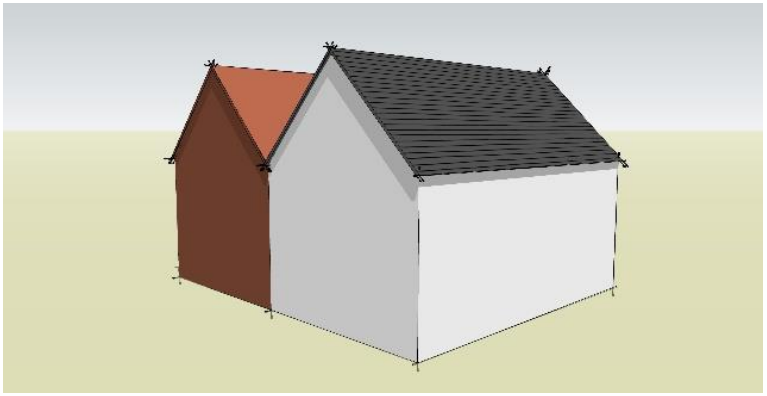

Figure 8.10 – Valley Roof.

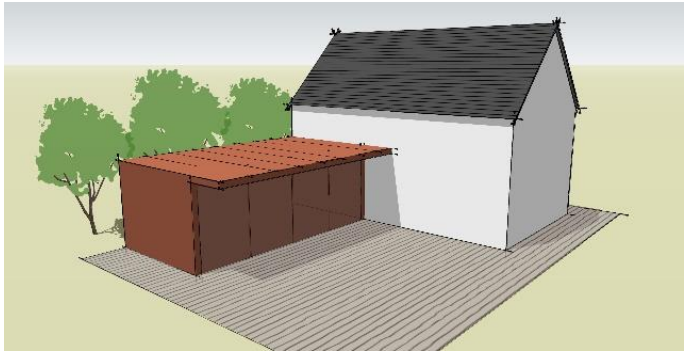

Figure 8.11 – Contemporary flat roof.

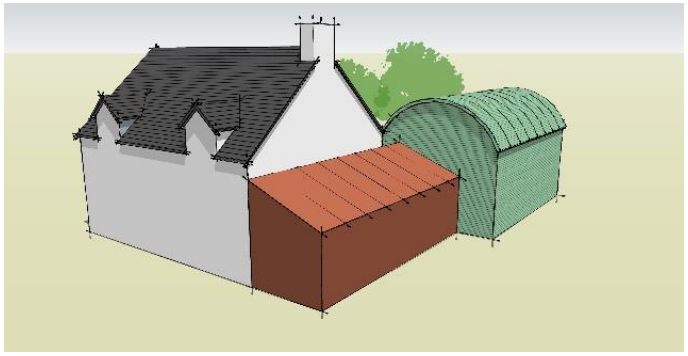

Figure 8.12 – Extension linking to a converted outbuilding.

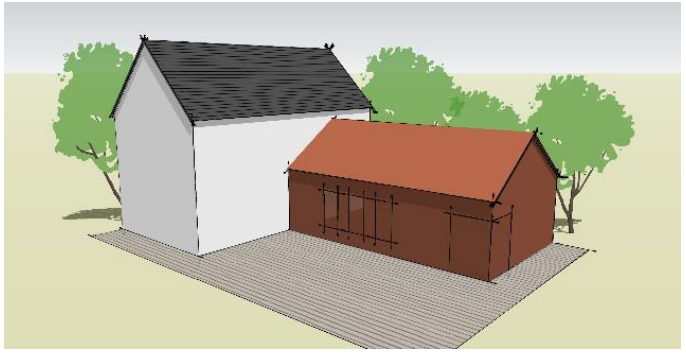

Figure 8.13 – 'L' shaped pitched roof extension

7.2 - 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.

In this regard, applicants are advised to be aware of their obligations to comply with the Building Regulations (which are separate to the Planning Regulations) particularly in relation to access and fire escape.

7.3 - Lifetime Adaptability:

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

A larger roof may be incorporated into the design to facilitate attic conversions for potential future needs. However, it is important that roof pitches and overhangs are not excessive and remain in proportion with the dwelling.

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

Consider the internal layout with future adaptability in mind i.e., could a downstairs room be used as a bedroom and link into an adjacent bathroom? The incorporation of 'soft-spots' into internal partitions and external walls should also be considered to allow for easy future adaptability.

8. EXTENSIONS, ACCESSIBILITY & LIFETIME ADAPTABILITY

Key considerations:

- Proposals for extensons to vernacular structures need careful consideration. Design should respect but not imitate the original dwelling.
- Design the extension to be subservient to the main dwelling. i.e., smaller in scale / height.
- Clearly distinguish the extension from the original dwelling.
- Break down massing of structures if an extension has a larger floor area than the original footprint.
- Use narrow plan elements to break down the massing.
- The shape of larger extensions should ensure that the structure appears subservient to the main dwelling.
- The dwelling should be accessible for those with moderate mobility difficulties and for occupants as they age.
- Allow for the internal layout to be adaptable to facilitate the changing needs of occupants.
- When choosing a site for a dwelling, consider whether the site has capacity to accommodate a future extension if required.

9. SERVICED SITES

In this section, serviced sites are discussed and how they can integrate into the landscape.

The following aspects are considered:

- Planning Policy
- Site Strategy
- Design Criteria
- Infrastructure and Services
- Design Statement and Masterplan

9.1 - Planning Policy

It is a policy under HO P22 of the Draft County Development Plan 2023-2029 to promote and facilitate the provision of sustainable alternatives to one-off housing through the designation of lands specifically for serviced sites across a series of villages and rural settlements in County Kildare.

9.2 – Serviced Site Strategy

As with individual sites discussed throughout this document, many of the same principles apply when considering a serviced sites development in a rural area, such as:

- Landscape Character
- Capacity of the area to absorb further development
- Views
- Topography
- Pattern of development in the area
- Aspect and orientation
- Prevailing winds
- Site Context (i.e. site boundaries, neighbouring uses, access, etc.)

When considering a serviced site development, applicants and agents should appraise the capacity of the area for absorbing additional development of this size. In rural areas, where there is an existing focal point such as a church, school or shop, the key design issues will be integration with the existing settlement pattern in terms of scale and visual impact.

A serviced site development may be planned and designed as a complete development but may also be developed on a phased basis, where one or more units may be built at a time.

Figure 9.1 is an example of a Site Analysis showing the context of a proposed serviced site development. The drawing shows various existing features which any new development would have to respond to and address, such as a river, native woodland, public road, and hedgerows. Each site will present its own unique analysis issues, and may include flood risk, zones of archaeological potential, protected views etc.

Where a serviced site scheme is proposed a design statement shall be prepared to assist future homeowners in designing their own bespoke home.

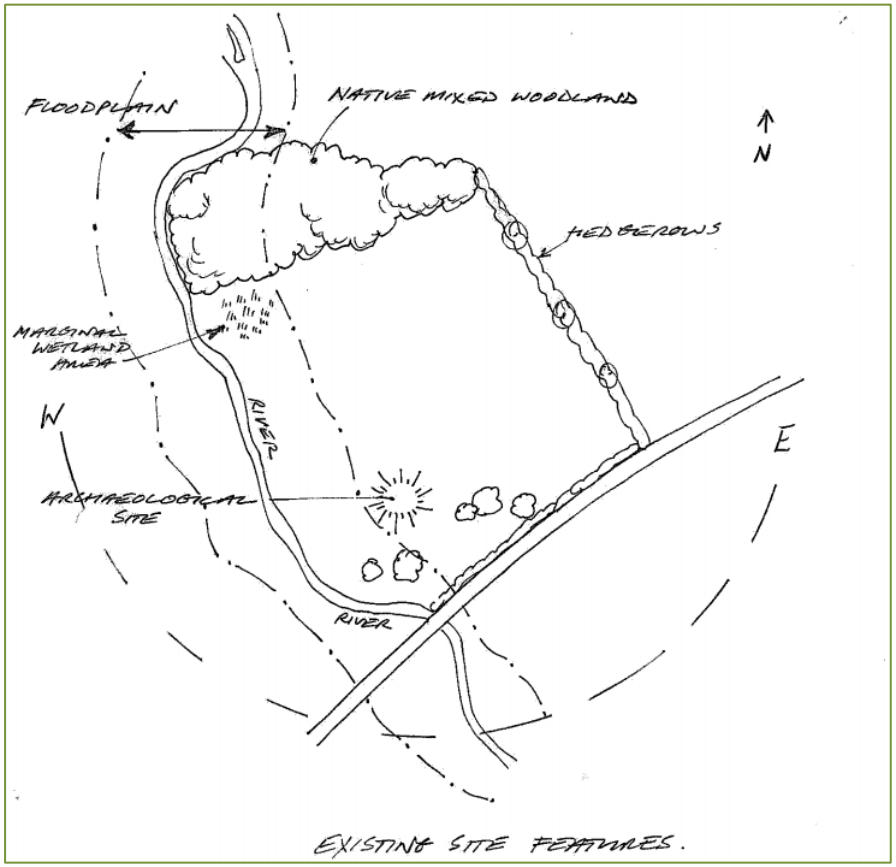

Figure 9.1 – Example of a preliminary site analysis drawing for a serviced site development.

9.3 – Design Criteria

Applying good design principles will ensure that servicerd site developments integrate with the character and natural setting of the area, while also delivering high quality, energy efficient homes. Issues to be considered in the design strategy are:

- Assimilating the development with the topography as appropriate, maintaining existing site levels where possible and maintaining the natural landscape as a backdrop on all sites, but particularly on elevated sites.
- Retaining existing natural features where feasible on approach roads and boundaries, i.e., mature hedgerows, stone walls, trees, removing only what is required to provide site access and sight lines.
- One site entrance from the public road should be provided to access all dwellings.
- Identifying and respecting the character of any historical structures on and in the vicinity of the site and seek to integrate and enhance views of these structures where possible.
- Reflecting the character of development in the rural area in terms of scale, form, & massing.
- Identifying the prevailing winds for each site, sun path and shadows.
- Where relevant, enhance and develop connections to the village centre providing connectivity links to promote active travel (walking and cycling) to nearby amenities (i.e., schools where relevant).

9. SERVICED SITES

The principles outlined and discussed throughout this document in relation to one-off houses also applies to these developments such as Orientation, Form and Massing, Roof finishes, Wall finishes, Window finishes, Door finishes and Landscaping.

9.4 – Infrastructure and Services

Access:

Provision should be made for only one shared access point from the public road and the internal access road should be a shared surface roadway.

The road access should be responsive to the natural features and contours of the site. If the site is located in an area with footpaths, provision should be made to connect with these.

Access to a serviced site development should be designed to ensure that the principal design issues of road safety, visibility, and protection of the rural character of the area are achieved. Access requirements will be considered on a case-by-case basis, depending on site location and road status.

Water and wastewater:

A key consideration is ensuring that a suitable supply of water and a form of wastewater treatment infrastructure is in place, that ensures there is no adverse impact on the local environment. Priority will be towards the connection of all clustered housing to the the public wastewater treatment plant, discharging to individual on-site treatment systems or to a communal re-constituted wetland. Private collective wastewater treatment plants will be discouraged.

There are three potential water services options or scenarios:

1. Serviced: Where the public wastewater treatment is in place, the technical requirements of Irish Water shall be met. A pre-connection enquiry is advised before progressing to planning application stage.

2. Serviced but with capacity constraints: Where the public wastewater treatment system is in place but there are capacity constraints, the developer shall examine options in consultation with Irish Water to up-grade the public system. Where an up-grade is not feasible, the Council may consider on-site treatment options, until such time as a connection becomes possible. In this scenario the development should be designed to facilitate future connections to the public mains and sewer.

3. Un-serviced Developments: Where a site is not serviced by a public treatment plant, on-site wastewater treatment systems will be required to be designed, constructed and maintained in accordance with the 'EPA Code of Practice Wastewater Treatment and Disposal Systems for Single Houses' in place at the time of the application.

Surface water

In relation to surface water, management schemes will be required to show full details for surface water management. Nature based solutions to surface water are particularly encouraged, such as green roofs, swales, bioretention areas, rain gardens and wetlands. Surface water run-off should be dealt with, within each site. Surface water from the internal access road or public road should be piped / drained to a soakpit or watercourse.

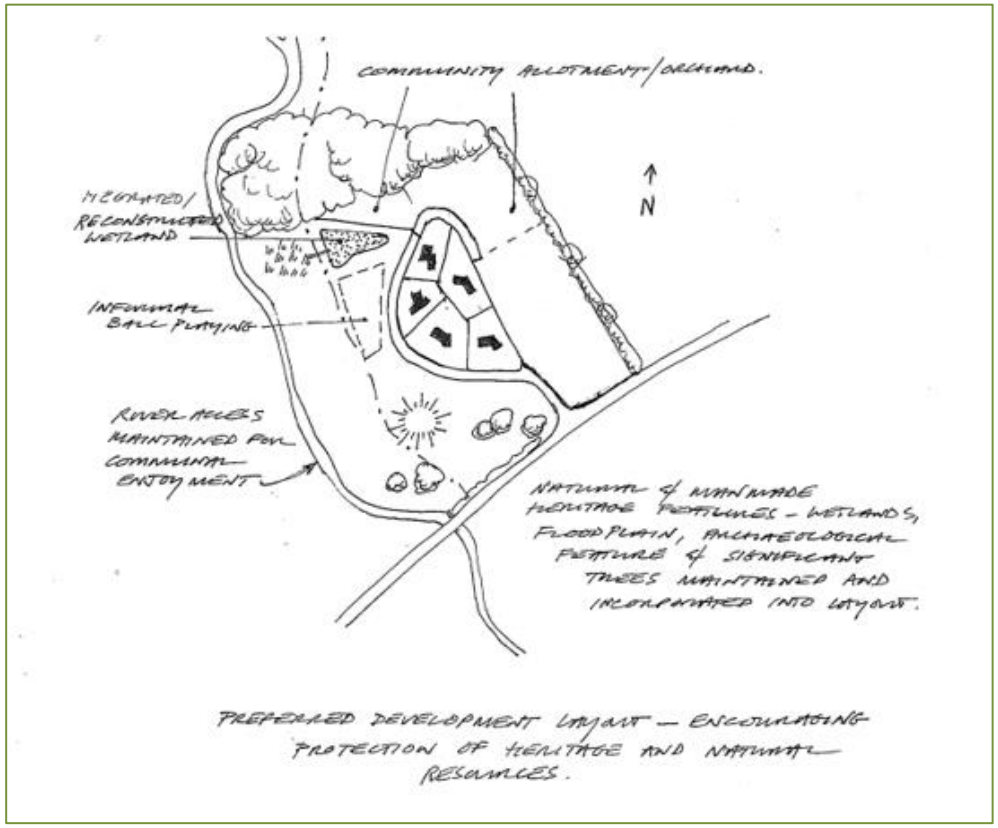

Figure 9.3 – Example of a potential serviced sites layout

9.5 – Design Statement and Masterplan

Any planning application for a serviced sites development must be accompanied by a Design Statement and Masterplan to include the following:

1. A detailed Site Analysis setting out the site context including details of the site selection process, site appraisal, topography analysis, landscape & heritage features, orientation, and aspect.

2. A Design Statement prepared by a suitably qualified professional outlining the design approach to the proposed site layout.

3. A Landscaping Plan to address the entire development, to confirm existing features to be retained, mitigation measures to screen the scheme, landscaping proposals (to include native species and measures to address biodiversity) and details of all site boundaries.

4. An Infrastructure Statement outlining how the development is to be serviced in terms of access, water, wastewater, and surface water.

5. A statement regarding the impact of the scheme on the landscape having regard to the landscape character area which the site is located in.

6. A House Design statement to include details of a palette of materials to be used throughout, building lines, building heights etc.

7. A Management and Implementation plan.

9. SERVICED SITES

Key considerations:

- The site should have the capacity to accommodate a serviced site development.
- The site will need to be served by suitable infrastructure (i.e., sewerage, water, access).
- Ensure there is a focal point to cluster the development around to form a community (i.e., church, school, shop, pub)
- The focal point should have capacity to absorb more housing.
- Ensure the development integrates and has relationships with existing buildings.
- Each unit should follow individual rural house guidelines in terms of scale, massing, and orientation.
- Schemes should be designed by an architect or other suitably qualified professional.

10. APPLICANT CHECKLIST

Applicants should consider the following prior to appointing an agent to submit a proposal for a new rural dwelling. Should applicants fail to comply with policy / criteria outlined below they may wish to explore alternative options, other than a new rural dwelling.

- Do you have a genuine housing need? If you already own a house this may be problematic.
- Do you have a social or economic need to build a new home and live in the countryside?
- Do you live or have you previously lived in the area for a considerable period? (i.e., 16 years)
- Is the area you live in located within Rural Housing Policy Zone 1 or Zone 2? See Map 3.1 of the Draft County Development Plan.
- Is the site you are interested in located within 5km of the original family home (Zone 1 and Zone 2)?
- Are there a significant number of one-off houses already in the area?
- Will the addition of this dwelling constitute ribbon development? (i.e., 5 or more houses along 250 metres on one side of any road)
- Can the site facilitate safe entry and exit of vehicles? Clear visibility is required.
- Is the site within a Special Area of Conservation (SAC)? See Map 12.1 of the Draft County Development Plan.
- Is the site within a Natural Heritage Area (NHA)? See Map 12.2 of the Draft County Development Plan.
- Is the site within a sensitive landscape? See Map 13.2 of the Draft County Development Plan.

If the applicant does not have a housing need, does not have a requirement to live in the countryside or has not lived in the area (within 5km) for a considerable period (generally 16 years) they do not meet criteria and are unlikely to be successful in securing permission for a new rural dwelling.

Should the applicant meet the housing / local need criteria they should then consider whether the area can absorb further development. In many areas of the county this may be difficult to achieve given the high number of rural houses in County Kildare.

If the applicant is satisfied that they meet the above criteria and that the proposed location can absorb further development, they may wish to then engage an agent to develop a suitable design proposal for the site using the design principles outlined in the Rural Design Guide.