Design Guidelines for the Single Rural House

Galway County Council

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Foreword -

This guide has been produced with the following intentions

- Encourage debate about rural design
- Foster informed decisions within the planning process
- Inspire all who have a role to play in our future heritage
- Instill stewardship of our countryside

There is a misconception that design is purely about taste and therefore subjective. This guide seeks to illustrate through objective criteria a series of tried and tested design methods, houses which are both practical and energy efficient yet relate to their rural surroundings.
This guide promotes an understanding of our rural built heritage yet equally encourages imaginative site specific design.

The success of these guidelines will only be measured in years to come, in the form of inspired design which contributes to our built heritage and reinforces our regional identity.

Contents

Technical Information -

A - Introduction

Context

Galway County is experiencing an economic boom unprecedented in its entire history. Such prosperity has generated an increasing pressure on the rural landscape of the county to absorb such housing development. The challenge therefore is how best to direct and manage such change with new housing so that it is in harmony with the outstanding qualities of County Galway. These qualities include a very rich vernacular built heritage, a heritage which should serve as a benchmark on how best to gauge our future built heritage .

Purpose of Guidelines

The purpose of these guidelines is to assist applicants on making an application for a single rural house in the countryside, by highlighting all the necessary issues which inform good rural house design. The skill, perception and imagination of a good designer is necessary for a creative interpretation rather than a mechanical application of principles, and it is imperative by all those involved in the process to acknowledge these guidelines as a framework thus avoiding generic and often un-imaginative responses to the rural countryside. The emphasis is on the future which is rooted in our evolutionary vernacular past. This is a guide to inspire a new design tradition which is Irish in origin and is assertive, confident and artistic and providing a future built heritage for County Galway.

Stewardship

Each one of us has a responsibility towards the countryside not just in preserving our existing heritage , but on creating a heritage for future generations to enjoy. It is therefore imperative that when proposing to build in the countryside that such designs are a positive insertion within the fabric of the countryside and do not detract from the existing natural surroundings. Strong stewardship is important in such a context which will promote rather than detract from a unique sense of place in the countryside.

Approach

This guide will illustrate an approach to **location** that reflects the variety and diversity of landscape types of County Galway, from its agricultural hinterlands and uplands to the east and Atlantic coastline, island communities and Conamara National Park to the west.

Advice on **siting** and layout will look at age-old wisdoms as precedent in considering shelter strategies and blending with the landscape, along with practical issues in locating day to day utilities such as play areas, waste disposal ,storage , parking, access, privacy and respect for your neighbours.

The guide will illustrate 2 key principles to a successful house **design** -

- Illustrate the characteristics of a rural house by highlighting the importance of simplicity, refinement, proportion and quality of materials.
- Site specific contemporary design which through careful site analysis will result in a skillful and well executed design on appropriate sites - and those best qualified to do this are Architects, some of which have contributed illustrations for this guide.

What are the aims of the Guidelines?

The guide will illustrate a structured approach on all the criteria necessary to inform good and practical design for a rural house .

- Better designed houses for people to live in.
- Better located houses to look after the appearance of the countryside.
- More considerate siting of houses to make them warmer, efficient and comfortable homes to live in, which promote the use of sustainable energy technologies in accordance with European and National Regulations.
- The promotion of contemporary Irish design and regional identity of County Galway.
- Cheaper and more efficient houses to heat in the future through the use of energy saving technology.
- A step by step logical approach to all the factors to be considered prior to making a planning permission for submitting a comprehensive application with a well designed house on carefully selected sites.

Design criteria

Location

Check location policies and related issues within the County Development Plan. Search out good natural sites, which will minimize the visual impact of new houses. Good natural sites offer great sheltering, privacy and orientation with south facing glazing for maximum solar gain which is unseen or minimized from neighbouring roads. Sites should be avoided which will require extensive site works involving the removal of natural features such as hedgerows, stone boundary walls and ground contours.

Siting

A careful and detailed site analysis is necessary to highlight any siting issues and strategies which inform the position of the house on the landscape but also inform the design layout of the house itself and how it relates to the site and the wider landscape. Considerations such as prominence, shelter, passive solar gain, privacy and visual impact are all issues that if addressed at this initial stage will avoid poor design decisions at a later stage. Site features unique to an individual site should be exploited and incorporated into the design of the house resulting in a house which is rooted to its immediate site context. Functional issues related to road access, drainage and environmental waste disposal need to be addressed along with design issues which result in an overall integrated solution.

Landscape design

Apart from natural landscaping features which should be utilized in terms of siting there is also a need to address issues relating to a more natural landscaping intervention. Large areas of green baize lawns should be avoided to the front of houses and there should be an awareness towards local precedent which will inform good landscape design which integrates with the surrounding area. Large open areas should be broken down into different areas which relate to the day to day activities of domestic life.

House design

In order to place design issues in context there is a necessary precedent study highlighting the rich vernacular past which evolved over time as technology and economic circumstances changed. An economy of means which informed the past vernacular, with a common thread that has resulted in a strong regional identity through our built heritage.

These key characteristics are highlighted so as to inform good layouts and determine the shape and heights of the proposed house. The form of the house should be simple and refined with very little modeling to the front elevation. The design should reference local indigenous characteristics and careful attention given to proportions of elements and their overall composition.

Awareness is necessary on the scale of a house in the landscape, and while a larger house requires a larger site there is still an issue on its assimilation into the landscape setting. This will require a skillful design approach which breaks down the massing into a composition which appears rooted to its context.

Detail design

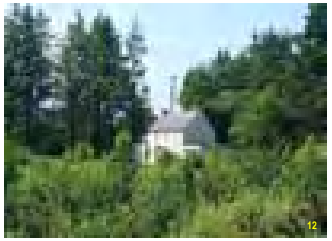
The ‘devil’ is in the detail. This is true in the sense that good design is only as good as an accumulation of many constituent parts which form the overall composition. The characteristics which form a regional identity were usually expressed by the detail, which in the past were not decided by personnel taste but by local context and climatic conditions, such as those houses located in exposed coastal locations which had minimal eaves and verges to minimize exposure to wind and rain. Strong traditional detailing offers a strong clarity and honesty along with a robustness and proportion unique to the west of Ireland. A careful use of colour and quality of indigenous materials and craft define the substance of traditional detailing. Avoid white plastic and un-necessary ‘add-on-frills’.

Appendices

As part of the process a series of related issues will be highlighted for inclusion on an on-going basis.

- Conservation - a method of managing change to ensure that a special interest is retained for the benefit of future generations.
- Sustainable design - highlighting current design and technology for a sustainable future
- Making a planning application which illustrates a step by step approach, addressing issues as highlighted in the guidelines.
- Design references - a comprehensive list of both historical and current Irish rural house design publications.



B - Location

Finding the right place

When selecting a site location it is important to consider a number of initial factors which inform a successful integration within the rural landscape.

This should involve an analysis of any impact the house may have on the landscape - not just in terms of its appearance but also practical considerations such as water, telephone, electricity and proximity to schools, shops and other public conveniences.

The landscape of the County varies so dramatically, and as such each house should respond to local characteristics and settlement patterns so as to integrate with the local context and landscape fabric.

This section highlights relevant issues which should be considered by applicants with the aim that any development will visually integrate rather than impose onto the landscape.

A house that is badly sited — will permanently alter the appearance of the landscape and set a poor precedent for future generations, a constant reminder of man's intervention onto the natural landscape — and run counter to the age old wisdom of generations who had consideration for the siting, topography, scale and indigenous materials which they exhibited in an effortless manner—so much so, we pass them by in a fleeting moment such is their integration with the landscape.

Planning context

It is important at this initial stage to check Galway County Council's County Development Plan 2003—2009 , Local Area Plans and Settlement Centres for the locality which highlight the following aspects -

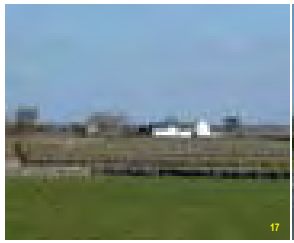
- Policies in relation to development in restricted areas,
- Scenic landscapes, scenic routes as indicated on scenic maps.
- Natural Heritage Areas (NHA).
- Special Area of Conservation (SPC).
- Architectural Heritage Areas (AHA).
- Landscape Character Maps.
- Record of Protected Structures and Conservation policies.

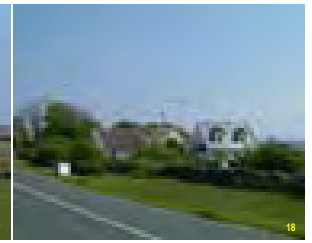
If a potential site is located within one of these areas it is important to consult with the Development control section of the Planning Department before proceeding.


Galway County

Context

Where context is carefully considered, a dwelling should reinforces the character of a particular landscape and set high standards in terms of its location, siting and design.

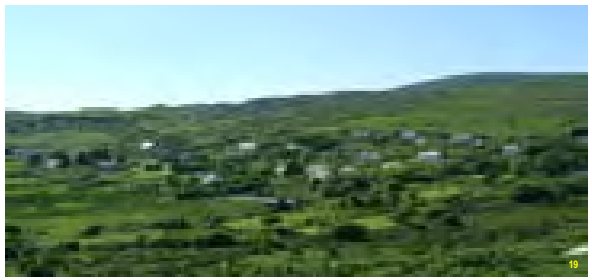




The Sustainable Concept

'Develoment, which meets the needs of the present without compromising the ability of future generations to meet their own needs". 1987 Brundtland Report.

Sustainable housing has been defined as housing which creates vibrant communities, and is efficient in the use of land, energy, water and other natural and non-renewable resources.
It will be orientated to face a southerly orientation to maximize the potential for solar heat gain, landscaped to provide privacy and shelter from the prevailing wind thus retaining more heat and warmth, thus reducing the consumption of limited fossil fuels.



Landscape -

Rural context

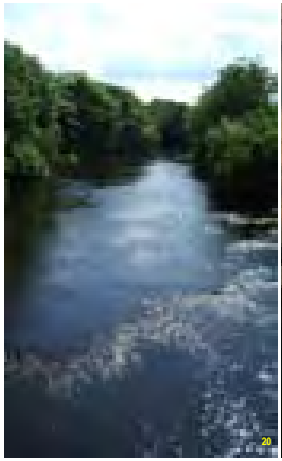
Natural Heritage

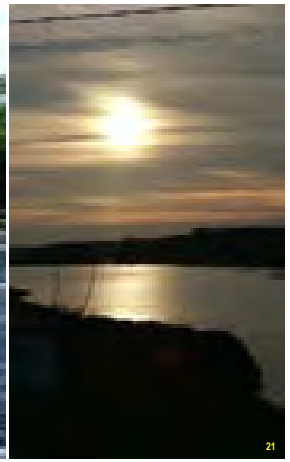
‘ the Irish landscape is a paradox of colours, smells and textures under ever changing light that both repel and attract, that can arouse a sense of shame, but also great pride. It was the inherent unpredictability of the paradoxical Irish landscape and people that Boll most admired. The one constant about this unpredictability is that it will always be with us.’

Ireland—20th Century Architecture.

It is hard to argue the fact that the countryside is a valuable asset. It provides an economic resource to the traditional industries of agriculture, forestry and fishing but also to tourism. It is becoming increasingly obvious the importance of such a natural resource in terms of its scenic beauty and natural diversity. It also provides a clean pleasant environment for all to enjoy and is an obvious source to the County’s prosperity.

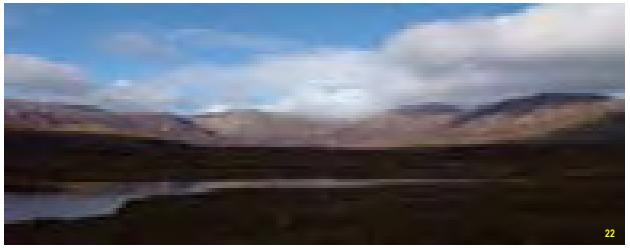
The landscape in County Galway varies greatly and have been classified into 26 distinct areas. However the County can be divided into 2 very distinct landscapes, Connemara to the west and the Agricultural lands to the east which are divided by Lough Corrib.





West

Connemara can be subdivided into two contrasting areas separated by the Cliften—Ougtherard N59 road. To the south the landscape can be defined as low-lying and inter-dispersed with bog patches and peaty lakes. To the north, the land rises dramatically to include a major mountain range with glaciated rock surfaces. This region is also characterized by high rainfall and exposure to Atlantic winds, which near the sea virtually eliminates tree growth to indigenous scrub with rock outcrops mainly along the coastal areas and islands. The geology is predominantly igneous and metamorphic, the granite being of three distinct variations, honey/brown, green and pink hues as well as the distinctive Connemara green marble.



East

The contrast could not be any more defined with Connemara in that the east of the county is defined by a large central lowland where the predominant activity is agriculture. The geology is mainly carboniferous limestone which are prominent in the south-west of the county as you approach the Burren. Other features which dominate the east are field boundaries defined by limestone walls and or hedgerows, raised bogs forming in areas of lower rainfall, a scattering of broadleaf and conifer woodlands, rolling topography and rich pasturelands.

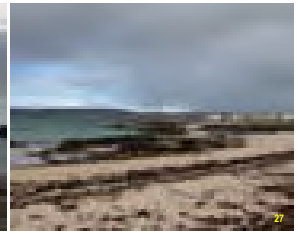
Seascapes

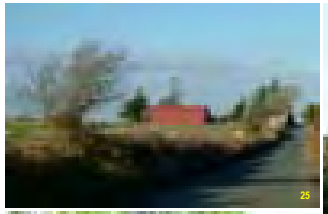
Seascapes vary from the dramatic cliffs of the Aran Islands to sandy beaches like the famous Coral-strand west of Carraroe and the Fjord inlet of Killary harbour and the offshore islands of Aran and Inishbofin.

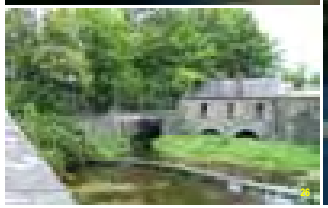
Touchstones

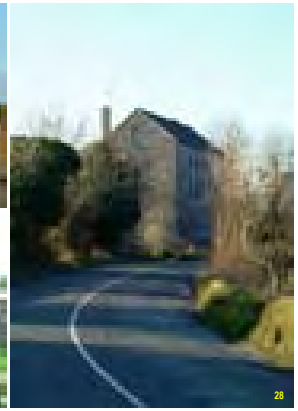
These are evident from the earlist of times up to the present, from archaeological remains to growing urban centres and farmland. Megalithic tombs, castles, ecclesiastical remains, vernacular stone barns and thatch cottages all provide touchstones to a rich built tradition and anchor the experience of the present to the past.

‘The first marks of man on this landscape, creating the archaeological landscapes of prehistory, were necessarily sympathetic and responsive to the environment, betraying a fear and knowledge of the elements that informed their precarious existence. Thus, the use of materials to hand, together with an intimate knowledge of microclimate, framed the form and positioning of these early structures in the landscape.’ Building on the edge of Europe









C - Siting

Presence in the landscape

Identify natural shelter features such as a backdrop of trees as a shelter belt which also gives good privacy.

As a strategy, tuck the building in close proximity to these natural shelters, which have immediate benefits in terms of the buildings assimilation into the landscape while reducing heating bills and providing good levels of privacy.

Shelter strategies

Such a direct response to climate and shelter locates a building in its particular place, settles it into the contours and frames the setting as the shelter planting matures.

Houses positioned in this way give a convincing rational and delightful model for continuing the process of building and development in Irelands landscape. Whether buildings sit in or sit on the landscape it is more that concealment is sought after.

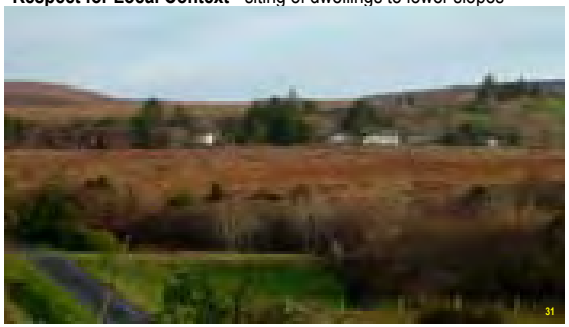
It is realistic and necessary to treat buildings as objects in the landscape and consequently to give due attention to their form.

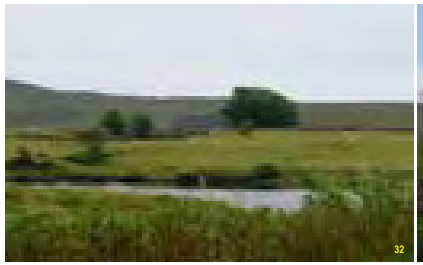
Anchoring into a Landscape

Coastal-clustering over crest of hill - providing shelter from wind

A successful integrating of natural and man-made

Respect for Local Context - siting of dwellings to lower slopes





Context -

A sensitive response

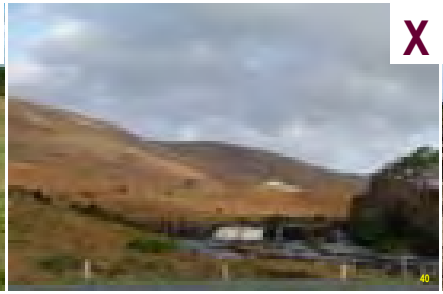
Natural setting -

Each landscape has unique characteristics, and for a successful rural house integration these features should form the backdrop. It is important to do a site analysis of its unique qualities which should then form an element of the design strategy.

Show House -

Located close to road and all natural shelter features removed for maximum presentation effect. Large bulky scale dominates the site and immediate setting.

Bungalow Bliss - the house is positioned on the top of the hill to get the best possible view. The design was taken from a typical pattern plan book with no regard to unique site features. The house appears isolated from its site with a sea of lawn in front, large tarmacadum or coloured pavior driveway and concrete path. The existing hedgerows removed and replaced with Leylandii with a loss of privacy and all cars parked in front for the final sub-urban treatment



Preferred response -

Position the house in the most sheltered area of the site. House is orientated in a southerly direction to maximize daylight and passive solar gain. Where there are contours existing on site, the house should be integrated into the slope, avoiding unnatural platforms. Large bulky houses should be avoided in favour of a breaking down of the mass into smaller elements which work with the contours. Provide good setbacks from road, maintain or re-instate natural boundary features and locate gardens and play areas to more secure and secluded areas around the house.

Place making -

Integrating into the landscape

The focus here is on working with the site features and not against them. It has become a standard and mis-appropriated feature of the rural landscape to 'land' a sub-urban design onto a rural landscape which is very evident of its poor contextual relationship.

- Maintain existing field boundaries - or where sightlines are required to re-instate to agreed position.
- In order to minimize the visual impact - a minimum of 2 boundaries to be retained.
- Avoid car parking to front—locate to side or rear - this may require entrance door to side.
- Integrate into existing contours to soften the house into the site.
- Avoid surrounding the house with a concrete path - create a planting zone between the wall and ground. This will further soften the impact.
- Grade any excessive spoil in a gradual manner over the contours to create extra shelter.
- Introduce wild gardens to the front—avoiding large areas of mowed lawn which add to the 'platform effect'.
- Use materials for surfacing which are geologically linked with the area. Source local quarries for stone and pea gravel.
- Avoid large areas of black tarmacadum or precast paviours as driveways and brick features out of context with the rural character.
- Manufactured post and rail fencing, precast kerbing along with decorative lamps illuminating the driveway

Rural integration - natural enclosure, house anchored to contours

X

Suburban isolation - natural features removed , isolated from landscape

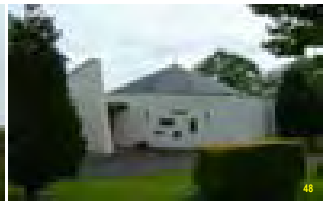
Preplanning— site analysis sketch

The sketches above illustrate an initial site analysis which incorporates site specific features into a design strategy and used as a basis for a pre-planning discussion.

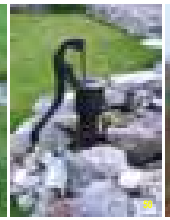
General considerations

Local facilities - schools

Local facilities - churches



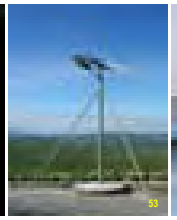
Foul drainage - Water source



Visual screening - privacy

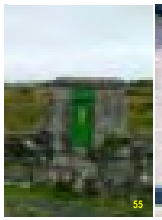
Sun - Orientation

Solar energy

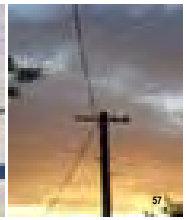


Carbon emissions

Local facilities - post / telephone



Power source



Utilities - Everyday considerations

Apart from the main considerations regarding the design and siting of a rural house, there are other considerations which are equally important for a successful integration within a rural context.

When looking at a potential area, it is important to consider the distance to local facilities such as the school, shop, post office and recreation activities. Given the rising concern over environmental issues such as C02 emissions it is important that travel distances are minimized.

Also in order to limit the visual impact of any rural house, the various everyday utilities require careful consideration in terms of their location within the specific site and that they are adequately screened from the main road. These are very practical issues and to some extent are not design related, however they do affect the overall impact and should therefore be given equal consideration.

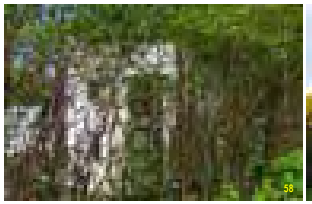
A poor solution which does not address the issues highlighted will result in an undesirable integration and loss of rural quality.

There is also a necessity to address the orientation of any house so as to maximize potential solar gain while achieving a balance with privacy and wind shelter. This will also reduce fuel consumption and provide brighter and therefore healthier homes.

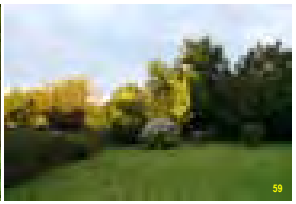
The following utilities are considered in the following illustrations in the site analysis sketches which should inform the overall composition and layout.

Domestic considerations - integration

Privacy



Garden amenity / safe play area



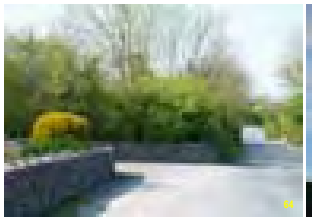
Tools / garden storage

Fuel / refuse storage

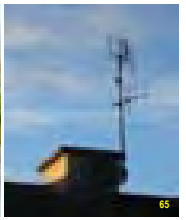
Clothes line

Composting - Vegetable area

Safe access - car parking

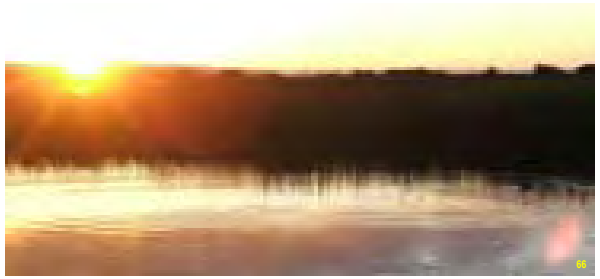


Tv / telecommunications



Capture the Sun

- Orientating due south



The Sun - a free renewable energy source.

Within the coming years we will be faced with an unprecedented challenge in terms of energy performance to our buildings, in the form of a European directive relating to the 'energy performance of buildings'. Along with this there is the ever **decreasing** fossil fuel resource, thus requiring a need to develop more sustainable energy strategies by encouraging the use of renewable energy sources. The most immediate response which costs nothing but can achieve a 30% saving on heating costs - is to **orientate the house within 15 degrees of due south**.

Mapping the Sunpath -

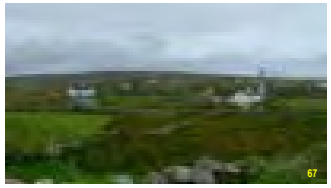
A careful analysis is necessary in relation to a landholding so as to achieve the best site option which considers all the previous everyday utility issues.

When considering a particular landholding it is best to seek a location which locates the rear of the house to face south. This will allow for larger glazing areas to achieve passive solar energy and greater daylighting while maintaining privacy and achieving a better solid to void ratio to the front (north) elevation.

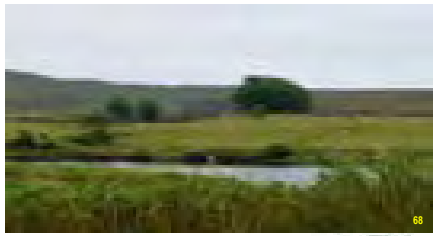
The sun's position varies throughout the seasons and care is needed in choosing a vantage point, consider the above criteria and **adjust the design to suit the orientation.** It may not always be possible to face due south, so consider the use of well-proportioned gable windows.

Clachans - organic clustering

One of the most striking features of 18th-19th century village settlements is the predominant arrangement of dwellings facing due south in order to maximize solar gain from the sun. Along with this was the arrangement of outbuildings to form a sheltered courtyard and form an cohesive yet organic settlement pattern unlike the current linear or 'ribbon' patterns which line our country roads.



Wind exposure - seek out natural shelter



Shelter strategies

It is equally important to seek out shelter where a site is exposed to the natural elements. A house which is exposed to winds will incur significant heat losses in winter time, which could be avoided by studying the alignment of older settlements in the area. The gable of the house should face the wind - south westerly to reduce exposure.

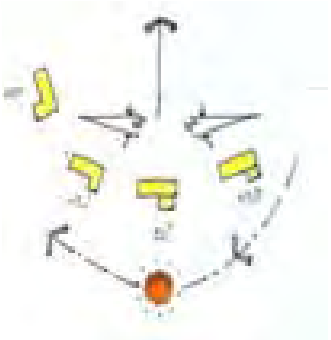
Positioning the house - passive solar gain

The sketch below illustrates a common response to orientation in a rural setting, in that the house in the lower corner is simply placed parallel to the road. The house in the upper corner has carefully considered its orientation so as to maximize daylight and solar gain and integrate with the natural screening which provides shelter and privacy.

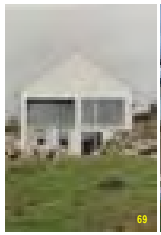
Solar gain - free energy

This sketch indicates the % increase in heating demands away from due south.

Source : S.E.I



Policy 67 : Promote energy conservation measures and facilitate innovative building design that promotes energy efficiency and use of renewable energy sources.
extract from Galway County Council Development Plan 2003 - 2009



Site selection guide - Analysis of best site options

Natural setting -

Each landscape has unique characteristics and for a successful rural house integration these features should form the backdrop. It is important to do a site analysis of its unique qualities which should then form an element of the design strategy.

Assessing potential sites -

The illustration opposite indicates an existing family farmstead , with adjoining landholdings outlined in red. The sites are assessed on an individual basis so as to consider the possibilities and constraints associated with its particular characteristics.
Each site considers safe access, orientation, privacy, visual prominence, utilities, drainage and percolation.
Note : the massing is broken into an L-plan so as to maximize daylight, solar gain and reflect the scale and character of existing dwellings. Refer to design for alternative form massing strategies.

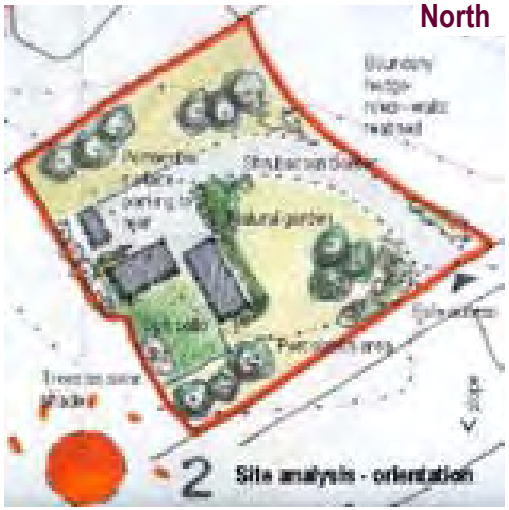
1 East - West aspect

- The site is adjacent to the main access road and is visually vulnerable.
- Effective screening with indigenous planting is required to maintain privacy to road.
- The house is sited to the top end of the site and requires careful assimilation with natural contours.
- The percolation area is located to the bottom of the site with the natural slope.
- Hedgerows and stonewall boundaries should be retained or reinstated.
- Parking is located to the rear of the site providing screening and a natural shelter from the prevailing winds.

Conclusion - the site with its east - west aspect is not ideal. There is a need for careful siting, design and landscaping to achieve a successful integration into the rural context.

2 North - South aspect

- The site is accessed via a local access laneway away from the main road, providing a visual buffer.
- The house is sited to the west to provide a private sun patio area and natural garden to the east. This natural garden will anchor the proposed dwelling into the rural setting.
- The house form and massing is orientated to maximize daylight and solar gain.
- There is an issue with privacy from the local access lane, which can be overcome with careful landscaping of hedgerows and or trees which provide solar shade.
- The car-parking is located to the north-west providing both wind shelter and screening of cars with a courtyard.



Conclusion - the north - south aspect is best in terms of solar gain and daylight, issues of privacy with large glazing to the front elevations from the access lane require careful consideration.

3 East - West aspect

- The site is accessed via a local access laneway away from the main road, providing a visual buffer.
- The house is sited to the northwest to provide a private patio area and natural garden to the east. This natural garden will anchor the proposed dwelling into the rural setting.
- The house form and massing is orientated to maximize daylight and solar gain with large glazing to the south and west overlooking a private garden amenity. Further privacy can be achieved with careful landscaping.
- The car-parking is located to the north-west providing both wind shelter and screening of cars with a courtyard.

Conclusion - the north - south aspect is best in terms of solar gain and daylight.

4 East - West aspect

- The site is accessed via a local access laneway away from the main road, providing a visual buffer.
- The house is sited to the west to provide a private sun patio area and natural garden to the east. This natural garden will anchor the proposed dwelling into the rural setting.
- The house form and massing is orientated to maximize daylight and solar gain.
- The car-parking is located to the north-west behind an outbuilding / storage area, which provide shelter from prevailing winds

Conclusion - the north - south aspect is best in terms of solar gain and daylight, with large glazing to the rear overlooking the sun patio and maintaining maximum privacy and garden amenity.

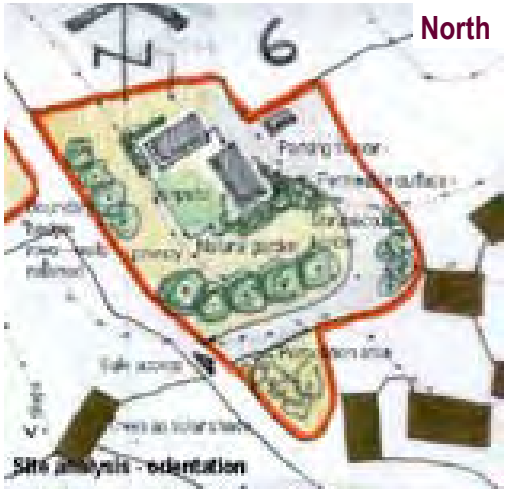
5 North - South aspect

- The site is accessed via a local access laneway away from the main road, providing a visual buffer.
- The house is sited to the northwest to provide a private sun patio area and natural garden to the east. This natural garden will anchor the proposed dwelling into the rural setting.
- The house form and massing is orientated to maximize daylight and solar gain.
- There is an issue with privacy from the local access lane due to the large windows facing the sunpatio, which can be overcome with careful landscaping of hedgerows and or trees which provide solar shade.
- The car-parking is located to the north-west providing both wind shelter and screening of cars with a courtyard around outbuildings.

Conclusion - the house is sited to maximize the solar gain and achieve some degree of privacy. Located near the existing cluster of dwellings, this site has potential to integrate well into the rural setting and enhance the character

6 North - South aspect

- The site is accessed via a local access laneway away from the main road, providing a visual buffer.
- The house is sited to the north to provide a private sun patio area and natural garden to the south. This natural garden will anchor the proposed dwelling into the rural setting.
- The house form and massing is orientated to maximize daylight and solar gain.
- There is an issue with privacy from the local access lane, which can be overcome with careful landscaping of hedgerows and or trees which provide solar shade.
- The car-parking is located to the north-east providing both wind shelter and screening of cars with a courtyard.
- The house is located adjacent to an existing cluster of dwellings to reinforce the rural context.



Conclusion - the north - south aspect is best in terms of solar gain and daylight, issues of privacy with large glazing to the front elevations from the access lane require careful consideration.

7 East - West aspect

- The site is adjacent to the main access road and is visually vulnerable.
- Effective screening with indigenous planting is required to maintain privacy to road.
- The house is sited to the lower end of the site and requires careful assimilation with natural contours.
- The percolation area is located to the top of the site against the natural slope, this requires an engineered solution.
- Hedgerows and stonewall boundaries should be retained or reinstated.
- Parking is located to the front of the site , which is visible and the entrance is exposed to the winds

Conclusion - the site with its east - west aspect is not ideal. There is a need for careful siting, design and landscaping to achieve a successful integration into the rural context.

Topography -

The earth is not flat

Historical Precedent

In the past, local knowledge was accumulated on an areas particular micro-climate and the houses responded to this. The concept of a view from the top of a hill was far less important than that of shelter, so as to conserve fuel and energy as opposed to the top of the hill which was cold, exposed and generally isolated.

Buildings have evolved in response to their function and natural setting, whereas todays sub-urban response has been to dominate the landscape and designers should show a similar understanding to contours as our traditional past has shown.

Working with the slope

Where a site has existing contours it is important to do a detailed contour survey and site analysis which will inform a site specific response. Any proposal should run with the slope as a general guideline and provide a unique design which integrates with its site. Deep plan house designs should be avoided as they require excessive excavations and generally result in prominent plinths with either a deep gouge into a hill or a very conspicuous land mound which compound insensitive siting and thereby make a design even more obvious.

This sketch illustrates the principle of achieving a large floor plan, yet with a sensitive analysis of site can achieve an appropriate solution in terms of siting, formal massing and a distinctive rural indentity, thus avoiding the typical sub-urban solution which is 'landed' onto the site with no consideration of the rural context.

Old - this example illustrates a sensitive integration with existing contours. This approach avoids a 'platform' effect and equally an excessive amount of excavation. The soft landscaping further enhances the character and makes this house anchor into the setting. The house appears as part of the landscape and vice versa.

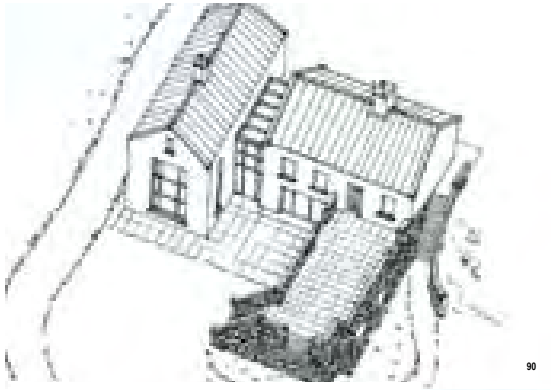
New - this example illustrates how modern interventions can be equally successful and by such a sensitive understanding of site and context, provide precedent for successful assimilation into a rural village context and form part of the overall character of the area by embracing the site specific characteristics, which in this case had an existing hill which was integrated with the house design. This approach makes both the house design unique and defines the site.

Contours -

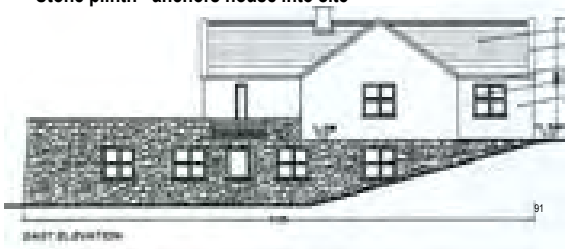
Work with the slope

Anchoring to a Site

The success of any design which utilises site specific features such as contours will be determined by how well a design responds in terms of its massing, so as to minimize the bulk effect and assimilate into the contours. These sketches illustrate such a design which is enhanced by the re-use of the excavated stone to anchor into the site.

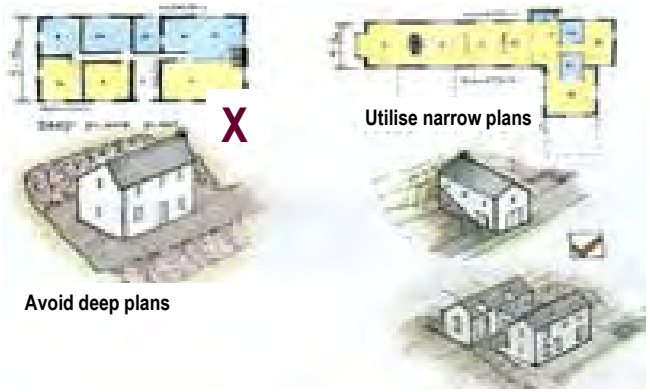


Stone plinth - anchors house into site



Excessive cutting of a hillside

Care should be taken to avoid such an extreme intervention on a site. This response creates a safety hazard in that the ground has been weakened and may result in land slippage and excessive flooding to the rear of the house. Apart from this, it also creates a poor living environment in terms of useable play area and visual amenity.



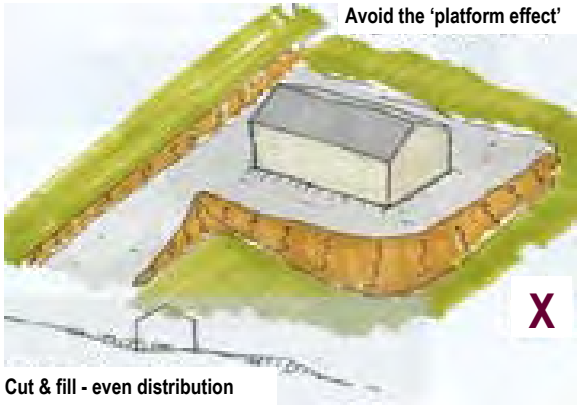
Avoid deep plans

Stepped ground levels

This response involves the minimum amount of excavation as individual accommodation spaces respond in a sensitive manner to site contours. The result is a very unique contextual house design which is site specific in terms of design and requires the skills of an Architect.

Excessive mound fill

Such a response creates a very unsightly platform effect and requires extensive and un-necessary landscaping had there been more consideration given to the house design and siting



Cut & fill - even distribution

1 ½ Split-level response

Where the contours are more dramatic a design can take advantage by utilizing a split level design allowing a greater use of accommodation space.

D - Landscaping

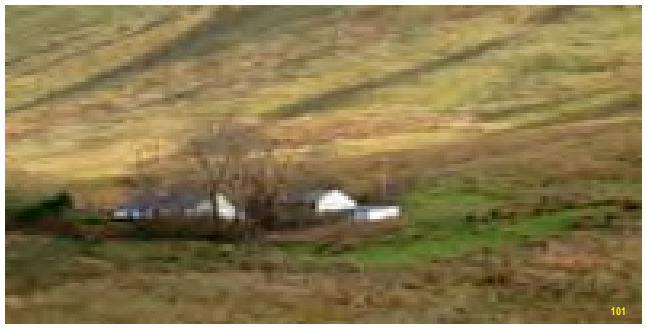
Rural characteristics

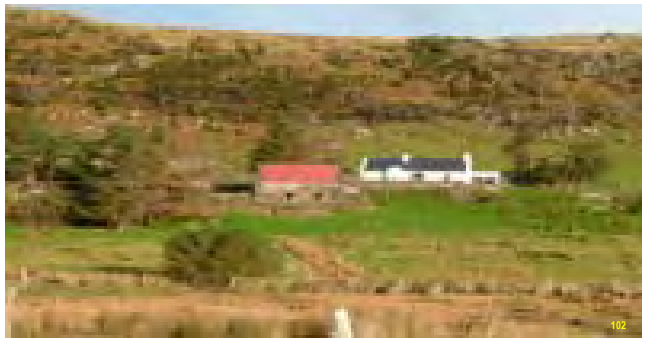
A Naturalistic approach

The character of the rural garden can be defined as something which requires minimal intervention to the existing landscape and where there has been intervention this has generally been with indigenous planting reinforcing the link with the land to enhance its natural character. This link with the land has been instilled over generations and along with house design the garden evolved in a harmonious way to achieve an almost seamless transition from house to landscape. By creating a planting zone between house and path, enclosures, privacy, wildlife habitats, boundary treatments and limiting the use of expansive areas of tar macadam and lawns, the house becomes visually anchored to its site, and thereby softens the geometric impact that the built environment has on the natural landscape.

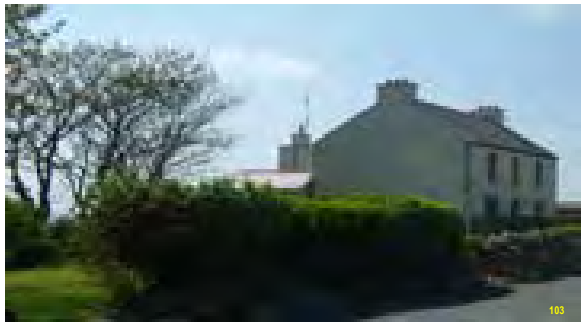
- Avoid geometric and formal garden layouts, use organic layouts with asymmetrical features which work in harmony with the landscape character of the area.
- Choose plant species which are indigenous to the area along with species that will enhance the biodiversity and ecology of the area. Avoid plants which require the use of harmful pesticides which harm the natural eco-system.
- Avoid large areas of mowed lawn - especially to front gardens, they look out of context with the natural meadows and require extensive maintenance, break the garden into zones such as natural meadow, safe play areas, patios, composting and vegetable plots.
- Use materials for surfacing which are geologically linked with the area and are permeable to surface water. Source local quarries for stone and pea gravel.

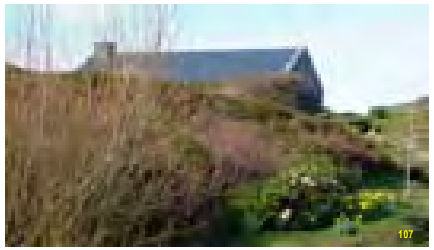
Natural Gardens - west Galway





Natural Gardens - east Galway





Field boundaries -

Rural characteristics

Field boundaries

"Ireland currently possesses a heavily enclosed rural landscape. Eighty per cent of the surface is devoted to agriculture and the farmed land is everywhere divided into fields separated by continuous and permanent enclosures. These enclosures are the most pervasive features of the cultural landscape, allying it with the Atlantic fringe of Europe but distinguishing it from many continental areas where farmland has traditionally been laid out in open-fields which lacked obtrusive divisions. The vegetation growing on them influences micro-climates and contributes substantially to the biodiversity of the rural environment. Visually, enclosures dominate the cultural landscape, framing or obscuring the view for those who travel through the countryside."

Atlas Of The Irish Rural Landscape

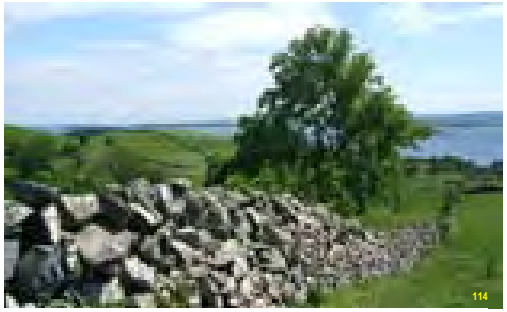
Field boundaries are standing records of the area's history of land ownership and display evidence of local geology, local craftsmanship, and local farming practice.

Natural Boundaries

Hedgerows

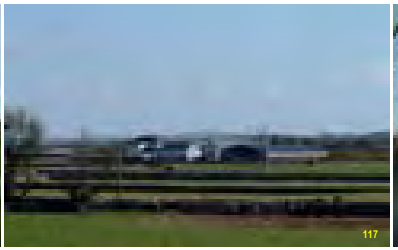
These wildlife corridors are important heritage features. Varying greatly in form and species, they help to form the local and regional character of the landscape. Hedges on fertile and well drained land are dominated by hawthorn and may have trees of ash, elm, sycamore or beech. Shallow or acid soils will give rise to gorse, while hedges on poorly drained land are likely to be dominated by willow. Hedgerows provide food and shelter for insects, birds and other animals, forming corridors that permit wildlife to move between habitats. Hedges are durable and if properly maintained will last for centuries, and is ultimately more cost effective than any alternative boundary. Hedges provide shelter from wind for stock, crops and road users. They alleviate the blinding effects of low sun, filter dust and fumes, and absorb road noise.

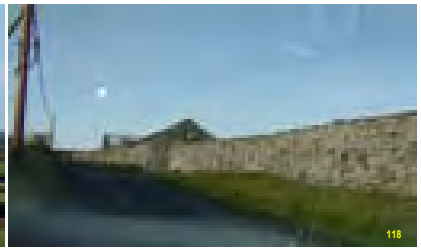
Hedgerows

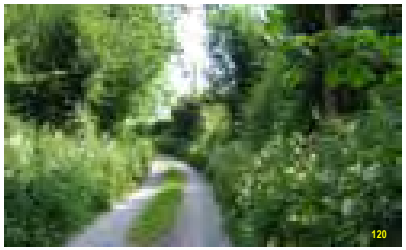


Random rubble stone walls

Dry coursed local quarry stone







A Natural Response

Strategy & analysis

Context - a sensitive response

The existing cottage is located in South Connemara, which is dominated by an open wind-swept landscape. Shelter is provided by sparse clusters of vegetation and or natural contours. Such a natural landscape demands a sensitive response and in-depth study of the natural flora and fauna to give a successful proposal.

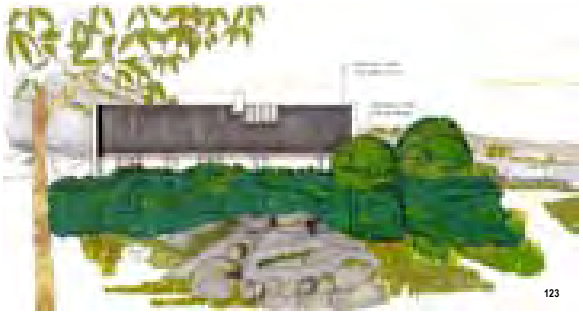
Existing cottage in its natural landscape context

Landscape strategies

This scheme is an excellent illustration of a landscaping strategy which combines many important features and provides an overall cohesive study on assimilating the natural surroundings. The context is carefully analyzed to provide shelter from prevailing winds, privacy, visual screening and through careful study, appropriate indigenous planting which will assimilate into the existing landscape.

Each aspect is framed with a specific soft landscaping to provide a natural response and avoid a man-made manicured garden. Such an understanding of context and landscape will result in a house which is well anchored and over time provide a complete assimilation between house and landscape.

Landscape proposal for Cottage in Connemara - a successful integration into a natural setting



Planting provides shelter belt and privacy

Rock outcrops and heather define a soft boundary edge

Entrance framed with landscaping

Entrances -

Safety and rural integration

Context

The entrance to the site is the first point of contact people have with their dwelling and therefore is an important element in the overall composition. A characteristic of traditional rural boundaries and entrances has been to maintain existing field boundaries and entrance features which reflect local craft skills such as dry stone walls, in-situ concrete pillars (barrel formed), forged gates and perhaps pebble dashed walls. Along with this there was the planting of native species to provide seasonal colours, privacy screening and shelter.

All too often the first register of an insensitive dwelling design is an in-appropriate entrance and front boundary treatment which usually has pre-cast post and rail fencing, artificial geometric stone, brick or natural stone which is not geologically linked with an area.

A sensitive rural response - maintaining existing trees with wide entrance splay

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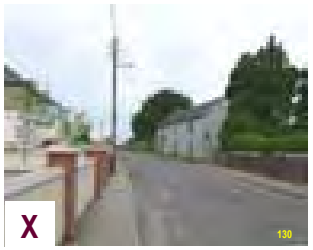


Insensitive sub-urban boundary treatment resulting in erosion of rural character

Design standards

With the ever increasing traffic volume on our country roads, safe access has become a primary concern and cannot be overlooked. Specific design standards are contained within the current Development Plan for guidance.

When locating an entrance it is important to consider the requirements for sight lines. Entrances which are proposed on the inside of a road bend provide poor visibility splays and generally require extensive removal of existing boundary features which will detract from the natural context.

Building lines are also a necessary requirement in order to facilitate any future roads improvements with setback distances reflecting the road status and are listed in the current Development Plan.

To prevent all dwellings from lining up, resulting in a ribbonised and autonomous street front, dwellings should be staggered which address siting characteristics as illustrated previously. Dwellings do not have to be located parallel to the road - in fact they should have a more organic arrangement which reflect the traditional characteristics of siting which responded to wind direction and solar gain.

Reinstating existing features

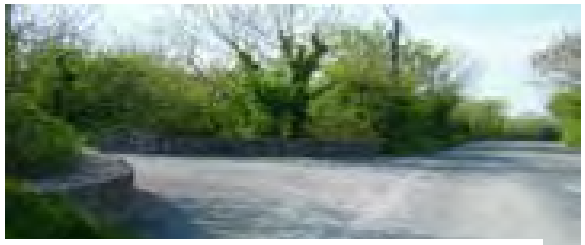
Where existing boundary features have to be removed to facilitate forward sight lines, these hedgerows / stone-walls should be reinstated behind the required sight lines as specified.

The layout of proposed access roads within a site should follow existing contours thereby avoiding excessive cut or fill excavation and provide a natural organic approach to the proposed dwelling.

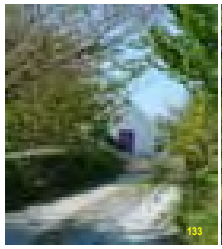
Surface water disposal should be designed in such a way so as to avoid run-off onto main roads. For surfacing, source local quarries for gravel and tar which look more natural in rural settings and provide greater permeability for surface water run-off than tarmacadam or precast paviors.

X

Erosion of rural character through insensitive removal of hedgerows.



Sensitive response - maintaining hedgerows while achieving safe access



Limestone fissured pavement - protected under the Habitat Directive

X

Record of Monuments & Places - Siting issues

County Galway possesses a rich range of archaeological monuments both in the countryside, and in its urban centres. The Archaeological Survey of Ireland has estimated that there are circa 120,000 known archaeological monuments and sites in Ireland and that County Galway contains 7100 such monuments (Gosling *et al. 1987*). Given that our archaeological heritage is an integral part of the wider environment and is fundamentally important to the quality of life for the people, to their education, culture, enjoyment, amenity and to the economy and special identity of the County of Galway. Policies 131-137 (Page 54-55) in the *County Development Plan 2003 – 2009* specifically deal with the archaeological heritage of the county.

Many of these monuments are readily recognisable such as castles, ringforts, ecclesiastical sites but others such as *fulachta fiadh*, field systems, earth works and enclosures can sometimes be a little difficult to recognise. Therefore it is important to check if there are any Recorded Monuments on or adjacent to your site. If a proposed development is located within c.30m of a Recorded Monument or Place it is advisable to seek advice from the DoEHLG (Dúchas) and/or a licensed archaeologist.

How do I know if there is a Recorded Monument on my site?

Record of Monuments and Places and Archaeological Constraint Maps

The ***Record of Monuments and Places (RMP),*** which has been produced for each county, enables the public and the local authority to judge what proposed developments could potentially affect an archaeological site or monument and their settings and character.

The ***Record of Monuments and Places and associated Archaeological Constraint Maps*** may be consulted in the planning office or in the county library. A list of licensed archaeologists is available from the planning office or the DoEHLG. Any works in relation to a Recorded Monument requires two months notice to the DoEHLG (Dúchas) under Section 12 of the National Monuments (Amendment) Act, 1994.

A useful leaflet is *Archaeology & Development: Guidelines for Good Practice for Developers, which* is produced by ICOMOS and The Heritage Council and available in the planning office. Dúchas-The Heritage Service have published an ***Archaeological Inventory of County Galway: Volume 1: West Galway*** **and** ***Volume 11: North Galway.*** (The Archaeological Inventory for the South of the County has not been published yet.) These publications are available in the local libraries and from most bookshops.

Zones of Archaeological Potential

It is important to be aware that several of the urban areas in the county are Zones of Archaeological Potential.Zone of Archaeological Potential in the County includes Tuam, Athenry, Loughrea, Dunmore, and Eyrecourt. When dealing with urban areas it is important to consult the Record of Monuments and Places to ascertaining whether or not the area in question is a Zone of Archaeological Potential.


137


138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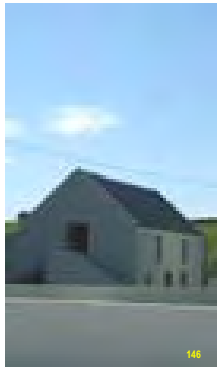
E - Design - Rural context


Regional Identity

“ Buildings, generated by pressing requirements of function, economy and beauty, were not invented anew for each project, but derived from long-lived architectural types inherited and acquired over time : the essence of the idea was carried around in the minds of their builders to be set down and adjusted to local conditions of climate and culture. Those who laid out the types always aspired to express it in a disciplined and perfect way; such a desire for formality exists throughout architecture, not adapted as an idea in itself, rather presented as the natural outcome of a logical , economic approach to construction.”

'A Lost Tradition - The Nature of Architecture in Ireland'.

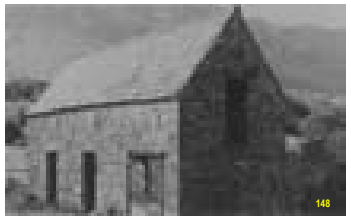



The Irish Barn - this iconic vernacular typology provides a rich source for contemporary design inspiration. Such an approach can only but be encouraged as such a tradition is reinvented to reinforce our future heritage.

Design aims

The aim of this guide is to encourage design innovation which is contemporary in nature and of its time, just as our past built heritage was of its time. What is important with such innovation is that it reinforces the characteristics that have defined rural design over the ages.

“Tradition does not mean preserving ashes, but keeping the flame alight “ - Jean Jaures.

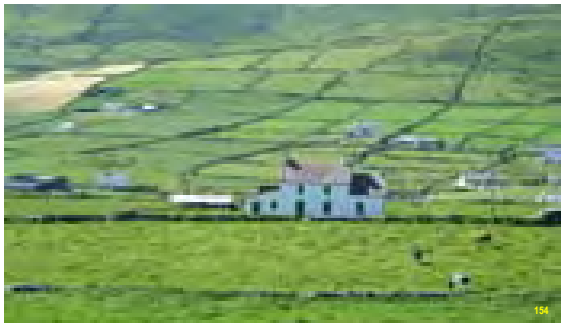



Design approach

This section is aimed at those who prepare planning applications in an attempt to provide some form of coherence when dealing with simple, well-mannered and restrained rural design. It needs to be recognized that design issues relating to form, scale , mass, bulk and proportion are a skill which require great attention and where the detail reinforces this clarity. Getting these wrong will result in a house design which looks clumsy & cluttered where no amount of detailed frills will overcome this.

Rural Vernacular









Design - Contemporary lifestyles

As we begin the 21st century, it is important that our buildings reflect the advances made **technologically and environmentally** which are now part of our modern lifestyles. At the same time it is equally important to have an awareness of our rural built heritage and the cultural aspects which are engrained in rural lifestyles.
Those best qualified to address these issues are Architects and Designers who have provided these images.


Contemporary Design -

The following images are examples of contemporary designs which respond to their site specific rural contexts.

Contemporary Lifestyles -
Illustrating modern design which reflect the best principles of rural vernacular



Our future is in our past

"In a world patently losing its roots, the recognition of an Irish architectural tradition goes some way towards the reconstruction of fragmented identity, only through a clear-sighted reclamation of context can a new architecture grow to re-inhabit its rightful place as mediator between past and future."

'A Lost Tradition - The Nature of Architecture in Ireland'

'Less is More' -

This dictum is well used within architectural circles, but is very appropriate when it comes to the design of modern rural dwellings. Such an approach will stand the test of time and provide a benchmark for our future heritage.
The distinctive and iconic image of a simple robust exterior is something which has and should define our built heritage, as opposed to over-complicated forms and fussy detailing. These examples show how it is possible to combine a simple robust exterior and provide variety which responds to both site and climatic contexts.








A Rural House -

What are the Characteristics ?

Contemporary 'Long House'

An Economy of Means.

The advances made in material technology and economic prosperity has through the ages shaped out rural vernacular house. These images indicate such advances while maintaining the essence of those inherent characteristics which define a regions identity.

"Building types emerged from a slow fusion of cultures and the practice of tradition, evolving slowly in response to changing needs and conditions; their study opens doors to allow comparison between forms in different eras and different cultures."

'A Lost Tradition - The Nature of Architecture in Ireland'.

'The Irish Long-House'

The linear nature of the one room deep plan of celluar rooms delineated by thick crosswalls, defined a particular rural lifestyle. Where the basic provisions necessitated an enlargement, this usually resulted in a lateral expansion, never in depth. The existing gable wall simply acted as a cross wall limiting any structural considerations, with the existing roof simply extended along to a new gable wall, an economy of means whereby the volume was determined by the span of timber. Over time the basic typology of the vernacular cottage found other modes of expression, mainly adopting influences from a more formal classical tradition of regularity and neatness. Advances in material technology also had implications on the basic evolution of form. The manufacture of slate and corrugated steel allowed for reduced roof pitches, while the advances made in timber and concrete technology allowed for greater spans and thereby deeper plans.

'Agriculture Courtyards'

The arrangement of outbuildings around the farmhouse, including haybarns, sheds, byres and bawn walls created an informal series of courtyards necessary for the purposes of agriculture - which today have some resonance as how best to break down the bulk and scale into careful massing studies.

An Irish 'Long House'

Agricultural courtyards

An Irish Barn

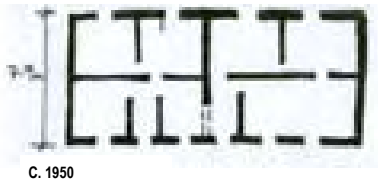
Evolution of Form

The development of the rural house in Ireland, to its present form has been shaped by the wider story of farming and country life. This expansion of agriculture and population in the preceding centuries in Ireland set the conditions for the construction of the vernacular cottage still imbedded within rural fabric of the Irish Country-side.

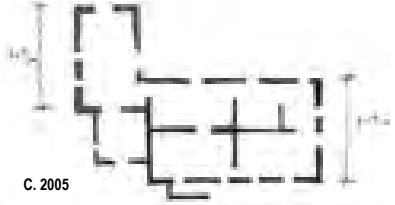
C. 1800

C. 1850

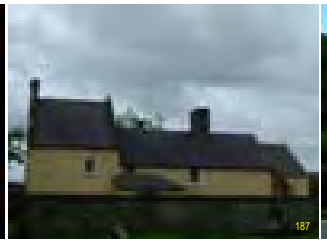
C. 1930



C. 1950



C. 2005



Rural forms -

Shape, volume & surface

Rural characteristics

- Simplicity of Form
- Sensitive scaling relative to site context
- Clear, neat & well defined front elevation
- Good, well balanced proportions
- Solid & honest construction
- Quality, robust materials & details

Shape / Form

The principle identifying characteristic of form is shape, which results from the specific configuration of a form's surfaces and edges.

Subtractive forms

These forms are simple and geometrically regular and can adapt readily to subtractive treatment. These forms will retain their formal identities if portions of their volumes are removed without deteriorating their edges, corners and overall profile. E.g., A recessed porch or balcony

Additive forms

Can be characterized generally by their ability to grow and merge with other forms. In order to perceive additive groupings as unified compositions of form, the components must be related to one another in a coherent manner both in form and proportion.

Articulation of form

A form and its surface planes can be articulated by differentiating adjacent surfaces with a change in material, colour, texture or pattern.

Single storey	Storey + half	Two storey	Miscellaneous
			
Long House	No dormer	Simple two storey	Thatch
			
'L' form	Eaves dormer	2 Story + lean-to	Tin hayshed
			
'T' form	Double and slipped	2 Storey + gable	Tin hayshed + lean-to
			
'U' form	Additive / subtractive forms	2 Storey single L	Front barn
			
Double parallel	Small roof dormer	2 storey L gable	Gable barn

Note : These forms are for indicative purposes only, to indicate appropriate rural vernacular forms. These inherent characteristics should then be applied to strategies for a successful response to rural design.

Suburban Forms

Avoid pattern book designs

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Sub– urban characteristics

- Overcomplicated & un-necessary shapes & forms
- Large & boxy relative to site
- Un-necessary projections to make elevation appear busy, to substitute for poor design integration.
- Proportions weakened by excessive elevation modeling
- Use of mock styles
- 'Tack-on' frills & extensive use of white plastic products

Pattern-Book designs

The main disadvantages with this approach is that you end up with a design which has no specific relationship to its site. The result is a retro-fit design which may end up distorting the original design, proportions and appear awkward or 'landed' onto the site.

Also these designs are at odds with the traditional rural vernacular characteristics which vary from region to region and reflect local climatic considerations in terms of orientation, layout and detail design.

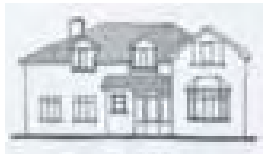
The following are a series of sketch illustrations which indicate the sub-urban character and forms.

Another aspect to such misinformed design - is the shear quantity and general acceptance to this form of design, and how such precedent erodes into the traditional rural character of the built environment. This type of design is unable to evolve, as the criteria is of an 'add-hoc' nature and not a rational one.

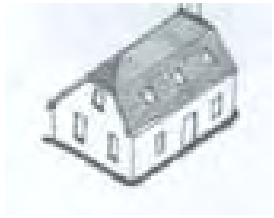
Dormor

Hipped gable dormer - arched portico

Twin gabled - dormer add-ons



Projecting bay gable - eaves dormer



Mansard roof+ Dutch hipped gable

Wide span gable - false arches

Two Storey

Double gable - integrated garage

Sub-urban porch + garage

'Mock tudor'

Dominating hipped gable

Two Storey - bulky

Projecting 2 storey bay from gable

Projecting 'features' - unresolved plans

Arbitrary add-hoc 'features'

The 'bulk' effect

Miscellaneous

Classical 'mock' hipped portico

2 storey projection through single storey

'Mock' heritage castle

Excessive pitch + flat roof

Note : **These forms are for indicative purposes only, to indicate in-appropriate sub-urban forms. These characteristics should be avoided as they erode the character and legibility of rural design.**

Massing - Breaking down the bulk

Getting the Massing right

Massing is about how you assemble the formal elements of the house and how these proportions relate to each other and to the overall composition.

The issues relating to the Big House type are generally ones of Bulk, Scale and Height as they are all factors which determine the overall Massing. The Big House has deep plans, wide gables and excessive heights, resulting in a large scaled and bulky house which cannot be assimilated into the rural countryside and appears 'landed' onto the site.

The solution lies in utilizing more slimmer and narrow plan forms, which can be assembled into better compositions with proportions and scale that reflect their rural context.

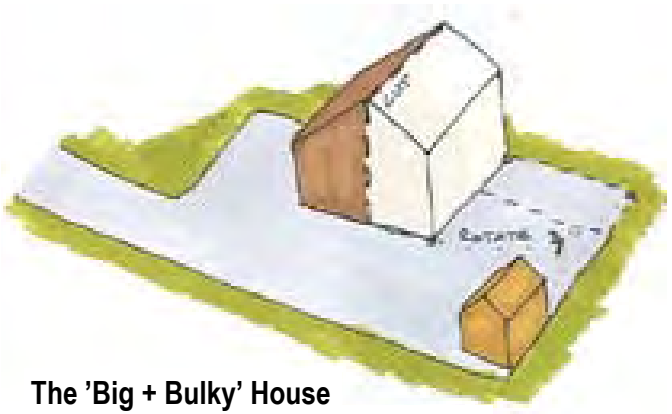
Massing studies

Indicative solutions to breaking down the bulk effect and still maintaining the required floor area.

Deeper, wider, higher

The problem with the Big House

The double room deep plan is a format used most regularly for house designs, due to the efficiency inherent with increasing spans under the one roof. However, this approach to house design is at odds with our Rural Built Heritage which was generally one room deep, and allowed for better scale, proportions and heights which related more to the human scale.



The 'Big + Bulky' House

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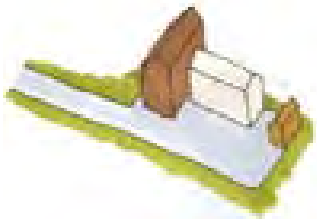
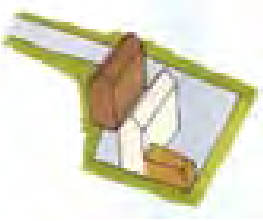
How to break it down -

A Model solution

A series of indicative sketches are shown below so as to provide guidance on how best to approach this issue. The particular example illustrated is for a 2000sq.ft house and how by using the principles outlined in these guidelines it is possible to achieve the same floor area yet having a less bulky house with lower ridge/eaves heights.

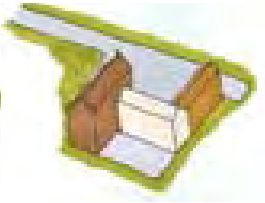


L - plan



Parallel + slipped

U - plan



Modified T - plan

Natural daylight

Utilizing such massing strategies increases the amount of natural day lighting to all habitable rooms, avoiding dark corridor spaces.

These pictures illustrate successful modern solutions which utilize massing strategies, avoiding the large bulk effect and reflect a sense of rural scale.

Massing Assembly of elements

Current trends for houses can be characterized by their deep floor plans, resulting in excessively wide gables and an over-weight appearance. The success to any contemporary solution is to use the 'one room deep' typology which can be assembled into a multitude of slimmer elements, presenting greater flexibility both in terms of layout and future expansion.

Many rural design issues can be resolved by simply reducing the bulk to a more slimmer floor plan with ancillary accommodation wings. The success of a contemporary rural design can be attributed to the skill of breaking down the bulk to a more appropriate massing and proportion which has its design roots in traditional cellular room forms.

Obtaining better massing with traditional forms

Avoiding un-resolved bulky layouts

This sketch illustrates the issues relating to the bulk effect. The roofscape is over-complicated, the internal plans un-resolved with no sense of scale or proportion. Ancillary wings only compound the problem.

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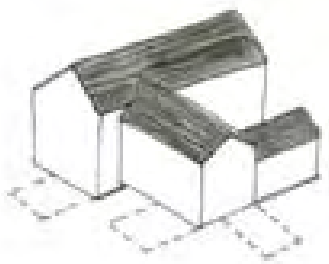
Good massing - well proportioned ancillary wings



This sketch illustrates good massing principles.
Ancillary wings have simple forms that are well proportioned and allow for future expansion with minimum intervention to the existing layout

These pictures indicate the principle of good massing with ancillary wings of traditional forms with good proportions, reducing the bulk effect while maintaining a sense of rural scale.

Scale - Reading a landscape

Scale refers to how we perceive the size of a building element or space relative to other forms. In visually measuring the size of an element, we tend to use other elements of known size in their context as measuring devices. These are known as scale-giving elements, and fall into two general categories: building elements whose size and characteristics are familiar to us through experience, and the human figure.

Scale is an important element of proportions in that objects are scaled in relation to their surroundings. When designing a house in the countryside, designers need to be aware of the surroundings - such as the landscape profile, size of field boundary areas and adjoining houses which will indicate an appropriate **scale** of house.

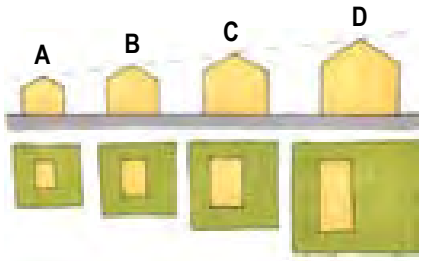
- A large dwelling will appear awkward in a site where the character of field boundaries and dwellings are small, regardless of its height - single or two storey.
- Large houses require a large site which needs to be **set** within a large expansive landscape with very mature landscaping of greater prominence.
- Where dwellings are considered 'out of scale', it is generally the deep floor plan and resulting excessive heights - reduce the overall form into smaller elements to reflect more the rural scale.
- Large dwellings with an imposing scale relative to surrounding dwellings is not very neighbourly, in that there will be overlooking and privacy conflicts, they will have an adverse visual impact and set undesirable precedent.
- In order to achieve a more human scale, designers need to give more consideration to measures which reduce the heights, yet meet regulation standards.

Context & surroundings

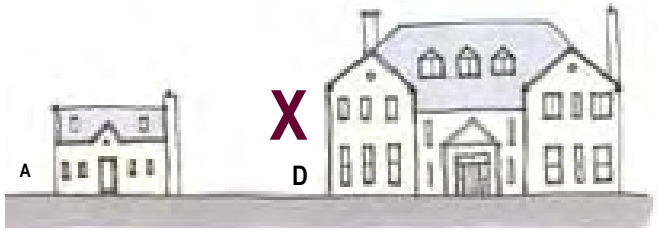
Horizontal scale and massing works with landscape

When deciding on an appropriate form and scale for a dwelling design it is important to first 'read' the landscape which may inform the design strategy. In this case the landscape is dominated by a horizontal horizon. These illustrations indicate a suitable design which is horizontally massed to the undulating soft contours. The result is a design which is sensitive and unique to its context.

Plot size and Scale

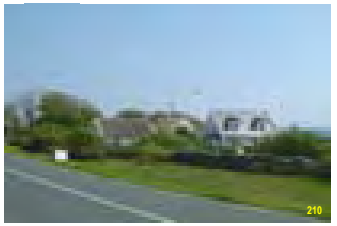


House A is relative in scale to house B as is C to D. However, house D if located beside house A would be considered out of scale with the surrounding context, regardless of compliance with DC 15 standards.



Existing mature trees provide a vertical scale reference and visual screening






Horizontal landscape features - horizontal scale

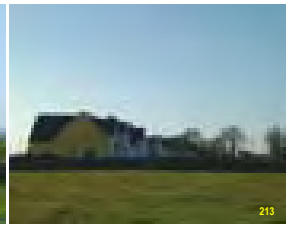

Vertical landscape features- vertical scale

This sketch below illustrates the use of landscaping features such as mature trees which inform a vertical scale reference - the scale and massing registers these features which are integrated into the design strategy.

Existing mature trees provide a vertical scale reference with rolling hills a horizontal scale, which is registered in the design and massing.

Height & scale

Rural



Sub-urban

Height - deeper = wider = higher

Apart from the floor plan having deeper dimensions, the other factor which effects the overall scale of the dwelling is the height which has a direct relationship with the plan.

The deeper the plan the wider the gable and for a given pitch increases the overall ridge height.

Designers will need to pay particular attention to the section profile and in particular the following -

- Low eaves.
- Vertical emphasis to windows.
- Distance between head of ground floor window and first floor window sill to be minimized so as to achieve better proportions.
- First floor roofs partially accommodated within the ceiling zone.
- Ridge heights can be reduced by narrower plans, rather than lowering the roof pitch.
- Use of traditional roofing materials
- Avoid roof sheeting materials - especially mock profiles.
- Where a design is in a visually sensitive location - alternative roof designs and materials will be considered to reduce the overall height and visual impact.

Ridge, eaves and window heights X

Solution

This example above is a clear indication of the problems associated with **deep plan** forms. The width of the gable +12metres is excessive which increases the ridge height considerably. Eaves heights along with increased distances between window heads and cills compounds the issue resulting in a large bulky building that bears no sense of scale with the existing streetscape.
Note : this relates to both urban and rural design issues.

Eaves heights

These sketches illustrate one strategy on achieving more desired ridge and eaves heights, without reducing floor areas. Utilizing a narrow plan form with appropriate massing will reduce the bulk and height.

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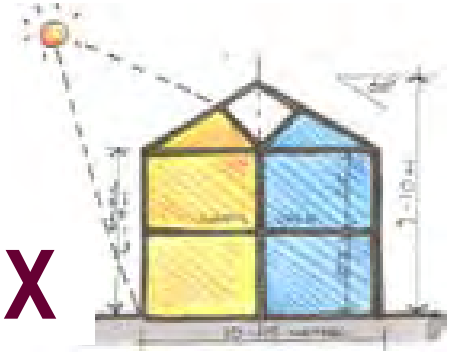

Sub-urban 'deep plan' - 2500 sq.ft

Rural 'one room deep' plan - 2500 sq.ft

Proportions + Scale

Proportions = design success

This is a fundamental element of design - in that each element is linked to form the overall composition. Eg. the size and shape of a window relates to the solid / void which forms the overall elevation composition.

Often you can judge by your eye when something is not balanced - often it's the proportions of that element and its relationship within the overall composition.

Proportioning systems go beyond the functional and technical determinants of architectural form and space to provide an aesthetic rationale for their dimensions.

- They can usually unify the multiplicity of elements in an architectural design by having all of its parts belong to the same family of proportions.
- They can provide a sense of order in, and heighten the continuity of, a sequence of spaces.
- They can establish relationships between the exterior and interior elements of a building.

Key factors

Traditionally, rural houses were characterized by the following design factors :

- Horizontal proportioned walls
- Horizontal roofscape
- Vertical emphasized windows to counterbalance the strong horizontal solid to void relationship

The current standards in terms of building regulations are eroding these basic yet fundamental characteristics which gave so many of our rural dwellings their human scale. The mis-use of large horizontal windows reverse the vertical solid to void emphasis, thereby weakening the balance of simple yet visually strong traditional elevations.

Asymmetrical elements can provide a sense of movement.

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When proportion is not considered either as an element or within the overall composition - the result is one of disharmony and erosion of form.

An example below, where all elements are well proportioned and are in harmony within the overall composition. Note the high solid to void ratio and general solidity.

Ancillary elements are proportioned to the main design element.

The ‘narrow’ plan

Advantages of a ‘one room’ deep strategy

The narrow plan—or ‘one room deep’ concept is not a new one, in fact it has been in existence for generations and the fact that such a design has been around so long—must have some benefits.

To highlight its main advantages a series of basic scenarios have been illustrated and how by using such a plan avoids the problems associated with deep plan forms.

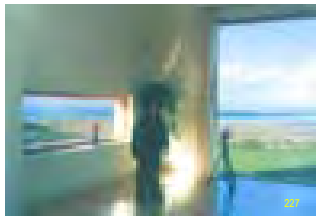
Slopes

- Avoids excessive cuts and platform effects thereby reducing the cost of siteworks
- Allows greater flexibility - level changes can be integrated more successfully within the footprint

Narrow plan - slope can adapt and absorb the slope into the design - reducing sitework costs

Aspect

- The deep floor plan - means glazing area needs to increase so as to provide sufficient daylight - this weakens the balance between glazing and masonary.
- The narrow plan allows for a dual aspect - in that light comes from two different directions - creating a more dynamic living environment.
- There is a greater freedom with the composition of glazing in narrow plans which give better ratios of glazing to masonary.



Narrow plan - double aspect dual aspect allowing daylight from two sources creating dynamic living areas

Ridge height glazing utilized in this example to allow daylight into deep floor plans - also good solar panel integration.

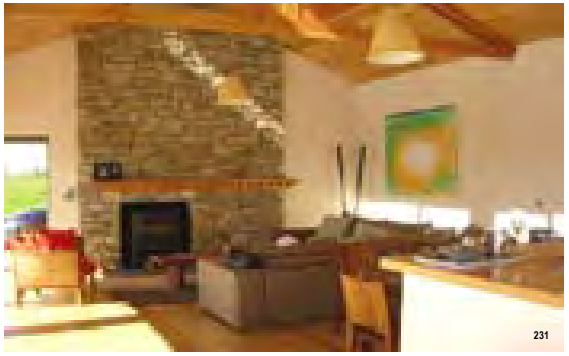
Solar Gain

- The deep plan house by its design will only receive 50% solar gain & natural light with dark corridors.
- The narrow plan can benefit from 100% solar gain and natural light - which will provide a saving in terms of heating / energy bills by as much as 30%.
- Locate the utility zone to the north elevation and reduce the area of glazing to a minimum, which will provide privacy and reduce heat loss.

Narrow plan-solar gain 100% solar gain / daylighting, reduced energy bills

The ‘narrow’ plan

Contemporary examples



The following examples illustrate the spatial diversity which can be achieved with a one room deep plan without corridors. While the interiors reflect our contempory lifestyles, the external form has traditional characteristics

Contemporary open plan layouts with traditional form characteristics

The ‘one room deep’ cellular plan allows spatial diversity with opportunities for future expansion with minimum intervention to the existing floor layouts. Dual aspect rooms provide great natural daylight.

The deep plan

Alternative solutions in a rural context

It would be naïve to suggest that all future designs would utilize the narrow plan form. So in order to address the design issues relating to the deep plan form some illustrations have been included so as to avoid the associated design pitfalls.

Pattern Book Designs

One aspect of such deep plan designs is the roof scape which often dominates the elevation with proportions that are oversized and out of scale with the dwelling.

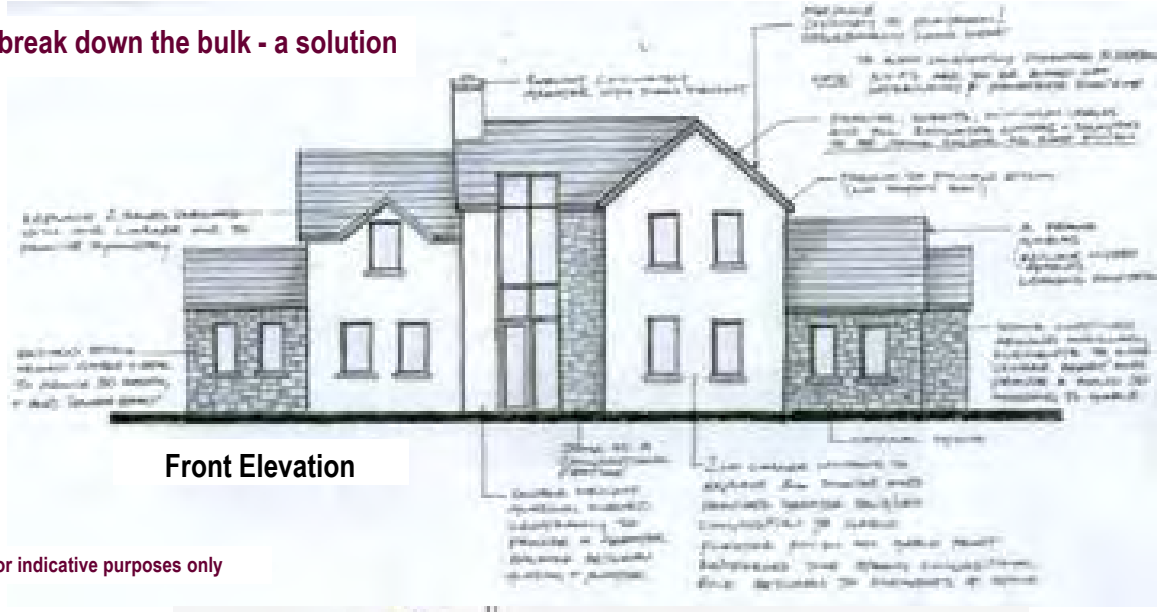
This is often compounded by poor attention to detail with large bulky eaves.

Reworking the deep plan.

In order to reflect the scale and character of the traditional farmhouse a maximum depth of **9m** for the plan was specified. This will allow a better proportioned house with traditional gables with ancillary utilities accommodated within lean-to roof.

These sketches are included to illustrate how it is possible to achieve floor area requirements, meet the building regulations and vernacular characteristics.

How to break down the bulk - a solution

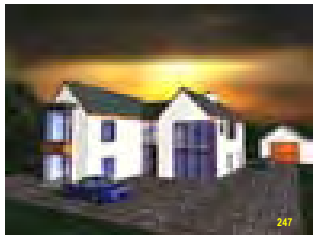


Front Elevation

Note : for indicative purposes only

Side Elevation

Ground Floor Plan



Workmanship -

Good detailing

Once the main design issues of Form, Scale, Massing and Proportion have been addressed, it is time then to turn our attention to good Detailing and Construction.

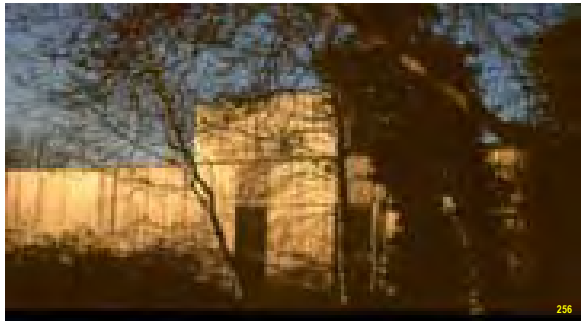
While a particular detail may seem insignificant, their cumulative effect can make the difference between a dwelling which appears solid and robust with attention to detail, and an ugly poorly constructed dwelling. It is imperative at this stage to pay attention to details which concern the external appearance and these should be discussed with the Builder and Architect / Designer.

Timber clad recessed enclosure (loggia) - a warm inviting space

A refined palette of materials, colour and robust details.

Details articulate the formal composition

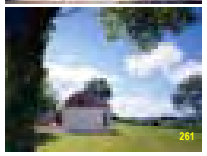
Robust materials for climatic exposure



Natural weathering of cedar cladding in context of tree screening

Roofscape -

Form, materials & detail



'The RoofScape'

It is often an overlooked element within design, yet the roof forms its own iconic and distinctive 'surface'.

The roofs of the rural countryside are often a simple profile with materials and colours adding to the distinctive profile of the landscape.

A 'Standing seam profile' - low pitch roof, to maintain views

Conservation and sensitive restoration with natural slate

'Colour & Texture

The various colours and textures associated with local vernacular roofs such as thatch, corrugated metal and slate add to the architectural quality and regional identity.

Thatch - golden hue colour

Corrugated Tin - oxide red (barrel vaulted haybarns)

Slate - blue/grey hue

Roof pitches varied according to the material used -

Thatch - 45-50 degrees

Slate - 35-45 degrees

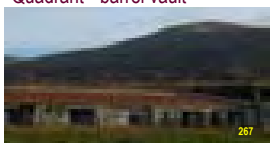
Corrugated Tin - 25-35 degrees

Where roof pitches are below these - they require a high degree of design skill and appropriate modern materials in order to avoid the problems of the past associated with flat or shallow roofs.

Low - pitch maintaining landscape views

Quadrant - barrel vault

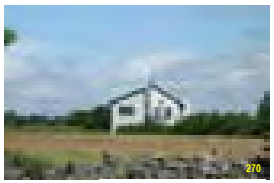
Grass roof - natural insulator



Sedum roof - landscape sensitive

Thatch

Corrugated metal - barrel vault

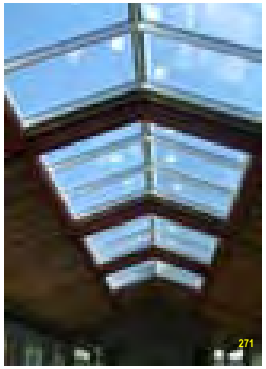


Double monopitch

Insulation

A crucial factor when designing today, are the statutory requirements relating to heat loss and requirements for higher levels of insulation and ventilation which require great attention to detail by Architects/Designers and Builders.

Rooflights - natural daylighting



Roofscapes - keep it simple !

Pitch roof

Mono-pitch

Barrel vault

Quadrant barrel vault

Inclined eaves

Inclined ridge

Avoid Complicated roofs =

They indicate- poor resolution of floor plan layout.

Roofscape -

Fascia, Verge & Rainwater Details

Flush verge, eaves and gutters matching colour of roof finish

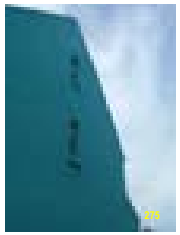
Good detailing

One of the most common details often overlooked relates to the junction between the roof edge and wall.

The majority of modern constructions call for 'low maintenance', and while this is a valid concern it often results in the use of White PVC for fascias and soffits.

A general rule of thumb is that the fascias, soffits and verges should be finished to a similar colour as the roof material. This will define the roof as a distinctive element and reinforce rural vernacular roof characteristics by having a more direct connection with traditional details.

Careful observation of traditional gables will reveal so much about traditional detailing in terms of climatic conditions and the need for robust and low maintainance detailing. These details can still be achieved today and have as much merit and validity as those that use PVC.



Raised concrete coping to gables

Flush eaves and verge

Slight projection of eaves and verge

Contemporary roof details - fascia, verge and gutters same colour as roof

A contemporary idiom which acknowledges robust traditional detailing

Flush verge, plaster eaves and rainwater gutter same colour as roof

Ornate Fascias & Tiles Apart from the exceptional Lodge or Arts & Craft house, ornate details should be avoided - as they will add to the visual clutter and are at odds with rural characteristics of simple, refined and robust detailing. Small tiles/slates should be used for smaller roofs such as porches, dormers and bay windows to avoid a boxy effect.

Rainwater Pipework small round rainwater goods which are the same colour as the roof material are recommended - as they maintain classic simple lines and are low maintainance. White plastic or box gutters and downpipes should be avoided.

The treatment of gable verges, soffits and fascias can be designed in one of four ways :

Flush Eaves and Verge

Slight Projecting Eaves and Verge

Concrete Coping

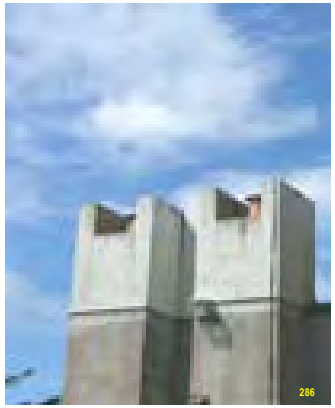
Raised Concrete Coping

X Consider maintenance issues + avoid bulky eaves boxes - poor attention to detail

Chimneys - robust design

Anchoring

Chimneys are an iconic element in that they are anchored to the ground yet project beyond the ridge, forming a symbolic relationship of dwelling and landscape.
Rural chimneys have a common characteristic of been robust and centrally located which also added to the regional identity.
Traditionally, chimneys were located along the ridge either flush at gables or within the plan.
Chimneys also projected proud of the gable but care was given to their proportions so as to avoid weak and mean looking stacks.



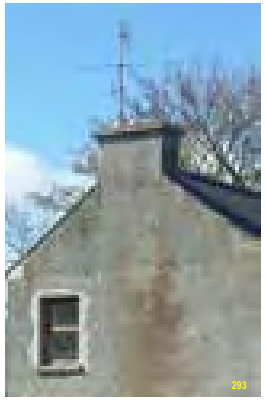
Robust detail

Contemporary chimney with stone providing a strong anchoring to site

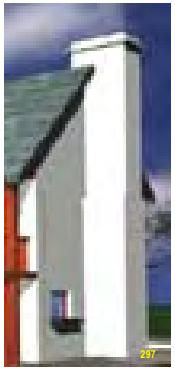
Contemporary chimney design - robust and iconic
Note : great skill is required so as to achieve this sense of proportion

Cappings

Chimney cappings also found expression with variations throughout the county, while modern precast versions and large elaborate designs are often at odds with these local characteristics.
Chimneys can also be utilized as vent stacks for both Radon gas and any internal toilets thereby avoiding unsightly surface mounted soil vent pipes.



Squat, short chimneys. Avoid long spindly types



Dormers - roof lights

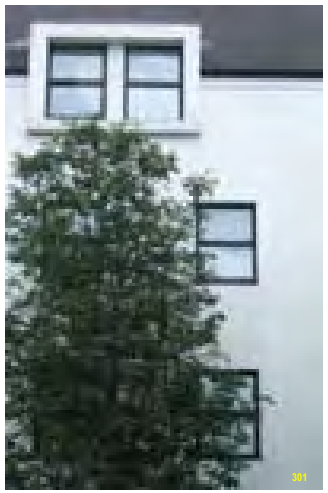
Dormers

These type of roof-lights have over the years become a dominant feature with single storey designs - where attic space has been utilized for extra accommodation, - the result of excessive roof spans from double room deep plans.

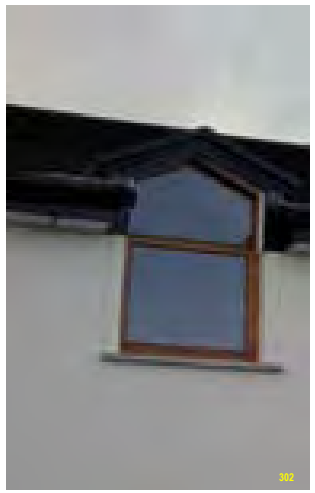
These dormers become a dominant 'feature' to the point of cluttering the roof which is often compounded by the use of white PVC cladding and boxy eaves.

Where there is a need for day-lighting to an attic space, it is desirable to use flush profile roof-lights as these provide a clean roof profile and give extra daylight over roof dormers.

Depending on location and design, it may be more desirable to allow a storey & half with eaves dormers rather than single storey with attic dormers. This will allow for a clean roof plane while maximizing attic floor space for accommodation. (refer to heights).



Eaves dormers - contemporary



Eaves dormers - traditional

A sensitive dormer / recessed balcony integrated within the profile of the roof-scape,

Integration -

These images illustrate a sensitive integration of roof-lights and patent glazing which maintain the roof -scape. Roof-lights provide up to 40% more daylight than the equivalent dormer area of glazing.

Roof-lights at ridge line - maintaining roof-scape and providing natural daylight

Dormers should only be considered with restraint and which follow these basic design principles :

- On public visable elevations—flush rooflights are preferable to multiple dormers
- Dormers may be appropriate to unseen public elevations but require considerable design restraint.
- Avoid the use of white PVC cladding - as a rule of thumb, the vertical cladding should be the same material as the main roof.
- Fascias and soffits should be minimized and again the same colour should be used as the main roof.
- Windows should also be the same colour as the roof material.
- Eaves / wall plate dormers are preferred but require considerable design.
- The number and location of eaves dormers along with rainwater downpipes should also be considered so as to avoid their proliferation and visual clutter.

X

Avoid excessive use of dormers - they dominate and erode the roof-scape. If used they should be located to rear elevations and clad entirely in the same material as the main roof avoiding a clutter of various materials and colours.

Windows - Solid to void proportions

'A window to our past'

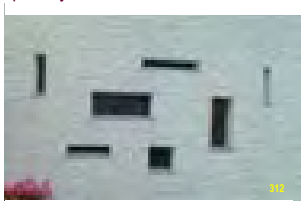
Windows are perhaps the single most important element of a home in that they provide a dual function by providing both natural light and framing views to the external landscape. In the past, window sizes tended to be small due to the limitations on manufacture. The result was a highly distinctive solid to void relationship between walls and openings which added to the refined and robust appearance of the rural home.

Aspect

Large openings should be reserved to those areas of the house for living which can maximize the benefits of passive solar gain from direct sunlight. These require careful siting and design as conflicts may occur between the need for daylight and privacy where the south aspect is facing the main road.

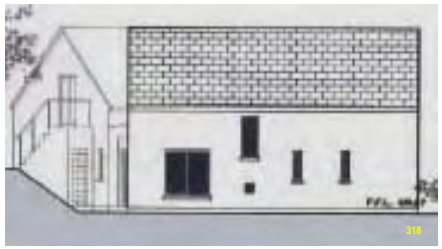
Consideration of both north and south aspect should determine the sizing of windows, which as a rule of thumb means large glazing to the south and small windows to the north to reduce heat loss.

Small openings to north aspect - to reduce heat loss + maintain privacy



Cluster of small openings - well proportioned solid to void

Large openings to south aspect - solar gain + natural daylighting



Precedent of well proportioned solid to void openings which inspire contemporary solutions of vernacular design and reinforce the regional identity.

Proportion + Emphasis

With advances in material technology and greater economic means, there are such few limitations in terms of size and shape. Recent trends have been to choose windows with increasing dimensions and a variety of shapes all assembled into random and discordant compositions which appear confusing and at odds with the rural characteristics as outlined below.

It is necessary for all habitable rooms to have a minimum window size which is 10% of the floor area. However this needs to be considered in the context of the elevations, so as to provide a high solid to void ratio and good proportions. The accepted practice of a rhythm of vertical openings is a tried and tested model. In exceptional cases where a high architectural design necessitates a horizontal opening to balance the overall elevation composition should this accepted practice be reconsidered.

Contemporary vertical + Horizontal compositions

A contemporary example above, illustrating that horizontal windows can provide a compositional balance with excellent solid to void proportions while framing the landscape beyond

Traditional vertical emphasis - with good solid to void proportions

Windows - Size, shape & materials

Corner window to frame a view - requires considerable design skill

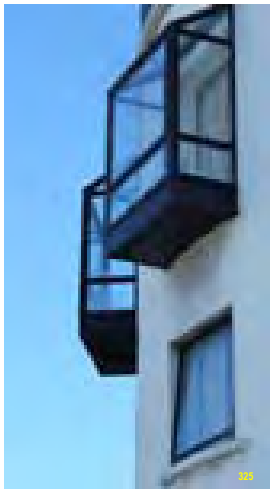
The choice of window type and its style can greatly alter the design and character of a house and it is therefore crucial that a clear understanding of traditional window types are highlighted so as to make informed choices which reflect these principles.

Size & shape

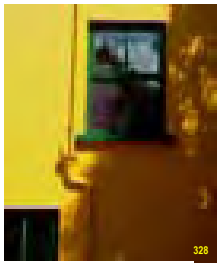
Picture Window - framing a horizontal landscape

The size of the window does not need to be small to respect tradition. **What is important is the proportions and a good solid to void ratio.**

Where there are horizontal or corner windows these should only be utilized only with a skillful Architect / Designer so as to achieve a harmonious balance and composition of solid to void and to frame a particular site view.



Projecting bay windows - these cantilevered bay windows illustrate the lightness achieved using glass, rather than heavy clumsy solutions which have stone, plaster, glass, pvc and tiles.



Material choice + colour

Issues such as maintenance free have taken precedent over traditional craftsmanship and attempt to imitate the style and material finish but do not achieve the visual depth.

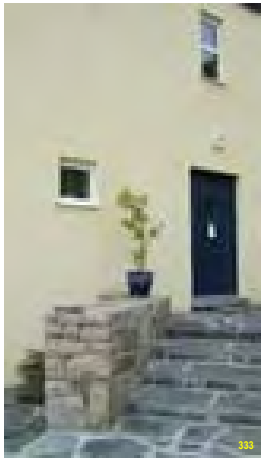
Poor window shapes, cheap material choice for short term economic gains and poor colour selection all compound the issue of unattractive windows.

Window design should add to the overall elevation composition with successful designs paying particular attention to such details.

Coloured aluminium / timber composite

With advances made in technology and the need for greater energy efficiency requirements, there is now a wide choice of windows types available. Consider the merits of each before selection.

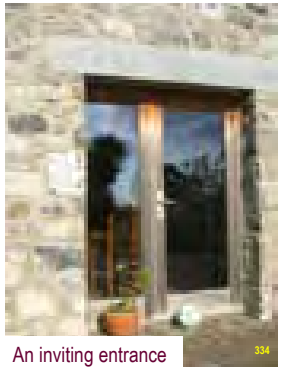
Doors + entrance porch



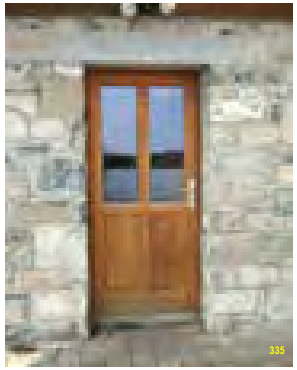
Front Doors - 'first impressions'

Traditionally these were the only means of expression to a house's identity, weather by painting with a contrasting colour or by the use of stained glass. Entrances often expressed the character of the house by means of colour and glazing to indicate an inviting or private presence.

Other aspects which are important considerations are security and **level access thresholds** which must comply with **part M** of the building regulations.



An inviting entrance



Porches - additive and recessed forms

A key characteristic to the entrance of rural housing is the porch. The porch provides a number of functions in that it creates a buffer or transition to the interior spaces, a means of shelter from the weather and forms an interesting visual reference to announce the main entrance.

Traditionally, the front door formed a direct access to the main living area from the exterior. In order to conserve energy it is now imperative to provide some form of transitional space, so as to conserve fuel and energy consumption.

The porch therefore plays a key role in both an aesthetic and functional sense and great care is needed in their design.

Porches do not necessarily need to be placed to the front of the home. Generally the location of the entrance should avoid the prevailing winds and therefore may necessitate the porch to be located to the side or rear.

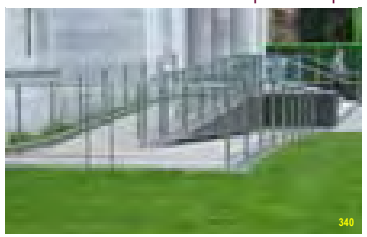
Consideration should also be given to the 'subtractive volume', as opposed to an additive volume, which can provide an interesting shadow play and give the elevation some visual depth.

Contemporary loggia - recessed forms

Iconic additive forms - announcing the entrance

Additive and recessive porch forms - providing an iconic focal point of arrival - the porch should not dominate the elevation but contribute to the overall composition.

Part M - Access Ramp - no step



Level access threshold - no step

Front door - Entrance porch criteria

- Reflect shape of opening.
- Openings should be well located and proportioned and provide an adequate source of natural light.
- Introduce visual interest by creating a design counterpoint.
- Take care in selection of materials. Historically they were painted but in recent years PVC has taken over. This presents issues in terms of aesthetics and sustainability in that they are difficult to maintain and recycle in an environmentally friendly way. Doors which are sourced from managed forests are the preferable long-term environmental solution.
- Allow sufficient access for ambulant persons and apply provisions for life-time design.
- The location of post-boxes, electrical meter boxes and external lighting should be discreetly located to avoid unsightly utilities to the front elevation.

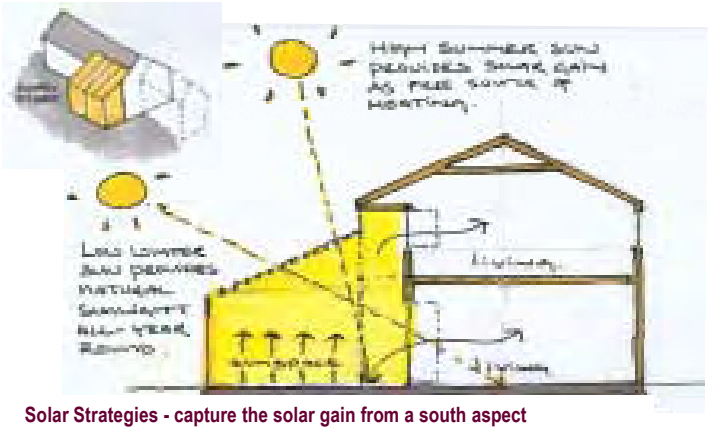
Sunspaces .

Integrating passive solar design

Design integration - sustainable living

New ecological house designs integrate such sunspaces within the main building form with a transitional volume internally which can be utilized in the summer to provide a free source of heating by passive solar gain and natural day-lighting and can be closed off during the winter months so as to conserve energy.

Ventilation requirements are also a necessary consideration with sun spaces so as to avoid over-heating problems in the summer months. They should therefore be designed so as to provide visual interest to the glazing proportions and provide the necessary passive ventilation.



Solar Strategies - capture the solar gain from a south aspect

Recent trends or design features to both new and existing houses have been the introduction of conservatories - while they have a key functional role in terms of passive solar gain the majority of conservatories are merely add-on features and compounded by the fact that little consideration has been given to their purpose by siting them to the east or north.

Their transparent nature can provide a visual counterpoint to the more solid appearance of the main house, but this requires great design skill.

Conservation of Fuel and Energy

Current building regulations and EU directives seek to conserve heat losses and reduce carbon emissions by increasing insulation standards and applying heat energy ratings. With ever decreasing fossil fuels, new means of heating and energy conservation will need to be considered and integrated into design as a long term sustainable solution.

Sub-urban - projection

Avoid conservatories which are merely 'add - on' features, which have no regard to their orientation, design-integration or solar gain. Poorly orientated conservatories will only compound the problem of heat losses in winter and excessive solar gain in summer, making the space un-habitable for up to six months of the year.

Contemporary examples which illustrate good design integration

Finishes - Regional identity


Sense of Identity

A strong design characteristic of our built heritage has been the use of locally sourced building materials which define a regions character.

This indigenous approach and an economy of means fostered by local craftsmanship, formed a regional vernacular identity which is a legacy and benchmark that should be reinforced by a modern idiom and not eroded by pastiche.

Areas along exposed coastal locations can be distinguished by there iconic white washed rendered walls. A lime render was often applied to the stone walls which allowed the walls to breath. The recent trend of removing a render finish to expose the stonework is a practice which should be discouraged as the buildings interiors are vulnerable to water ingress. This practice also encourages the use of stone 'veneer' cladding to new houses which are 'non functional features' and therefore erode the clarity of our vernacular buildings.


Materials + Technology

One of the most immediate visual references which define a regions character is the use of indigenous materials. Thatch roofs were in the past an iconic example, with few remaining examples.

As our economy of means evolves - so to will the advances in materials and technology. Our buildings are a record of this material evolution which should register these advances yet retain a sense of rural identity.

Natural slate / cedar timber cladding / timber windows / pre-coloured render


Local stone / timber windows / limestone lintels / natural slate


Cedar cladding / timber windows

Zinc galvanised metal cladding


This photo illustrates the evolving nature of design, building technology and energy conservation. The form may be at variance to rural design yet compensated by high levels of energy conservation and is sited in a natural tree screened area.

'Less is More'

When choosing external finishes they should meet certain criteria -

- Ensure they are robust enough for their location.
- Ensure they are selected to compliment and assimilate the natural and rural surroundings.
- The amount and variety of finishes should be minimized - 'the house should not appear as an advertisement for the builders merchant'. The proliferation of material features can result in a cocophony effect - remember the overall composition should read as one of clarity, robustness and refinement.

Contemporary rural house - refinement, clarity and robustness of detail

X

Avoid frills to compensate for poor design

Stone - Geology, craft and material

Craft and Tradition

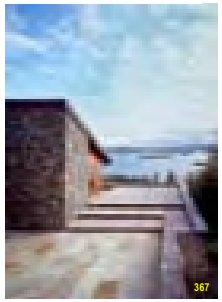
One of the most distinctive characteristics of the rural landscape is the use of stone wall field boundaries. Variations occur due to the geological base of a particular region which vary from the carboniferous limestone of the Burren landscape in the south of the county, to the variety of granite within Conamara.

Stone buildings were distinguished into two main categories - that of the cut stone structures of Banks, Courthouses and Churches, with a less refined stone to utilitarian buildings such as barns, mills and farm outbuildings.

This allowed for a clear distinction between buildings and their function through the use of appropriate materials.

Stonework is such an important indigenous craft and apart from boundary stonewalls can provide attractive alternatives and should be encouraged in the following circumstances.

Contemporary use of stone



Appropriate use of Stone - compositional element

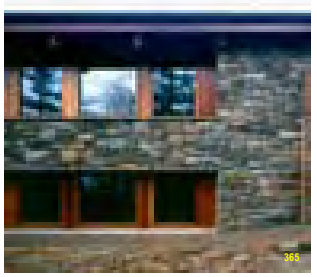
- The use of stone cladding to ancillary wings and boundary walls will provide visual contrast, reduce the apparent bulk and anchor the dwelling to the landscape.
- Some landscapes which are visually vulnerable will benefit from the use of the local stone as the main external finish and help to blend and assimilate their natural surroundings.
- In more modern solutions the interplay between stone and glass can provide interesting compositions of heaviness and lightness.
- When choosing materials for external finishes, it is important that they portray an honesty and are not applied 'veneers' to give the effect of the real thing. Materials should be allowed to weather with a natural patina which can add to the character of both the building and landscape.

Stone ancillary forms

Poor practice - do not remove lime render to expose stone.

'Anchoring' with stone - use only indigenous stone to area

Stone which is indigenous to a particular area should only be used in that area. East Galway's geological base is limestone whereas Conamara's base is granite. Part of the character which defines an area is its stone and it would therefore be considered incongruous to build with limestone in Conamara and granite in East Galway.



These photos illustrate the correct use of local stone - which define regional identity and reinforce the indigenous craft of stone masonry.

Colour - External treatment

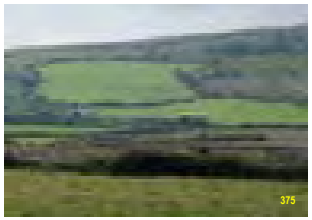
Hand in hand with the tradition of rendering the external walls is the use of colour to provide a distinctive bench-mark in the landscape. A strong tradition with our vernacular cottages was the use of white-wash contrasted with strong colours to highlight particular elements such as doors and windows.

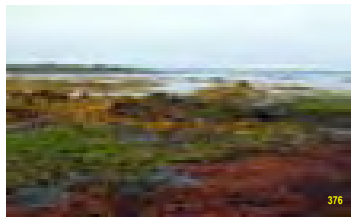
The walls should be generally painted in light colours which contrast with the dark colours of the roof-scape and particular design elements which compliment the overall colour composition.

Colour & Tradition

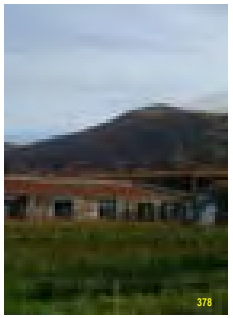
These pictures illustrate the use of light colour rendered walls with individual elements such as doors and windows painted in bold and vivid colours.

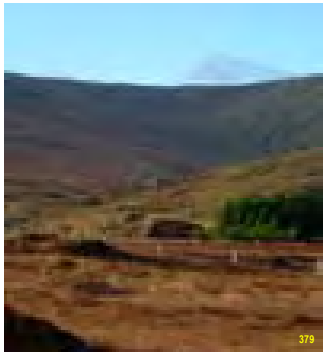
Natural material finishes - blending with landscape hues





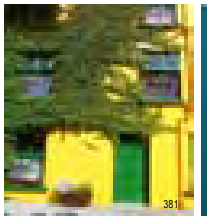
Today the choice of colour available is unlimited and as such, great care is needed when considering an appropriate colour. As a general rule of thumb, the selection of earth tones will best suit the natural landscape and when selecting, it is best practice to first prepare a sample chart of the colours and hues of the natural landscape near the site and its seasonal changes. This may inspire the selection of not just the colours but also the choice of material finishes which will compliment the seasonal variations of the natural surroundings.

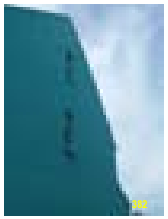




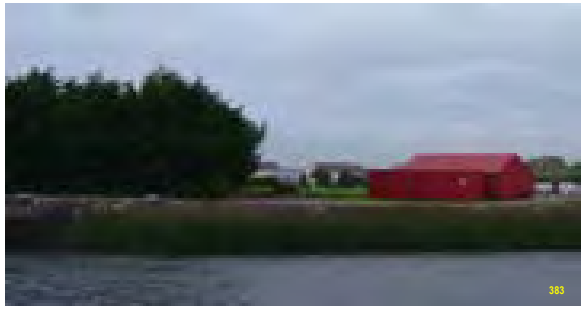
These pictures illustrate successful use of natural materials which compliment the natural surroundings and blur the contrast between building and landscape. Where visual amenity is high, choice of external materials is very important in terms of durability and assimilation.

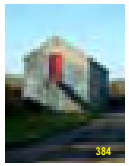
Avoid strong colours - more suited to urban context

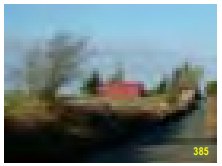




When selecting colours, it is important to consider the surrounding context. Strong or garish colours work best in urban streetscapes but appear incongruous in a rural landscape setting. There are occasions where complimentary colours work in the countryside. Such a precedent would be the iconic red corrugated barn set against a green landscape.







Trees & shrubs

The following information is extracted from a publication by An Foras Forbartha - part 3

'Trees, shrubs, ground cover plants and climbers for informal landscaping in areas of natural beauty or amenity '. Prepared by Niall Hyde and Ann C.M. Quinn.

A revised edition is available from the NRA website

Introduction

Informal landscaping could be defined as the use of plants to create a 'naturalistic' scene. Quite often the object of planting would be to protect the existing natural beauty of the area by providing screening for some unsightly development or by helping to integrate new development, for example buildings and roads, with the existing landscape. For this reason the plants included in this list are largely native to Ireland and the remainder appear 'natural' to the untrained eye. Many plants which undoubtedly grow in Ireland such as **Phormium tenax** or various **Eucalyptus** species are not included in the list as these look exotic and would in themselves be as obtrusive as the development which it is desired to 'blend in' with the landscape.

While an effort was made to make the list as extensive as possible (by consulting all the various sources of expert knowledge) it is not fully comprehensive and should not be regarded as an officially approved list. There are undoubtedly plants absent from this list which are appropriate for informal landscaping and which are not included.

This document is a basic list of suitable plants for different situations. Advice on the selection of species; planting and maintenance for any specific site should be obtained from a landscape architect and/ or a Horticultural Advisor.

Exposed situations beside the sea

In exposed coastal areas the following are the species which are most likely to succeed. Almost all of them would benefit in the first few years from protection by an artificial wind barrier, e.g. a timber lath screen. The species are selected for their tolerance to wind and to salt-laden atmosphere. Those indicated by * are regarded as being the most outstanding plants for exposed maritime situations. There are places on the west coast of Ireland where, because of conditions of severe exposure, no trees or shrubs will grow.

***Acer pseudoplatanus** (Sycamore)

***Alnus glutinosa** (Alder)

***Atriplex halimus 'Portulacoides'**

Elaeagnus macrophylla pungens

Escallonia macrantha

***Euonymus japonicus**

Fraxinus excelsior (Ash)

Fuchsia magellanica

Hebe brachysiphon

***Hippophae rhamnoides** (Sea Bushthorn)

***Ilex aquifolium 'Var madarense'**

***Tamarix species**

***Ulex europaeus** (Gorse)

Lycium chinense

***Olearia macrodonta 'Traversii'**(Daisybush)

Picea sitchensis (Spruce)

***Pinus nigra 'Var maritime'** (Pine)

***Pinaster radiate**

Populus alba (Poplar)

Quercus ilex (Evergreen Oak)

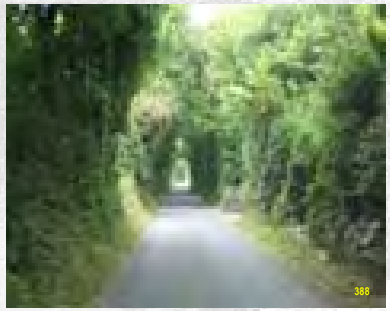
Salix alba (Willow)

Sambucus nigra (Elder)

***Senecio greyii**

Sorbus intermedia

Sorbus aria (Mountain Ash + Whitebeam)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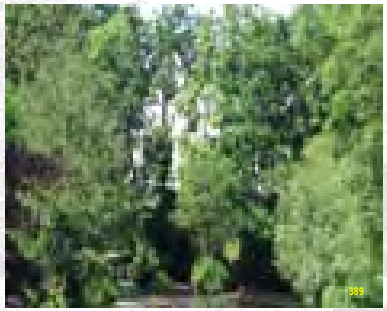
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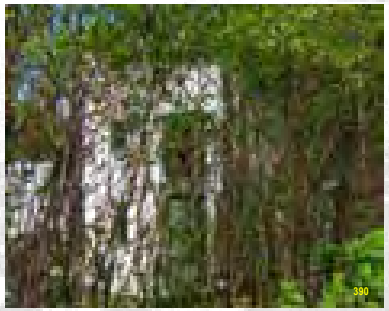
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Sand Dunes

The following species have been selected on the basis of their tolerance to wind, salt spray and to well-drained and almost pure sandy conditions of dune systems. **Ammophila arenaria** is most suited for areas of blowing sand, as it needs a constant supply of fresh sand. Species such as **Alnus glutinosa** and **Salix repens** are suitable only for sand slacks with a high water table. The other species are best in the more stable mature dune areas. **Suaeda fruticosa** has been used to stabilize shingle banks.

Alnus glutinosa (Alder)
Ammophila arenaria
Atriplex halimus
Clematis montana
Euonymus japonicus
Hippophae rhamnoides (Sea Bushthorn)
Lupinus arboreus (Bush Lupin)
Lycium chinense
Pinus nigra 'Var maritime' (Pine)
Pinaster
Radiate
Rosa rugosa 'Spinosissima'(Wild Roses)
Salix repens (Willow)
Suaeda fruticosa
Tamarix species

Heavy Clay Soils

The following species are suitable for heavy clays and poorly drained sites

Acer pseudoplatanus (Sycamor)
Alnus glutinosa (Alder)
Carpinus betulus (Hornbeam)
Chamaecyparis lawsoniana
Corylus avellana (Hazel)
Crataegus monogyna (Hawthorn)
Fraxinus excelsior (Ash)
Ilex aquifolium (Holly)
Picea species (Spruce)
Populus species (Poplar - requires setback)
Quercus cerris 'Robur '(Oak)
Salix alba (Willow)
Sambucus nigra (Elder)
Thuja plicata

Areas with high water table and subject to flooding

None of the following species will grow in stagnant waterlogged conditions. They are, however, the plants which are most likely to grow on sites with a high water table, subject to occasional flooding, or on banks near moving water.

Alnus species (Alder)
Cornus alba 'Sanuinea' (Dogwood)
Picea species (Spruce)
Taxodium distichum
Populus species (Poplar)
Rhamnus frangula
Spiraea salicifolia
Salix repens (Willow)

Peat and Boggy Areas

Alnus incana (Alder)
Betula species (Birch)
Cornus alba (Dogwood)
Erica species (Heather)
Myrica gale
Picea species (Spruce)
Pinus contorta / sylvestris (Pine)
Salix species
Sorbus aucuparia (Mountain Ash/Rowan)
Spiraea salicifolia
Ulex species (Gorse)

Dry Banks

Cytisus scoparius (Scotch Broom)
Genista hispanica (Spanish Broom)
Hedera helix (Ivy)
Helianthemum nummularium (Rock rose)
Choisy a ternate (Mexican Orange Blossom)
Juniperus species (Juniper)
Spartium junceum
Ulex species (Gorse)
Vinca species (Periwinkle)
Alchemilla species


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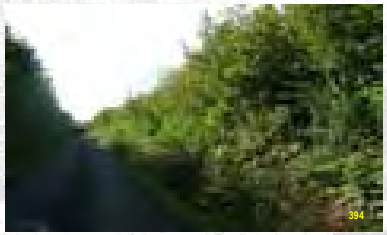
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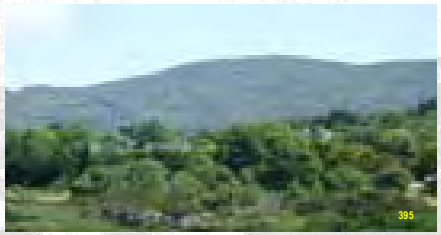
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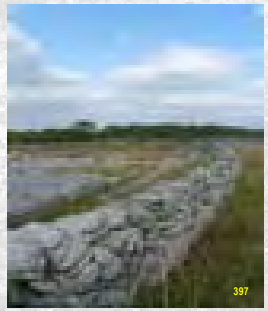
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Shaded Areas

The following plants are tolerant of shaded conditions and are suitable for planting under trees where full visual screening is required. Plants preceded by * withstand heavy shading and the remainder will tolerate partial shading.

Abies alba 'Grandis'

***Buxus sempervirens** (Box)

Carpinus betulus (Hornbeam)

Corylus avellana (Hazel)

***Euonymus japonicus 'Radicans'**

Fagus sylvatica

***Griselinia littoralis**

***Ilex aquifolium** (Holly)

Hedera helix (Ivy)

***Vinca species** (Periwinkle)

***Lonicera nitida**

Pittosporum tenuifolium

Platanus acerifolia

***Ruscus aculeatus**

Prunus laurocerasus (Laurel)

Tsuga heterophylla

Hedgerows

These trees and scrubs are suitable where it is desired to plant a boundary which will fit in visually with surrounding hedgerows, which will fit in visually with surrounding hedgerows, which should first be examined in order to determine local hedgerow species. These species should be predominant in the new planting

Acer campestre / pseudoplatanus (Field maple / Sycamore)

Alnus glutinosa (Alder)

Carpinus betulus (Hornbeam)

Corylus avellana (Hazel)

Crataegus monogyna

Euonymus europaeus 'Japonicus'

Fraxinus excelsior (Ash)

Hedera helix (Ivy)

Ilex aquifolium (Holly)

Lonicera periclymenum (Honeysuckle / Woodbine)

Malus pumila (Crab Apple)

Prunus avium 'Spinosa' (Bird Cherry)

Quercus robur (Oak)

Rhamnus cathartica

Rosa canina / eglanteria (Dog rose)
/ rugosa

Salix species (Willows)

Sambucus nigra (Elder)

Sorbus aria aucuparia (Whitebeam + Rowan)

Ulex europaeus (Gorse)

Virburnum lantana (Guelder Rose)
opulus

Populus alba (Poplar)

Note : Poplar Trees should not be grown close to public roads, driveways or buildings, as some species shed branches frequently when mature.

Exposed Upland Areas

Acer pseudoplatanus (Sycamore)

Betula species (Birch)

Calluna vulgaris (Heathers)

Corylus avellana (Hazel)

Crataegus monogyna (Hawthorn)

Erica species (Heathers)

Ilex aquifolium (Holly)

Larix species (Larch)

Pinus contorta (Pine)

Prunus spinosa (Blackthorn)

Quercus cerris (Oak)

Salix caprea (Willow)

Sorbus aucuparia (Rowan)

Ulex gallii (Gorse)

Viburnum lantana

Fast Growing Plants

The following plants, given the site conditions appropriate to the plant, can be expected to put on approx. 18'' in height per annum. Plants preceded by * can be expected to put on 24'' + per annum.

Trees

Acer platanoides / pseudoplatanus (Maple / Sycamore)

Alnus glutinosa (Alder)

***Populus canescens** (Poplar)

Cupressus macrocarpa

Fraxinus excelsior (Ash)

***Larix leptolepis** (Larch)

***Picea sitchenis** (Spruce)

Pinus pinaster (Pine)

Pinus radiate (Pine)

***Populus alba** (Poplar)

Populus robusta (Poplar)

Populus serotina (Poplar)

Robinia pseudacacia - brittle, needs shelter

***Salix alba** (White willow)

Salix caprea (Pussy willow)

Shrubs

Buddleia davidii (Butterfly bush) - good for wildlife

Cotoneaster frigida 'Glaucophylla'

Elaeagnus umbellate

Prunus spinosa (Blackthorn)

Sambucus nigra (Elder)

Euonymus europaeus

***Olearia macrodonta** (Daisy bush)

traversii

Escallonia x langleyensis

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