



DUMFRIES AND
GALLOWAY COUNCIL

Local Development Plan

Supplementary Guidance

Adopted 23rd July 2015

Design Quality of New Development

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1.0 Introduction

“Opportunities for design to make successful places are taken, or missed every day.”
(Designing Places)

1.1 This document provides detailed guidance in support of Local Development Plan (LDP) Policy OP2: Design Quality in New Development which relates to the design and development of buildings, places and spaces in Dumfries and Galloway.

1.2 Dumfries and Galloway Council’s vision statement is; “to make Dumfries and Galloway the best place in Scotland to live, learn, work, visit and grow.” One of the challenges to delivering this vision is to create better and safer places in which people want to live and work. Any future development will also have to be sustainable and designed to high standards, based on a detailed assessment of the site and its surroundings. Bland unimaginative new developments that are out of keeping with their surroundings will not be acceptable. The Council wishes to create high quality sustainable developments in well designed and well-connected places which are welcoming, pleasant, lively

and sustainable and ultimately create places where people want to be.

1.3 Dumfries and Galloway has a wide variety of towns and villages with their own character and sense of place with different architectural styles, building materials and landscape setting. It is accepted that every site, settlement and surrounding area will be different, and that any potential development should be designed with consideration of its own characteristics. Consequently, this guidance establishes key design principles and guidance on the design process rather than setting rigid or prescriptive standards that must be adhered to in order to raise the standard of new development throughout the region.

1.4 This SG sets out design principles and approaches to ensure the delivery of appropriately designed developments across the region. The document should clarify, for all those involved in the design and construction process, what the Council expects of new developments and to provide developers and agents with the necessary tools to help deliver better places for people to live, work and relax in. It is intended for

use by anyone proposing a building project, however small, as well as developers, architects and designers, local councillors and the community. **All elements of this guidance have to work together to produce quality places and its individual sections should not be read in isolation.**

1.5 The SG provides a basis for consideration of the design of new development of all types and scales, from housing to retail, and from commercial to community uses and of developments located in rural to more urban settings. It also covers movement, open space, the public realm and sustainability and energy conservation. Design is a material consideration in determining planning applications and planning permission may be refused solely on design grounds.

1.6 Developers should demonstrate through the Design and Access Statement (where required) how they have achieved or responded to the relevant design principles outlined in this SG. General guidance notes for producing Design and Access Statements are available to view on the council website www.dumgal.gov.uk.

Why should we raise design standards?

“We cannot afford not to invest in good design. Good design is not just about the aesthetic improvement of environment, it is as much about improved quality of life, equality of opportunity and economic growth.”

(The Value of Good Design, CABE)

1.7 Good design is not simply a matter of creating attractive buildings and places but about making places that work and where people want to be. The quality of what we build in our towns and villages impacts on everyone and everything. Successful, well designed places are essential for improving quality of life, they tend to be valued more by those who live and work in an area and are more appealing to visitors. Good design can:

- influence the local economy by making it a more appealing place to live, work, and visit. In addition, good quality places are usually cheaper to develop, easier to maintain, and attract investment;
- create safe, welcoming and

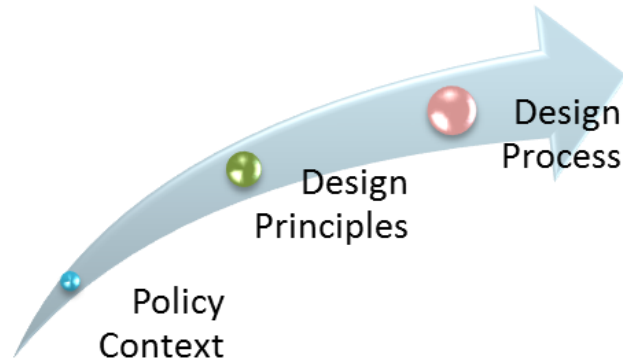
- adaptable places where people want to spend time, which promote a sense of community and which last for a long time;
- promote active, healthy, inclusive lifestyles by providing attractive and accessible green spaces, and through layouts which encourage walking and cycling;
 - create sustainable places that contribute to people’s health and wellbeing and function well for the purpose they were designed for whilst being sufficiently robust;
 - reduce energy needs by adopting sustainable energy measures; and
 - boost confidence and promote greater community pride and ownership in an area. Conversely poorly designed development and public spaces often have precisely the opposite effect.

1.8 Good quality design need not be more expensive, it can result in savings through economies of scale with higher densities, more welcoming and friendly environments, sustainable development and better connected places.



Tanpits, Kirkcudbright

How to use this document



1.9 This SG has been set out in three parts, as follows

Part 1: Policy context - This section outlines the relevant national and regional policy context in which this guidance sits, plus associated guidance to help ensure that the relevant planning documents are considered when designing projects.

Part 2: Design principles - This section establishes key design principles for any type of new development with examples and guidance on implementation. These design principles are labelled i – xxiii and are listed in Appendix 2.

Part 3: Design process - This section sets out a design process which, if followed, should lead to design solutions which take into account and incorporate the design principles set out in Part 2 based on a thorough analysis and detailed understanding of the site and its surroundings.

Design Principles

1.10 The design principles are set out under topic headings relating to each criteria of the policy OP2 (please see paragraph 2.3 below). Each topic is laid out as follows:

topic title	topic introduction	key points for that topic	design principles
7. Public Realm	<p>7.1 The public realm is made up of all the places which are visible and generally accessible by the public, including streets, squares and parks as well as front gardens and parking areas. A high quality public realm has far reaching benefits in terms of the health and well-being of residents through enhanced quality of life. Well-designed public spaces help to ensure that developments are socially inclusive, functional, and sustainable, and help to create a strong sense of place. Designing Streets states that streets are not just thoroughfares that people move up and down, but they are also spaces where people can gather to socialise, play, spend time, etc.</p> <p>7.2 The public realm needs to be considered as an integral part of the design process. The landscape framework should be used to create the main structure for the public realm, as successful developments will demonstrate a well considered and coordinated use of hard landscape and planting. This will allow for a clear interpretation and understanding of what the public spaces (the streets, squares, and green spaces) will be like and how they will be connected to each other.</p>	<p>Key Points Successful developments:</p> <ul style="list-style-type: none"> incorporate a hard landscaping scheme that reflects its local distinctiveness and the character of the site include landscaping schemes that are visually attractive and are robust. <p>xi) Within the public realm the choices of hard materials should reflect the intrinsic street character of the surrounding area whilst also achieving continuity of movement, flow and, with it, connectivity</p>	<p>and incorporated into proposals to reinforce these aspects and will give the development a sense of place and local identity. In order to achieve both a high quality and a hard-wearing public realm the design should be locally distinctive.</p> <p>Examples of good quality public realm in a public square in Coblescove, above, and within a residential scheme at Appuldurham, Cambridge, below</p>
		<p>7.3 "Hard" landscaping refers to the man-made elements of a landscape scheme including paving, steps, ramps, walls and fencing, tree grilles, street furniture (bollards, seating, railings and signage, etc.) and public art. In successful schemes hard landscaping will be used sensitively and will not over-dominate spaces or result in visual clutter. The most successful landscaping schemes are often those that are understated and restrained.</p> <p>7.4 Good public realm design will emerge from a creative response to site analysis and context appraisal. Existing landscape elements should be retained</p>	

35

explanatory text for each principle

2. Part 1: Planning policy context

Primary Policy Context for this Supplementary Guidance



2.1 The guidance supplements the requirements of national and local planning policy. The diagram to the left illustrates the relevant planning policy context.

2.2 The SG should not be read in isolation but in conjunction with other SGs produced by the Council. The guidance within this SG will be amended through future revisions to take account of changes to national guidance, evolving design ideas, technological advances and people's changing needs. Other additional supplementary guidance may be produced in the future which are not listed but will also be relevant to design quality. This SG is a material consideration in assessing planning applications.

2.3 LDP Policy OP2 sets out the criteria for design quality of new development. This SG helps clarify what is expected to be met in each of the criteria within OP2. Each criterion has been provided a topic heading which is shown to the right of the policy below under which the Design Principles have been arranged (the principles are all listed in Appendix 2).

Policy OP2: Design Quality of New Development reads as follows:

Development proposals should achieve high quality design in terms of their contribution to the existing built and natural environment contributing positively to a sense of place and local distinctiveness. Where relevant proposals should:

- relate well to the scale, density, massing, character, appearance and use of materials of the surrounding area and in so doing be sympathetic to the local built forms as well as respecting the important physical, historic and landscape features of the site and its vicinity;
- be designed with people, not vehicle movement, as the primary focus, incorporating the principles set out in 'Designing Streets' and where possible increase connectivity to nearby places, paths, streets and open spaces;
- ensure that any open space required is of high quality, appropriate and integrated to the development and where possible provides linkages to the wider green network;
- incorporate a hard landscaping and planting scheme which includes the proposed treatment of existing trees and other landscape features;
- be designed to create safe, accessible and inclusive places for all people which are well integrated into existing settlements and respect the established historic layout and patterns of development, that are also adaptable to future changes; and
- integrate sustainable energy measures.

A masterplan and/ or development brief may be needed for some sites, the site guidance outlines where this is required.

Built Form and Character

Movement and Accessibility

Open Space

Public Realm

Safe and Inclusive

Sustainable



Accordia, Cambridge

**“Design is not just what it looks like and feels like.
Design is how it works.”**

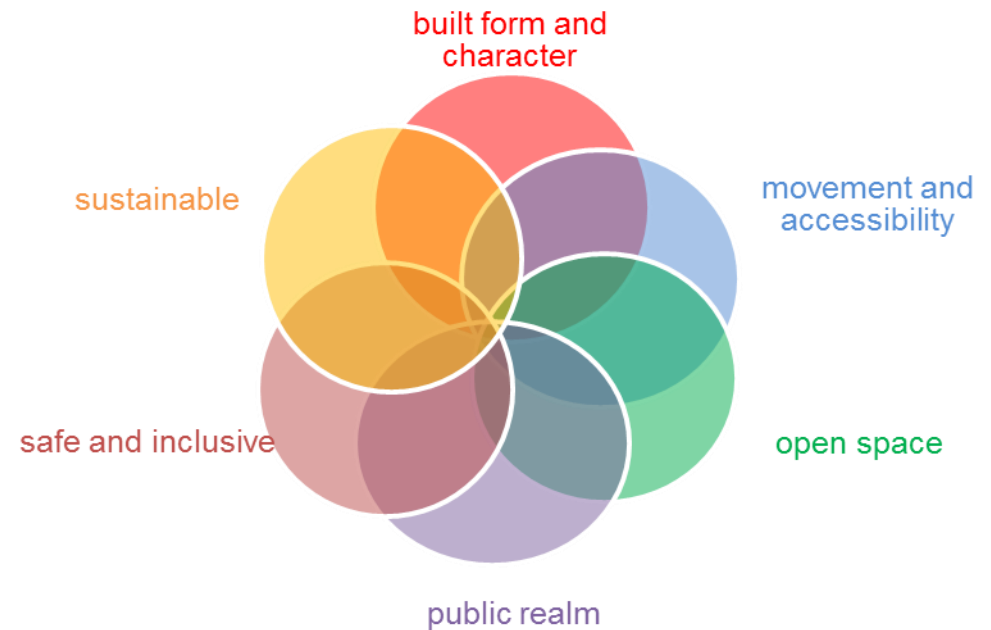
(Steve Jobs)

3. Part 2: Design Principles

3.1 The most successful places, those that thrive socially and economically, tend to have the same six qualities in common. These qualities are at the heart of good design and are shown in the diagram below. Successful design is a matter of balancing differing interests and opportunities in a way that is right for that particular place.



3.2 This section sets out key design principles and criteria for creating good quality and successful places within Dumfries and Galloway arranged under the following topic headings linked to the criteria in policy OP2 although there will be some overlap between them:



3.3 The design principles will be used by the Council to assess proposals for new development in the region. The guidance explains what is required under each design principle. The extent to which a development will need to apply these principles will vary according to the scale, complexity and sensitivity of the scheme. It is recognised that every scheme will have different challenges, different design priorities and specific design qualities that respond to its particular circumstances. It should be noted that there is no 'right solution' to any design challenge and there will always be other design approaches that may satisfy the principles.

3.4 Applicants will need to demonstrate how their proposals have reflected the design process and responded to the design principles within this guidance document. This could be explained through the application drawings or, where required,

in a Design & Access Statement. Where a development proposal takes a different approach than the Design & Access Statement should provide justification and explain how it meets the requirements. Where a Design and Access Statement is not required a Design Statement may still be helpful to explain the design choices that have been taken.

3.5 All of the design principles can be applied to residential developments but may also be applicable to other forms of development, to a greater or lesser degree.



Moffat

**“Growth is inevitable and desirable, but destruction of community character is not.
The question is not whether your part of the world is going to change. The question is how”**
(Edward T. McMahon, Urban Land Institute)

4. Form and Character

4.1 New development, regardless of its scale, should be appropriate to the local context. It should respect the important physical and landscape features of the site and its vicinity in order to integrate development well into the landscape. Every site will have built form or character of value associated with it, whether it is on the site, adjacent to the site or in the settlement/area to which it relates. Incorporating such elements into the overall development will give an understanding of local character and appearance and add to a sense of place. This section outlines key considerations in the analysis of landscape character and built form:

Key Points

Successful developments:

- retain and incorporate existing site features and characteristics
- respond appropriately to wider landscape character
- protect and enhance attractive spaces and vistas
- respond positively to landform and do not result in significant levelling off or use of mounds, platforms or underbuilding
- usually avoid unnatural land changes and the use of retaining wall structures but instead incorporate slopes into the overall design

- incorporate key views, both into and out of the site
- use views and landmarks to assist in orientation
- reflect local building forms and proportions
- ensure that the size and pattern of development is in keeping with the local area
- respect and complement existing building materials in the area
- seek to create a positive edge when located on the edge of settlements
- incorporate adequate and convenient bin storage facilities

i) Proposals should create places that respect the landscape character, including topography, and visual qualities of the site and surrounding area, retaining and, where appropriate, enhancing existing landscape features.

Landscape character:

4.2 The term 'Landscape character' is used to describe distinct patterns and combinations of elements including geology, landform, soils, vegetation, hydrology, land use, landscape features, visual qualities, urban form and architectural style which combine to create 'landscapes' or 'townscapes'. The regions' unique and diverse landscapes

contribute to its identity and, at a more local level, help create settlements in places with their own unique sense of place.

4.3 The region's rich and varied landscapes have, over centuries, shaped how settlements have developed over the centuries, the style and form of buildings that have been constructed and materials used. These relationships are integral to how we see our towns, villages and countryside today and in our understanding of how new development can respond appropriately to the wider landscape context.

Dumfries and Galloway landscapes



4.4 Successful developments support local distinctiveness by taking the opportunities available to integrate the proposal into the site, its setting and the way it relates to and reflects the unique and enduring features of the surrounding area. They should create places of character based upon an appreciation of the site and surrounding area, responding positively and adapting to its natural and built context. Understanding a site and its context is crucial to the creation of development that contributes to high quality landscapes and townscapes of the future by capturing the 'spirit of a place'.

4.5 There are many important features that contribute to the character of a place and can ensure that a place is rooted in its setting. These include:

- geological setting – the relationship between materials, location and building function
- landscape character and patterns of land husbandry (field boundaries, etc.)
- topography and its influence on the townscape
- land use patterns associated with local needs, traditions and industries
- architectural forms, often linked to

- traditions related to local sources of materials and craftsman-hip place names connected with local historic associations, land ownership, topography and trades (From Barton *et al*, Shaping Neighbourhoods, 2010)

4.6 The relationship between landscape and the built environment creates the diverse and distinctive settlements which are such an important part of the region's landscape character. Landscapes are constantly changing, however even the smallest development, particularly within rural areas, can have an adverse impact on local landscape character if the siting and design do not take account of the local setting.

Topography:

4.7 Understanding the landform and topography of an area is essential to ensuring development can fit into the wider context. Few sites will be perfectly flat; slopes, ridges, hummocks and rocky outcrops all have implications for layout and design as they will influence the orientation of development, steepness of streets, sunlight and effectiveness of passive solar design, the extent of engineering solutions such as retaining walls or drainage, and shelter from the

elements. Such natural features contribute to local distinctiveness and any new development should seek to complement the natural contours of the site rather than 'iron out' irregularities.

4.8 Traditionally buildings, particularly individual buildings in rural areas, took account of topography and the scale of the landscape features. Settlements were typically located at the foot of a slope for shelter or avoiding wetter low-lying ground. Modern construction methods and materials have allowed developers to ignore these contextual elements often to the detriment of local character and distinctiveness, for example:

- **Mounds** - building on artificial mounds or platforms can make a development unduly prominent.



- **Under-building** - can create extensive areas of blank walls

further increasing the visible mass of a building.



size and materials are of particular importance on sloping sites where roofs become more visible and prominent and when considering development on a steeply-sloping site.

A return to the traditional approach of respecting the existing ground levels should be made wherever possible in order to avoid such problems.

- **Levelling** - undulations to create large flat development plots can create sterile 'anywhere' places of uniformity and ignores the contribution of existing topography to local character and distinctiveness.
- **Retaining walls** - designing gardens to be as level as possible can result in large, 'un-natural' level changes on sloping sites. The use of high retaining structures can be unsightly and expensive whereas using terracing or more gradual slopes can create more interesting and varied spaces which complement rather than detract from the local landscape.
- **Roofscape**; the design of the pattern of roofs in terms of pitch,



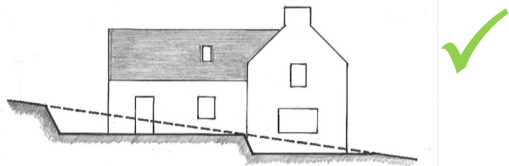
Above and below: Poor integration of slopes and use of retaining walls on modern developments which can be unattractive, overbearing and block natural sunlight



4.9 Slopes, level changes and undulations are a positive asset to development and can be used to create more attractive, varied and interesting developments for example:

- when used to create visual interest and to define specific spaces such as informal play areas or separating private gardens from adjacent pavements:
- split level buildings or stepping structures such as walls or railings down rather than running parallel with the slope;
- an attractive rhythm can be created in the development's roof line as it adjusts to the topography providing visual interest: and
- buildings may be placed parallel with the contours but care should be taken to avoid too regimented

an effect from a distance.



Above: Midpark Hospital, Dumfries which uses the sloping site to its advantage

Visual qualities:

4.10 The visual qualities of a site and its neighbourhood such as the degree of openness, potential views of interesting natural or man-made features, the appearance of nearby built forms, streetscapes and landscape features or the nature of skylines present potential opportunities to enhance new development. Effective site planning will:

- identify and seek to protect/enhance open spaces, interesting features and any attractive vistas - or potential vistas

- identify the potential for screening a development from unsightly features or for 'framing' views to enhance the best outlook
- note the visual qualities of nearby structures and buildings and consider how any new development might relate to it. This could include specific listed buildings, focal points or landmarks but also the general patterns, layouts, scale, form, mass and architectural styles of nearby built forms.
- continue adjacent street forms, feu/plot patterns and building lines into

the new site to create natural visual linkages and connections.



4.11 The more prominent the site is the more critical it is to ensure that the development fits into the surrounding landscape. Care will need to be taken to ensure that the location, height and massing of buildings does not have a detrimental impact on views into or across the site. Design proposals which take account of key views of particular local features from the wider area or framed vistas into or through the site are more likely to be successful. In urban locations, this could include views along an established street or watercourse.

4.12 Capturing or framing views of the surrounding landscape from within a site through careful siting of building/trees/etc. can enhance a development. Views toward important or interesting landmark features such as monuments or hilltops help to establish the context of a site within the wider landscape and should be incorporated into the new development. Ensuring such views are maintained from public areas such as streets, squares and open spaces and from civic buildings is particularly important.

4.13 There is often a desire to create open panoramic views from new developments in rural or particularly

prominent, open locations. However this needs to be balanced with any potential impacts from new development on views from existing properties and on views of the site from the wider area.

4.14 Visual 'clues' such as distinctive buildings, large trees, artworks or green spaces can act as 'landmarks' helping with navigation and orientation. Designing vistas around existing features or creating new ones as a focus of key views can be particularly effective.

4.15 Potentially attractive views can sometimes be hidden by existing buildings, etc. Opening up such 'new' views by removing or altering built forms could have significant benefits on visual amenity which may outweigh the loss of the building.

Retaining landscape features

4.16 New development should ensure that it interacts with its surroundings aspiring to create high quality landscapes of the future. Features such as established trees, hedgerows, watercourses and footpaths are an important aspect of local identity. Retaining such features and incorporating them into the design can contribute strongly to the quality of new



New developments that have incorporated mature trees into the landscaping at Poundury, right and Marchfield, Dumfries above



development, creating a sense of continuity that acknowledges local identity, creating places that are distinctive and unlike anywhere else.

i) Proposals should relate to and respect the form, scale, massing and pattern, of surrounding built forms.

4.17 Whether urban or rural all development proposals should relate to and respect the local context which includes how buildings are arranged within their plot, their relationship to the street, building lines and depths, street pattern, forms and roof pitches, materials used, boundary features, etc. Design should be based on an analysis

and detailed understanding of the site and its surroundings. The surrounding townscape or building character and built form, the particular qualities, characteristics and constraints of the site and its wider setting all contribute to a locally distinctive built character.

4.18 Once the character of the wider landscape and settlement has been established, attention should be focused on the elements of the individual building and how they fit in, and make a positive contribution to the surrounding townscape and to local distinctiveness. Where new development is being considered in the context of historic buildings, villages and towns, it is very important that building form, massing, architectural style, detailing and materials contribute to the character of the surrounding area.

4.19 Encouragement is also given to exploring contemporary design. The interpretation of local styles and building traditions can lead to designs that complement the surroundings whilst providing homes that suit today's needs and offer future flexibility. Previous generations were able to produce buildings that blended well into their surroundings without relying on

simply copying them. By considering and selectively using local forms, rhythms or materials it can be ensured that new architecture will be sympathetic to its surroundings.

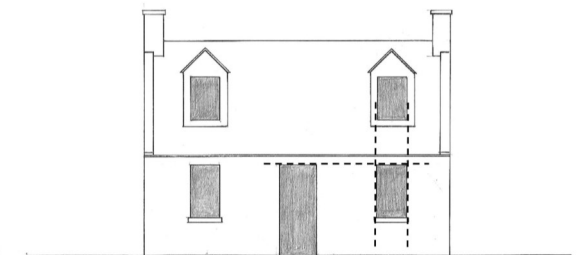
Form:

4.20 The form of a building is its three dimensional shape. New developments will be constructed within an existing 'place' and must respect the characteristics of neighbouring built forms. Successful developments will sit well in the landscape and street scene if the form of a new building relates to the form of local traditional buildings.

4.21 The traditional building form is fairly consistent in rural areas and villages across the region, with variations in the use of locally-occurring materials and in architectural detailing. Traditional buildings tend to demonstrate basic functional scale and 'simple' proportions; they are generally single storey structures, with a rectilinear plan, and usually no more than one room deep. Simple traditional forms are the most effective in ensuring that buildings fit in with their setting and create a balanced streetscape in such locations.

4.22 Proportion is fundamental to, and a

very significant part of, successful design. It is something that affects every aspect of a building because each and every element is relative to the whole and that in turn is relative to where it is and what surrounds it. Traditional rural homes maintained a balance of proportions between the walls and openings (windows and doors). They are generally characterised as being simple buildings, with horizontally proportioned roofs sitting on horizontally proportioned walls that are counterbalanced by elements with a strong vertical emphasis such as gables, chimneys and windows. This balance is destroyed all too frequently in modern developments by using much larger, horizontal emphasis windows which reverse the solid-to-void relationship (i.e. the windows dominate) producing a structure that looks weak



The diagram above indicates the vertical emphasis of local traditional architecture and the simpleness of design

and unbalanced, lacking the simplicity and strength of traditional buildings.



*Left:
Traditional
cottage*

4.24 On larger housing developments it is appropriate to have a mix of house types which will help generate a mixed community. A preferred range will typically be a mixture of apartments, terraced, linked, semi-detached and detached units, and with appropriate variation in storey heights. Local character is likely to play a major role in what mixture of units is suitable for a site. A robust mix would include smaller units as well as large units. A nominal mix of 3, 4 or 5 bedrooomed detached houses/bungalows is unlikely to generate the diversity which makes for sustainable and attractive communities. For smaller developments of one or two houses it may be appropriate to provide dwellings of a similar size and type to those on neighbouring sites unless there is good urban design justification for a variation.

4.25 Within larger developments buildings of greater stature, scale, richness and quality could be used to express the significance of important places, views and corners to create 'impact' within the townscape and make it easier to navigate around the site and differentiate one area from another.

4.26 Roofs may be prominent in local and more distant views. Where new buildings are deeper in plan than traditional buildings, roofs at a traditional pitch may be visually intrusive. The roof form, in particular the spans and pitches, must be designed with care, taking into consideration their potential visual impact on their context.

4.27 Architectural detailing can make the difference between a scheme being good or excellent. The attention to detail and the quality of workmanship and finish affects the perception people have of a place, and the durability of a building.

Scale and Massing:

4.28 The term 'scale' covers the relationship of one thing to its neighbour and its local context. Scale relates to proportions of buildings in a local context and how the observer sees

*Right: new
development
at Tanpits,
using tradi-
tional pro-
portions*



4.23 Although the character and building types found locally should be taken into account, a pastiche of different styles, incorporating poor imitations of other styles, from a combination of buildings may result in a cluttered design. Equally a design should respond intelligently to context and should not be a stock design 'dropped in'.



*Above: Mix of house types at Marchfield,
Dumfries*



Infill site inappropriately developed above in terms of scale, massing and form and shown more appropriately developed below



them. For example, the developer should consider existing and proposed heights of buildings, widths of streets and buildings, depth of building, footprint of buildings, plot sizes, doors and windows on building elevations.

4.29 Massing is the combined effect of the arrangement, shape and volume of buildings and this can play an important part in place making. For example, buildings can be designed differently at entrances to a site or within a street scene with sections of buildings stepped back from the boundary or inclusion of

vertical tower shapes; which give a sense of place. Again, the massing of buildings adjacent to proposed development should influence the proposed building to ensure that it fits well with the street scene or surrounding area

4.30 The principles of scale, massing, form and proportion are very important aspects of development. Some new buildings can look out of place and inappropriate, even though they use materials and architectural features based on traditional buildings within the area. Often the reason for this is because their basic form and size is out of keeping with their location.

Neighbouring development is important in establishing the scale and mass of development, and architectural details such as the relationship of windows and roof pitches. This will help new development to blend into the landscape/ townscape setting.

4.31 The width of plots in relation to height is also an important consideration. This 'plot ratio' can help a new development reflect the dominant local pattern. Although it is not always appropriate to copy the design of traditional buildings, it is important to have an understanding of their scale,

massing and form, in order for new development to complement them.

4.32 The height of new development should be relative to its site and surrounding buildings. In order to integrate new developments with existing buildings and spaces, new buildings that are clearly higher than their neighbours should be avoided. This will help to protect the visual character of areas where there are uniform building heights and will also help to protect key views.

4.33 Where the scale of proposed new development is different to that of surrounding buildings, justification and a compelling reasoning for the difference will need to be provided. However, within larger developments and more built up areas there may be opportunities to add variety and visual interest to proposals, for example, through variations in building mass and height particularly where this forms part of the character of that area.

Pattern:

4.34 The pattern of development is the arrangement of the development blocks, streets, buildings, open space and landscape that make up the area. The



Above: examples of urban grain

Clockwise from top left: traditional village in Dalry showing dwellings fronting directly on to the road situated on narrow plots

1960s/70s housing in Georgetown , Dumfries showing larger detached houses centrally situated on their plots

Modern development at Marchfield, Dumfries showing a mixture of house types and connections and at Tanpits, Kirkcudbright showing a layout similar to its local character

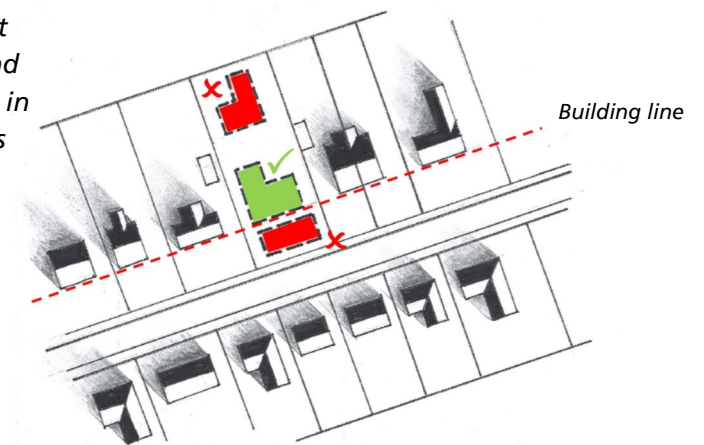
arrangement of different forms in a group of buildings, the relationships between them and how they are joined or separated is important. A good design will look at the inter-relationship of all these elements, rather than each particular characteristic in isolation, and will make a 'place' that is distinctive, has its own character and is easily identifiable.

4.35 Analysing the existing pattern of buildings (solids) to streets or spaces (voids) when viewed on a plan provides the best indication of the urban structure in an existing or proposed area. The proportion of solids to voids, and the way in which the structure is arranged is defined as the 'urban grain' of an area, e.g. narrow informal streets and spaces compared to large, regular street-blocks. This kind of analysis can help to identify:

- the townscape character
- the proportion of open space to buildings
- the scale of open spaces
- the street pattern and building lines

The pattern of routes, densities, uses, development blocks and individual plots influence the character and dynamics of a place.

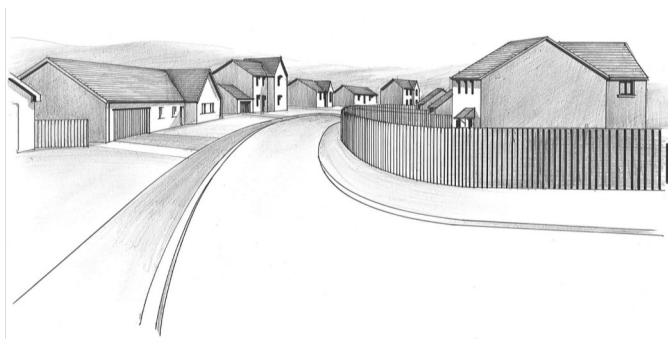
The diagram to the right indicates appropriate and inappropriate responses in relation to building lines



4.36 Taking into account the local character of the urban grain can identify factors such as whether buildings front onto the road, and whether there are pavements/ foot-paths or courtyards and garden areas separating buildings from the road (building lines). New buildings should be positioned to line up with the building lines of neighbouring buildings. Buildings located to the rear, behind the established building line and other properties (backland development) should be avoided as such developments can have an adverse impact on overlooking, noise and traffic disturbance, loss of amenity to other occupiers and have a negative impact on local character.

4.37 Where building lines do not exist new development should be positioned to face and engage positively with streets and spaces. Many new developments turn their backs to existing roads and buildings often creating barriers with high fencing which can be uninviting, create 'dead' frontages and be visually dominant. Instead developments should face on to and relate to existing road networks and buildings. Where fencing fronting onto streets

is unavoidable this should be in short lengths and landscaped.



Above: High fencing creates an unwelcoming barrier in this development.

Below: A short element of fencing which has been softened by landscaping



4.38 The layout and building coverage of individual plots can have an impact on the character of an area. Therefore consideration should also be given to the amount and proportion of buildings to garden and service areas (such as driveways) within existing plots in the area. Too often in new developments large detached properties are built on relatively small plots where the building to garden area appears to be very imbalanced and as a result they do not sit well within the locality and are visually intrusive.

4.39 There is a variety of layouts and relationships to roads and open space that offers a diversity of approaches for a site. Mews, squares, lanes and courtyards should be considered as potential design elements, subject to context. A courtyard development for example can provide a central focal point rather than arranging housing around a conventional road layout. The characteristics of the site such as ground levels, features to be retained or existing infrastructure, may also contribute to how the buildings are oriented on the site and the overall layout.

4.40 The density of housing (number of

units per hectare) should be reflective of its location. The traditional urban forms within larger towns and villages generally have a gradation of densities from the centre to the edge of the settlement, i.e density tends to be greater the closer to the centre of the settlement that you are and less dense at the edges closer to the countryside.

Detailed Considerations

iii) Building materials and colours should be chosen for their high quality, to complement the site context and to strengthen the local distinctiveness of the area.

4.41 Materials and detailing have a significant influence on people's perceptions of the quality of a place. The use of locally relevant building materials, techniques and detailing can reinforce local distinctiveness and strengthen the special character and identity of a place. In order to reinforce this character, it is essential to first identify the local materials palette that exists then establish how the proposed development can reflect this in the design.

4.42 In successful developments materials respect and complement the

character, scale, texture and colour of existing materials used in the local area, if they are recognised as worth respecting. For sites with a weak or indifferent context, materials can be used to help introduce a stronger sense of identity to a place.

4.43 There are local variations in the use of building materials across the region particularly where local quarries exist which help to create local distinctiveness. Such materials include:

- sandstone – particularly to the east of the region and is generally red to pink in colour
- granite – particularly in the areas in and around Creetown and Dalbeattie
- whinstone – can be seen across the region and particularly to the west and is generally accompanied with sandstone or painted detailing
- harl and painted render – can be seen across the region
- brick – generally seen in the larger settlements



1	2	3
4	5	6

1. Sandstone
2. Granite
3. Whinstone
4. Harl and painted render
5. Brick
6. Slate

Slate is generally used across the region as the predominant roofing material.

4.44 The number of materials and colours to be used in a new development should normally be limited to a small palette range, both within an elevation and within the wider street. The arbitrary use of a variety of materials and colours in an attempt to achieve 'individuality' is to be avoided instead the selection of materials and colours and their distribution across a development should be based upon an understanding of the context and a reasoned approach to the appearance of the scheme as a whole.

4.45 Contemporary schemes can use traditional materials to create distinctive and innovative designs that also connect with and have relevance to the place. Opportunities for confidently contemporary building design will be supported where this will maintain and enhance the character of the local area.

iv) Proposals that form a new long term settlement edge should create a positive relationship with the adjoining countryside, providing an appropriate transition between the built up area and the adjoining countryside.

4.46 As settlements expand, it is the edge of the existing built areas that is often the setting for new housing development. This is often the most visible part of the settlement acting as the transition between urban and rural

areas and therefore the treatment of this edge is essential as to how a settlement sits in the landscape. Such developments should consider the overall visual composition of the settlement boundary (buildings, rooflines, boundary



Above: Unnatural and harsh boundary treatment to settlement

Below: Softer and more natural transition from the built up area which engages with the wider setting



treatments and 'framing' elements such as landscape structure planting) as of equal importance to other views of the settlement itself and its buildings.

4.47 Successful developments will actively seek to create a positive edge to the surrounding countryside. This can be achieved by combining careful building design, orientation and provision of effective landscaped areas. This does not mean simply hiding the development with screen planting although landscape buffer planting may sometimes be appropriate. Depending on the scale of the development, a range of measures to ease the transition between urban and rural may be required. This can be achieved in a number of ways:

- by positioning buildings so that they sit into the landscape, for instance by following contours;
- by aligning buildings so that they are informal and made up of smaller scale elements
- by grading the density of development - reducing its scale and intensity towards its edges with the countryside, allows for planting within and between plots to create a feathered edge to the settlement;

- layouts should be arranged so dwellings are orientated to be outward facing to address the countryside, rather than turning their back on it;
- by considering the boundary treatments themselves which should be softer boundaries such as hedges, so that the edge is 'green' and provides a soft transition between the edge of the development and the countryside. Hard boundaries comprising walls or fences will normally be inappropriate unless they are designed to reflect the local character.

4.48 In designing new developments on the settlement edges some consideration may also need to be given to further expansion in the future and how this would integrate with the development.

v) Proposals should have adequate storage areas for refuse and recycling containers, either per unit or communally, designed and sited so as not to detract from the appearance of the development and to allow bins to be safely and conveniently taken to a collection point.

4.49 Refuse and recycling requirements have resulted in an increase in both the size and the number of bins which, without carefully located storage, can be detrimental to the quality of the public realm and to residential amenity. Developers should be aware of the current bin collection system in the region and should also allow flexibility of design for future adaptations of the system.

4.50 Successful developments allow sufficient space for refuse storage, as otherwise bins will become dominant elements in the public realm or private garden areas. Insufficient space has potential knock-on effects on other areas of a development, such as cars being parked informally on-street rather than in spaces provided in car ports or garages, or informal bin stores being crated on planted verges.

4.51 Bin storage areas should be conveniently located on level ground to enable bins to be easily moved to the collection point, without the need for bins to be taken through a building (excluding garages, car-ports or similar external covered spaces). Bin storage within garages is acceptable, provided the garage design is large enough to comfortably ac-

commodate both a vehicle and the required waste storage and access.

4.52 Bin storage areas located on property frontages are often convenient for the purposes of collection but, without careful design, can be visually intrusive and detract from the appearance of the street. They should be positioned to avoid or minimise any adverse visual intrusion into the street scene or other publicly visible locations by being integrated well with the fronts of buildings and/or with front garden boundary structures.

4.53 Where bin storage is provided to the rear of properties consideration will need to be given to the distance of wheeling bins to the collection point and whether this is reasonable. Rear access paths for terraced houses can provide access for refuse bins to be located in rear gardens however they can also be wasteful of valuable space and are often long, narrow, poorly lit and unwelcoming spaces which discourages their use causing bins to be left on frontages. Where an access path is required this should normally be provided between units below an oversailing storey or 'pend'. These reinforce their privacy and security and are often an established feature of the area. They can also be grouped with entrances to form interesting elements and attractive arrangements on a facade.

4.54 In communal buildings, a contained area is normally provided for the storage of communal bins, as either integral or attached annexes or separate buildings. Ideally, they should be accessed externally to prevent unwanted access being gained to the building through these areas. Where possible, access to the communal bins should be limited to prevent bin fires and should also be well lit, both for convenience and safety.

4.55 Commercial sites should ensure that there is enough storage space to accommodate the waste anticipated by their business in an accessible yet discreet location.



*Above: Bins dominating the street
Left: Intimidating rear access path
Below: Bin stores provided to the front of properties however they could have been improved by being roofed
Below left: Rear pend access*

5. Movement and accessibility

5.1 Many factors influence our ability to access and move around an area. The main focus here relates to new development maximising connections to existing streets or paths whilst meeting the access needs of different user groups. The 'Street Design Hierarchy' in Designing Streets should be reviewed to provide helpful advice in relation to street structure and street layout. Consideration should also be given to the information contained in the National Road Development Guide. In successful developments the road layout does not dictate overall site layout. In general, active travel (walking and cycling) should be relatively easier and more barrier free than vehicle movement which should be slowed down. Above all, the routes must feel safe, both in terms of personal security and protection from vehicular traffic.

Key Points

Successful developments:

- prioritise people and not vehicles
- ensure that all routes feel safe and meet the needs of all users
- provide links to, and enhance, the existing movement network
- integrate adequate and convenient car parking into the overall design to ensure that vehicles do not become over dominant in the streetscene

- should provide for secure and convenient cycle storage

vi) All proposals should provide streets and spaces with the primary focus on the needs of pedestrians, cyclists and those with impaired mobility.

5.2 In successful developments streets are designed as places that prioritise people rather than vehicles. Early design choices are therefore critical to putting in place a well reasoned and practical movement network that meets the needs of all its users and in particular the needs of pedestrians, cyclists and those with impaired mobility. This means ensuring that the requirements of motor vehicles do not dominate to the extent that they constrain or are detrimental to the needs of all other groups. Users should be provided with a real choice of movement, so they can choose their own route and mode of transport.

5.3 Short local trips provide the best opportunities for journeys on foot or bicycle (active travel) so these routes should be more direct than those for cars. The existence of a pedestrian or cycle route is not enough to make it a real alternative to private car travel if

the quality of that route makes it unattractive to potential users. People prefer to walk or cycle along routes where drivers, residents and other people can see them.



Above: pedestrian/cycle route within a new development

Below: A cycleway combined with pedestrian access (source: cycleway-embassy.org.uk)



5.4 Streets and spaces should be designed to provide ease of access for all and the use of shared surfaces is encouraged wherever they are

appropriate. Where pedestrians and cyclists share the same surface as vehicles the priority needs to be given to the pedestrians and cyclists through appropriate measures. Well designed shared surfaces can avoid conflicts of movement, help to calm vehicular speed and encourage pedestrian friendly environments.



Examples of shared surfaces at The Drum, Falkirk, above and Poundbury, Dorset, right



5.5 Disabled access from the site to facilities also needs to be considered and taken into account.

5.6 The road layout should make opportunities for connections to the existing public transport network, providing through routes suitable for use by buses where necessary to enable them to serve the development. Public transport stops should be in safe, sheltered and accessible locations, and be close to key facilities such as schools, shops and health centres.

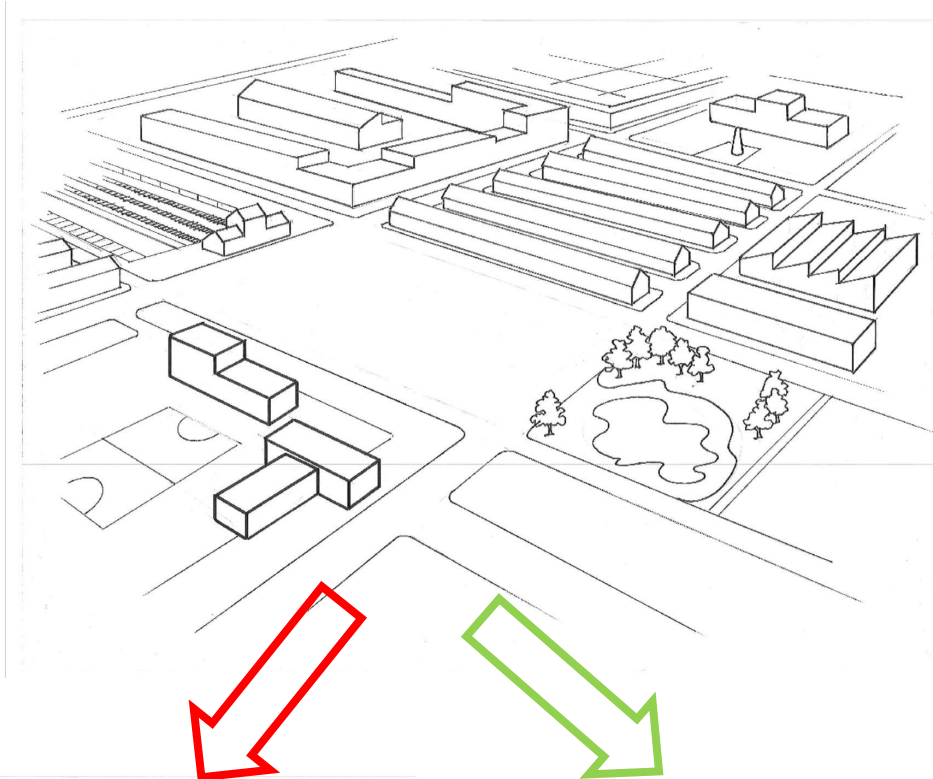
vii) All proposals should connect into existing networks of streets and paths to ensure that new development is well linked into the surrounding area and where appropriate should provide a linked network of routes and spaces within the development.

5.7 Successful developments complement and link to the existing movement networks (roads, streets and footpaths), encouraging a continuous walking and cycling environment and creating convenient and direct routes for people to use, rather than acting as an obstacle to natural desire lines across the site.

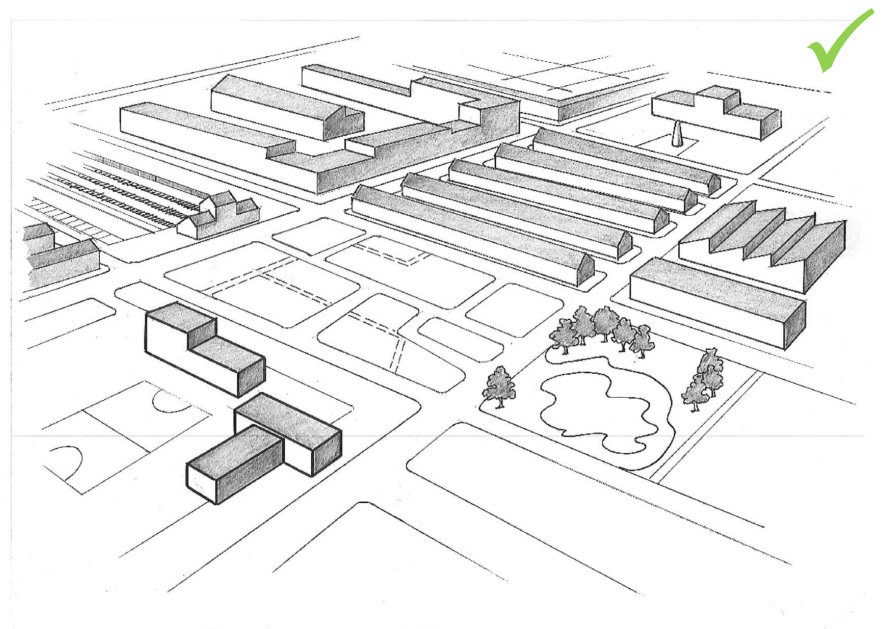
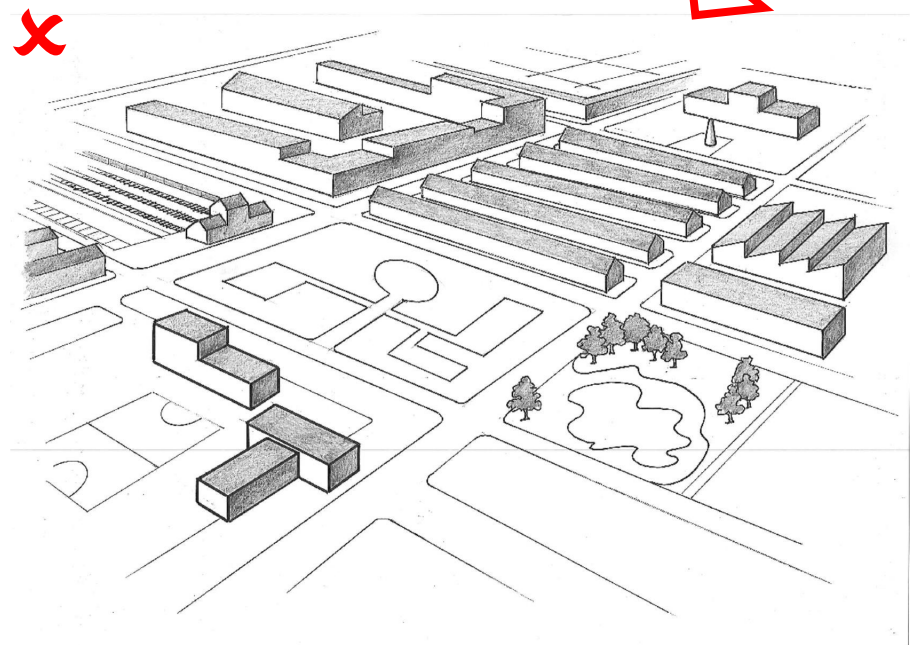
5.8 Numerous connections between the site and its surroundings allow people a choice of route into and through the site. Vehicular, pedestrian

and cycle access into the site should not be from a single point which physically isolates the development. Some developments have included too many connections, so that no routes felt safe to use. Connecting developments with the surrounding streets and footpaths allows them to physically integrate with, and function as part of, the established settlement, both socially and economically and can help to reduce car dependency. They encourage active travel by being easier to navigate and minimising walking distances to nearby facilities, which increases their pedestrian and cycle catchments.

5.9 The more successful places have internal permeability with interconnected streets that allow people to choose the most convenient and direct option for their journey rather than a series of cul-de-sacs. They also make connections to the adjacent street and footpath network, including safe, direct pedestrian/cycle links. Therefore the movement network should be designed to connect easily to local destinations by following desire lines to where people want to go.



Developments should not be inward looking or unconnected from the place that they are located in but they should take opportunities to be well connected to their setting, providing a number of types of access for different users



Detailed Considerations

viii) All proposals should provide a balanced mix of parking solutions, including cycle parking, that are integrated into the design and layout to support its appearance without cars becoming visually dominant.

5.10 Although sustainable public transport can provide an alternative to or complement car use, car ownership is an established aspect of modern life particularly in rural areas and satisfactorily accommodating parked cars is a key function of most streets. Designs need to reconcile the need to provide attractive streets that include adequate parking, but without detracting from the character or visual quality of the place. In successful developments car parking areas are designed as positive spaces that may either be urban in character or softened by planting trees and other vegetation, depending upon their location. Well designed places integrate car parking without it becoming over-dominant.

5.11 A balance of allocated and unallocated parking spaces should be provided to ensure that the parking provision meets the need generated

by the development. Applicants should discuss the nature and level of parking provision with the Councils Roads Officers. The design of parking provision must balance a number of issues to make sure that spaces are used, including:

- safe and convenient to use;
- being overlooked by occupiers of neighbouring buildings; and
- creating high quality settings that support the character of the place.

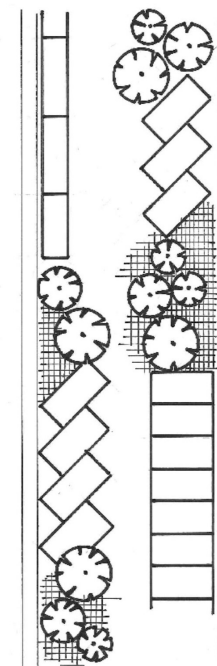
5.12 There are several different methods of accommodating cars within a new development, all of which have positive and negative aspects. How cars are parked in the context of development has a direct bearing on the amenity, appearance and size of the space between buildings. The Council would prefer more emphasis on parking to the side and rear of buildings rather than to the front.

On street parking:

5.13 The most traditional car parking method is to provide unallocated spaces on the street. This enables every space to be used by anyone and to its greatest efficiency. On-street parking can contribute to the character and vitality of a place, bringing movement and

people onto the street. It is also a flexible way of providing parking that can adapt to changing levels of car ownership, cater for peak demands from different users and can also serve to slow vehicles and buffer pedestrians from traffic.

5.14 The proportion of on-street parking appropriate for a particular scheme will be considered on its own merits, within the local context with regard to the parking provision that is required and the environmental impact of the proposals. Successful developments include street layouts that discourage parking elsewhere in the area, on pavements or on areas of green space.



Right:

Examples of different on-street parking options the impact of which are broken up using trees and landscaping

5.15 Angled parking bays are more efficient, but increase the width of the road; are potentially less safe, and can have a negative impact on the ground floor windows of habitable rooms, with lights shining in at night. Continuous areas of communal street parking, however, are also visually intrusive and need to be broken up, perhaps through the use of landscaping, or their quantity in one place restricted.

5.16 Any on-street parking should be designed as an integral component of the street scene.

Parking Squares:

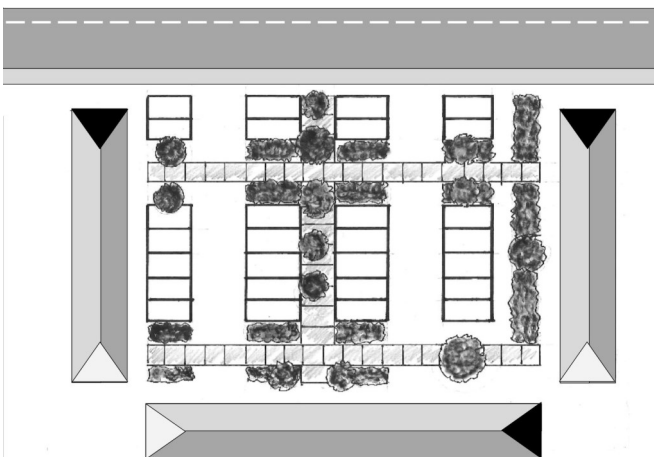
5.17 Parking squares can provide more car spaces in a wide street than parallel kerbside parking. They need to be designed with robust materials and as attractive public spaces which also accommodate parked cars. This can be achieved with generous and appropriate street trees, surfaces other than tarmac and appropriate street furniture. Small squares can add interest and provide parking in a traffic calmed environment.

In curtilage parking:

5.18 Many modern residential developments provide in curtilage parking spaces (within the plot), usually



Parking square at Poundbury, Dorset above and an example of a parking square layout below



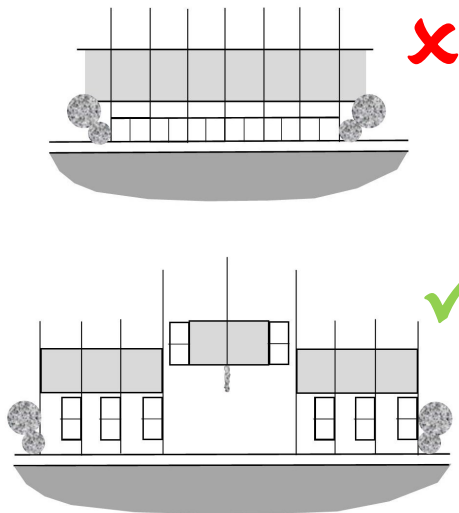
in front of the house. This may provide the car-owner with greater security and ease of access but it is visually dominant, is a less efficient use of space than unallocated parking and prevents

parking in the street across the access to the property.

5.19 Drives and garages should normally be located to the side/rear of houses to minimise their visual impact. Tandem parking is preferred to side-by-side spaces as it has less impact upon the continuity of the street frontage. Particularly when plot widths are narrow (below 5.5m) the parked car will become the dominant visual feature at the front of the house. This effect will be magnified if this method is repeated at regular intervals in a street.

5.20 As a rule, in-curtilage parking in front of the property should be avoided if better alternatives are available and in any event no more than 3 adjoining narrow fronted properties utilizing this approach should be grouped together to reduce the visual impact of parked vehicles on the street. Drive widths will need to be wider (at least 3.2 m) where they are also serving as the main pathway to the property and used for refuse bin access.

5.21 Private car spaces and drives visible from the street should be surfaced in small unit permeable pavers, or other



Below: Tandem parking in a new development at Lochside, Dumfries



materials which will allow sustainable drainage and contrast with standard tarmac, raising the environmental quality of the area.

In curtilage garages:

5.22 Garages are flexible spaces that can provide secure parking, although they are also often used for domestic storage or sometimes converted to additional living accommodation. This is a reflection of the generally low internal space standards of both many new dwellings and the garages provided with them. Garages are unlikely to be used if they are too small and impractical to easily park and exit from a car. This essentially reduces the provision of useable parking space and can displace it onto the road. This affects the quality of the place and may cause problems with highway safety or obstructing access to service vehicles.

5.23 For a garage to count as a space towards parking provision it must be capable of satisfactorily accommodating an average sized car. The garage may also have to provide space for household storage, such as bicycles, prams/push chairs or waste/ recycling bins, tools/work bench etc, and its size will need to reflect these additional demands.

5.24 The provision of in-curtilage parking in garages provides the most secure form of parking. However, the size, design and siting of garaging can also impact

on the character and appearance of the street scene. Proposals should avoid visually intrusive garages that detract from the appearance of the development or result in dead frontages. Integral garages are best accommodated in wide fronted buildings (incorporating ground floor front windows) at least 6m in width and at least 2 storeys in height to limit car dominance and encourage informal surveillance of the street. Normally detached garages built in front of the building line will only be permitted in exceptional circumstances.



Garages dominate the street scene above whilst they are less dominant when set back in the street below



Undercroft parking:

5.25 Undercroft parking can provide either allocated or non-allocated spaces. Undercrofts provide parking at ground or below ground level occupying the footprint of the building and must be designed so that there is a relationship between the street level units and the street to provide surveillance. It is not a form of parking that is common within the region and is unlikely to occur often however where appropriate it will need to be carefully designed in relation to the character of the street frontage.



Above: an example of undercroft parking, Accordia, Cambridge

Rear garage courts:

5.26 Rear garage courts on a modest scale (no more than 6 garages) are acceptable as long as they are safe (well overlooked), convenient and accessible.



Above: where garage courts are poorly overlooked and perceived as unsafe they are unlikely to be used (source: Exeter City Council)

Below: Well overlooked and accessible garage court at Poundbury, Dorset



Communal courtyard parking:

5.27 Parking courts provide off-street parking located internally within a development block, which can help reduce the visual impact of vehicles parked on the street. These should be seen not as car parks but areas that have parking in them. However, parking courts have often been neglected areas in the design process, being seen as functional backland areas rather than an integral part of the residential environment. The result is often a bleak, utilitarian and unappealing space.

5.28 If parking courts are too remote, inconvenient or unpleasant they can exacerbate on-street parking problems as owners choose to park their cars closer to their homes instead of using them. Where used, they should be small in size (no more than 10 spaces) and ideally include one or more properties within the court (sentry units) or providing direct overlooking to provide a sense of ownership and security. Communal courtyard parking can offer an alternative to in curtilage or frontage arrangements and help prevent the street from being dominated by car parking. Courtyards may also be needed as a supplement to other forms of parking when adequate parking

provision cannot be made by other means alone.



Above: rear courtyard parking at the The Drum, Falkirk which is divided into smaller areas using landscaping

5.29 There must be clear responsibility for the regular maintenance and care of the space. Entrances to private rear court car parks need to be designed to provide a private feel with the use of close buildings or archways. Where parking courts are provided, this should normally be as part of a suite of parking arrangements across the development, rather than the sole means of providing parking.

5.30

General points:

- Parking areas should be designed to

avoid causing an adverse impact to windows at ground floor level, particularly at night.

- Any block of more than 10 parking spaces should be broken up and sub-divided with appropriate paving and tree planting to reduce the visual impact.
- Allocating parking spaces on a plot-by-plot basis for average car ownership ignores significant variations in car ownership and wastes space by allocating parking spaces to people who don't use them. In addition additional spaces are not provided for people with above average car ownership, causing problems with unplanned-for parking. The provision of unallocated parking, on the other hand, is a flexible system which reduces the overall number of spaces required and better meets the overall parking need.
- Developers should take into account possible future needs for the installation of electric car charging points for on-street parking. Ducting and potential for easy connection to the electricity network should be considered to allow for future installation of charging apparatus.

Cycle Parking

5.31 Successful developments provide and make available secure and convenient cycle storage for residents, employees and visitors. Cycle parking should be incorporated into the design of buildings or otherwise located and designed such that it does not detract from the townscape or the amenity of spaces between buildings and is provided in well-overlooked areas, convenient for access to the building, which may often be the street itself. Cycle stands need to be located clear of pedestrian desire lines and should be detectable by people with little or no sight.

Below: Purpose built cycle parking in Germany (source: Exeter City Council)



6. Open space

6.1 'Open space' includes all the spaces between buildings as well as parks, playing fields, play areas, seating areas, woodlands, allotments, etc. and can include linear networks such as footpaths, hedgerows, streams, and public rights of way.

6.2 Private and public open space can be key to the attractiveness and success of a development forming attractive features within a wider network of places and routes and helping to integrate a scheme into its wider environment. Well-designed spaces help to create a sense of identity and provide opportunities for residents to meet and for community focus. They should be well-located to contribute positively to the surrounding character and appearance of the area, promote natural surveillance, be safe and welcoming and be connected to the wider path network.

6.3 They accommodate a range of activities, both physical and social, that promote health and well-being. The more activity there is the safer the public space will feel and the potential for crime or vandalism will be reduced.

6.4 Buildings should be positioned with care and regard to the quality of the

external space they create. Considering all parts of a site at an early stage in the design process can ensure that the range of potential uses and functions of both built forms and open space are reflected in the overall layout.

6.6 For further information in respect of the requirements for open space provision for new development please see the Open Space Supplementary Guidance.

Key Points

Successful developments will have open spaces that:

- are in accessible locations with high quality links for pedestrians and cyclists
- provide a network of sheltered, safe and accessible spaces
- have an appropriate function and integrate existing and new landscape features
- are integral to the overall arrangement of the site
- are designed to be robust, easily maintainable and fit for purpose

ix) Where proposals include an element of open space, whether this is open space primarily with soft landscape or

hard landscape, then it is important that these spaces are easily accessible, provide a variety of functions and are well integrated in to the overall site layout providing links to the wider green network.

Accessible:

6.7 Successful places are based on new development 'wrapped' around a framework of public open spaces linked by streets or footpaths, sited in easily accessible locations with high quality links for pedestrians and cyclists. Open spaces work best if they are located on well used routes and are faced by occupied buildings. Footpath and cycle links which follow established or predicted desire lines connecting all parts of a site to well - located open spaces with high quality facilities can encourage active travel, reducing the demand for vehicular travel by local residents.

6.8 Larger areas of public open space should be centrally located, accessible and overlooked in locations where people are likely to want to congregate, providing important focal points and recreational facilities. Where possible, roadways should not be continuous around public open spaces to allow at least one point of car free access

from the wider footpath network.

6.9 Publicly accessible open spaces should support the wider green network by conserving and linking landscape and habitat features, listed structures and cultural heritage. They should also encourage a range of recreational activities, particularly walking and cycling and provide for equipped and natural play spaces.



Above: centrally located, accessible and well overlooked play area

Below: more isolated play area which is not overlooked by neighbouring properties



6.10 Public spaces must be designed to be accessible to all with consideration given to all disability groups. Consultation with potential future user groups can provide information essential to the delivery of a successful and useable scheme.

Functional:

6.11 Successful public spaces are designed to be flexible and capable of catering for a range of potential uses rather than being a space that happens to be left over once the buildings have been laid out. Such 'left over' spaces eg to the rear of buildings or in awkward corners and small areas of grass which have no obvious purpose should be avoided and should not be used as open space provision as they can lead to maintenance problems and misuse.

6.12 Where development proposals include an element of public open space it is important that these spaces fulfil a clear function in the development and the wider place. The spaces provided should be appropriate to their function (s), with respect to size, location, orientation, sunlight, shelter, and management. Public spaces that are too large, lacking in natural sunlight or poorly designed can be unwelcoming

and instil a sense of unease by those using them. In some instances smaller, higher quality spaces may be more favourable.

6.13 Successful developments incorporate a variety of open spaces which ensure that a range of uses are catered for. Such uses may include formal sports and play areas, but should also include informal activities such as walking, meeting and seating areas. While new open space should be designed to cater for a variety of uses, in certain situations additional provision may be required specifically for reasons of landscape character, visual amenity, tree protection or nature conservation.

6.14 Successful 'multi-functional' spaces are designed for all sections of the community to use and to accommodate the needs of a wide range of ages and abilities without creating potential conflicts. Formal and informal meeting and seating areas need appropriate visibility and lighting and can be developed with several end user groups in mind.

6.15 Consideration should be given to ways of integrating sustainable drainage and biodiversity as well as traditional

play and sports provision into open spaces. This can enhance the character of a development, have biodiversity and landscape value and be part of a network of recreational routes, however the spaces should remain usable at all times notwithstanding the accommodation of drainage facilities or wildlife habitats.

6.16 Open space may also serve as a buffer between the edge of a settlement and countryside beyond, or for noise attenuation against noise generators such as busy roads, or may act as a corridor allowing greenspace and wildlife to penetrate settlements. However where landscaping is used for such purposes it is unlikely to be considered as part of the open space requirements for the site.

Integrated:

6.17 Successful developments consider the provision of public open space as an integral part of the design and wider landscape infrastructure thereby avoiding the creation of "left over" space between roads and buildings that is unlikely to be maintained. Therefore, it is essential that developers consider the location, extent and function of public open space at the start



1	2
3	5
4	
6	7

Various public space functions

1: allotments 2: amenity space 3: play area 4: bowling green 5: public park 6: playing fields 7: amenity space provided in new development, The Drum, Falkirk

of the design process.

6.18 It is important that open spaces add to existing features and landscape elements in and around the site to create a network of green corridors linked together by footpaths and cycle paths which will reduce reliance on the car. Existing natural features on the site can provide shape and structure to open space, for example wildlife corridors and linear parks/play spaces based around a watercourse or footpath can improve connectivity between areas of open space and should be identified as part of the early appraisal process and integrated into the design. This means retaining and incorporating existing natural assets such as mature trees, hedgerows, habitats, wildlife features and watercourses, as key features of the layout or creating new ones.

6.19 New planting should be integrated into street designs wherever possible. Planting can help to soften the street scene, reinforcing a local identity, creating visual interest, improving the micro-climate and providing a valuable habitat for wildlife. Tree planting should be considered as part of an overall townscape concept. Trees should be used to define space, frame views and create at-

tractive places such as avenues and squares. The planting of a single large specimen tree as a feature may be effective in defining a space such as a square or terminating a view. Planting should be integrated into the overall site, individual street and public open space designs.

x) All areas of open space should be robust, adaptable and attractive.

6.20 Where public space is valued, residents will care for it more and maintenance costs can be lower. Unloved and underused open space is a liability which must be maintained even when it



is not valued. Successful public spaces are designed with care, to include robust, fit for purpose materials and planting that are easy to maintain and have good lighting. The arrangements for future management and maintenance of public spaces must be identified at an early stage of the design process, as these will have an influence on their design and detail.

6.21 High quality planting should be used which is durable. Only healthy trees and shrubs which are appropriate for their location should be used. Planting should be positioned where it will survive its environment and flourish, taking into account light, water and shelter requirements.

Below left: new development at The Drum in Falkirk includes tree planting as an integral part of the scheme which will mature in time providing an attractive feature in the street scene

Below: Adaptable and multi-functional open space provided as part of a new development in McKenna Green, London (source: Aileen Shackell Landscape Design)



7. Public Realm

7.1 The public realm is made up of all the places which are visible and generally accessible by the public, including streets, squares and parks as well as front gardens and parking areas. A high quality public realm has far reaching benefits in terms of the health and well-being of residents through enhanced quality of life. Well-designed public spaces help to ensure that developments are socially inclusive, functional, and sustainable, and help to create a strong sense of place. Designing Streets states that streets are not just thoroughfares that people move up and down but they are also spaces where people can gather to socialise, play, spend time, etc.

7.2 The public realm needs to be considered as an integral part of the design process. The landscape framework should be used to create the main structure for the public realm, as successful developments will demonstrate a well considered and coordinated use of hard landscape and planting. This will allow for a clear interpretation and understanding of what the public spaces (the streets, squares, and greenspaces) will be like and how they will be connected to each other.

Key Points

Successful developments:

- incorporate a hard landscaping scheme that reflects its local distinctiveness and the character of the site
- include landscaping schemes that are visually attractive and are robust

xi) Within the public realm the choice of hard materials should reflect the intrinsic street character of the surrounding area whilst also achieving continuity of movement, flow and, with it, connectivity.

7.3 "Hard" landscaping refers to the man-made elements of a landscape scheme including paving, steps, ramps, walls and fencing, tree grilles, street furniture (bollards, seating, railings and signage, etc.) and public art. In successful schemes hard landscaping will be used sensitively and will not over-dominate spaces or result in visual clutter. The most successful landscaping schemes are often those that are understated and restrained.

7.4 Good public realm design will emerge from a creative response to site analysis and context appraisal. Existing landscape elements should be retained

and incorporated into proposals to reinforce these aspects and will give the development a sense of place and local identity. In order to achieve both a high quality and a hard wearing public realm the design should be locally distinctive,



Examples of good quality public realm in a public square in Creetown , above, and within a residential scheme at Accordia, Cambridge, below



relate to the character of the site and the wider design concept. It should complement the layout of the site, its built form, the materials of the site and its context, using local materials, with detailing and site specific public art to reinforce the local character.

7.5 The aim of public realm design should be to create visually attractive spaces that form a backdrop to the development as a whole. Successful design of streets and public spaces will:

- have a network of sheltered, safe, accessible spaces with different functions
- use a limited and co-ordinated palette of materials
- deal with changes in levels in a creative way which maximises useable space
- avoid leftover spaces
- be easy to maintain and durable
- create a clear definition between public, semi-public and private space
- avoid unnecessary features and clutter

7.6 To achieve an accessible environment the design of the public realm must ensure that streets and public spaces are generously

proportioned, simply designed and arranged, legible and consistent. Accessibility can effect decisions on length of pedestrian routes, gradients, level changes and shelter. Sudden changes in level or alignment or creation of obstructions should be avoided and should be dealt with in a creative way.

7.7 In cases where there are shared surface areas consideration will need to be given to distinguishing those areas that are solely for pedestrians from mixed-use areas through the use of different surface materials or edge details. When designing such areas ensure that materials are chosen to define spaces of differing functions, public / private spaces and changes in level. Particular consideration should be given to how blind or partially-sighted people will find their way around. The interface between different materials, changes in levels, and the placement of street furniture should be designed to minimise clutter and create a high quality streetscape. Detailing is also important, including ensuring the size of paving is appropriate and for visual continuity paving materials should normally be the same on both sides of a street.



Above: example of public art : The Whithorn Angel

7.8 Public art has the potential to enhance an area and community on both a physical and social level. The best public art is produced through a thorough assessment of the site context and comprehensive engagement of the community. Public art may not be appropriate for the majority of smaller

scale projects but where it is included it can make a marked difference to the character and identity of a place.

xii) All areas of public realm should be robust, adaptable and attractive.

7.9 A key principle of the design, implementation and management of the public realm is that it will evolve over time. Materials will be subject to wear and tear through their everyday use, therefore the design of the public realm should be robust using fit for purpose materials, details and finishes to minimise future management and be resistant to vandalism. Proposals will be required to demonstrate how the different elements will be maintained and allowed to develop.

7.10 The most important function of paving is to provide a hard, dry, non-slip surface that is durable, easily maintainable and that will carry the traffic that needs to use it. The choice of materials and design detailing must be capable of satisfying all of these functions as well as being simple and unifying and be sustainable through lifetime costing /valuing.

7.11 Any public art must be constructed with robust materials which should anticipate some attempted vandalism in the most public locations and should design out potential safety concerns for passers-by. The ease of maintenance should also be a design consideration.

Below and Right: Examples of public art in Dumfries



8. Safe and inclusive

8.1 The Council wishes to promote safe and attractive places that are both welcoming and responsive to the natural environment.

Key points

Successful developments:

- **feel welcoming and safe to move around in at all times of the day and night**
- **ensure that all spaces are accessible to all**
- **are designed to deter anti-social behaviour and reduce opportunities for crime**
- **provide clear distinction between public, semi-private and private spaces**

xiii) Create safe and welcoming environments which allow full and convenient access for all and are inclusive for people of different abilities.

8.2 To be well used and welcoming, successful developments are designed so that people are happy to walk around the site and to other parts of the town or village. Therefore new development needs to be accessible to all and feel safe and secure. Consideration will need to be given as to who will be using it and at

what times of day, and also whether it is accessible and can be used by a range of users.

8.3 Public spaces must be accessible to all and be designed to accommodate the needs of a wide range of ages and abilities, to ensure that they can easily and comfortably negotiate their way around the development. All spaces should be accessible for those using a wheelchair or with impaired sight or mobility, with dropped kerbs and the use of appropriate, easily negotiable materials. Consideration should be given to all disability groups which can be achieved through consultation with potential future user groups who can provide information essential to the delivery of a successful scheme.

8.4 Efficient and attractive means of enclosure, lighting and planting will enhance the space without providing scope for anti-social activities. Continuity of lighting levels is important on key pedestrian routes as sudden changes in lighting level can be problematic for some partially-sighted people.

xiv) Proposals should be laid out and designed to help reduce opportunities for crime and anti-social

behaviour and provide for natural surveillance.

8.5 In successful developments designing out crime will have been considered as early as possible within the development process. This allows for an integrated approach with density, layout, massing, access and other primary design decisions being made with consideration of their potential to reduce crime. A balance must be struck between facilitating good permeability for legitimate users and creating opportunities for criminal behaviour. This can help reduce problems such as remote isolated spaces, unobserved alleyways, illegible routes and inappropriate housing layouts that cannot be easily reversed once implemented.

8.6 The design of the development layout can help to deter anti-social behaviour and reduce opportunities for crime. Ensuring clear distinction between public and private spaces, good overlooking from adjoining buildings, lighting and avoiding the creation of potential problem areas can all minimise the likelihood for future problems.



Left: corner plot designed to enable overlooking in more than one direction



Right: building designed to allow full view of the street and provide for active frontages (Accordia, Cambridge)

8.7 There are a number of measures to reduce the opportunity for crime and make places feel safer for people. These measures include the following:

- avoid networks of separate footpaths and unsupervised areas, including public footpaths that run to the rear of and provide access to properties;
- routes should be clear, direct and attractive places where people feel comfortable. If they are cramped, poorly overlooked, indirect or unwelcoming they can attract crime or anti-social behaviour and discourage legitimate users;
- clearly defining and differentiating public, semi-public and private space by the design of appropriate boundaries and entrances;

- access to buildings should primarily be from the street. Blank facades, the backs of buildings, long boundary side walls including blank corners, bin stores and service yards fronting the street should be avoided;
- good overlooking from adjoining buildings to promote 'passive surveillance' of external spaces. If buildings overlook and provide direct access to streets people feel safer;
- provision of active frontages, where the ground floor is designed to

- allow visual contact and interaction between those inside and out; and appropriate street lighting where necessary.

xv) Private spaces should be clearly defined and enclosed to provide privacy and security.

8.8 There should be a clear distinction between public, semi-private (such as shared courtyards and small front gardens) and private spaces. Traditionally these spaces were often transitional and served to provide a distinction between private internal space and public external spaces. These areas should be defined by appropriate boundaries such as walls, hedges or railings as this helps to increase the awareness of intrusion and provides privacy and security. However such boundary treatments should not be of a height to prevent some degree of natural surveillance of the street.

“Design shapes the way we live. So it ought to serve everyone.”

(Eva Maddox, Interior Architect and Designer)

8.9 Plot boundaries (between public and private space) help shape the overall quality and character of spaces within the street, almost as much as the buildings. Boundaries onto the street should be designed as an attractive high quality element in the public realm, be long lasting and enhance the sense of enclosure within the street. High close-boarded fences are unlikely to meet these criteria.

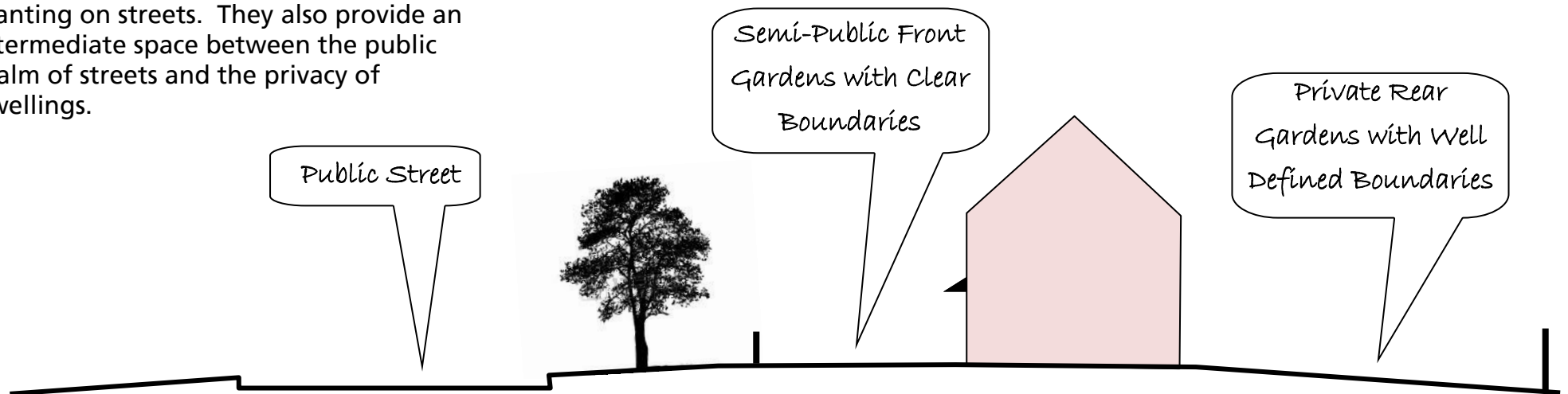
8.10 Front gardens are an important contributor to the landscape design of the street as well as providing opportunities for social interaction. They have an important role in softening urban environments by providing planting on streets. They also provide an intermediate space between the public realm of streets and the privacy of dwellings.



Left: the railings in this development provide a clear division between the pavement and front gardens whilst also allowing clear visibility



Right: at these flats there is no clear division between the pavement and the building frontage which creates a less inviting and attractive streetscene



9.0 Sustainable and adaptable

9.1 'Sustainable development' has been defined as "Development that meets the needs of the present without compromising the ability of future generations to meet their own needs or aspirations", (Bruntland, 1987). The achievement of sustainable development is a central aspect of planning policy and guidance. The layout and design of developments can play a key role in supporting sustainability objectives.



Above: Residential development which expresses its sustainable design. (source: Exeter City Council)

9.2 Sustainability is a broad concept which has to do with the good stewardship of the earth's physical and natural resources to ensure the continued health of its plant and animal life. PAN 44 advises, that ".... early

attention should be paid to the orientation, siting, spacing and shape of individual buildings and group of buildings to exploit the available sun, arrange the greater protection from wind and to create an energy efficient envelope".

Key points

Successful developments:

- make optimum use of layout, design and natural resources for minimising energy demands
- incorporate sustainable approaches to energy provision and efficiency to reduce carbon dioxide emissions
- incorporate the use of materials that are locally sourced and/or from sustainable sources
- incorporate building designs that will be both flexible and adaptable over time

xvi) The design of places and buildings should maximise energy efficiency, sustainable energy measures and the use of sustainable and locally sourced materials.

9.3 Only by creating places that make optimum use of layout, design and natural resources for minimising energy

demands can development be truly sustainable. The design and layout should be informed by the need to minimise demand for energy required for heating, cooling and lighting which reduces the costs for future occupiers. The energy that is required can increasingly be met from a variety of renewable energy technologies.

9.4 The microclimatic conditions of a site such as the prevailing wind direction, direction of the sun's movement, and the shelter and shading within the site, can determine the quality and usability of external spaces and the energy demands of heating and lighting internal spaces. An understanding of the microclimate is therefore essential to creating sustainable places that function well. Achieving optimum orientation of buildings, in relation to aspect and landform, should directly influence the overall layout of new development.

Energy Efficiency:

9.5 Reducing the amount of energy and water that we use not only uses resources more efficiently and reduces emissions, but also reduces the cost of bills, making the buildings cheaper to run today and in the future, when the increased cost of fossil fuels will drive up

energy bills.

9.6 Considering energy efficiency is fundamental to the sustainable design of buildings and any future development must consider sustainable approaches to energy provision and efficiency (such as increased insulation, passive solar gain, etc.). It is important to note that the majority of energy used in buildings is for space heating, and that the energy required, and therefore energy costs, can be significantly reduced by following the principles of sustainable design. This can be achieved through minimising the

amount of energy required to construct and occupy buildings and by maximising the potential of ambient energy, e.g. by using solar energy.

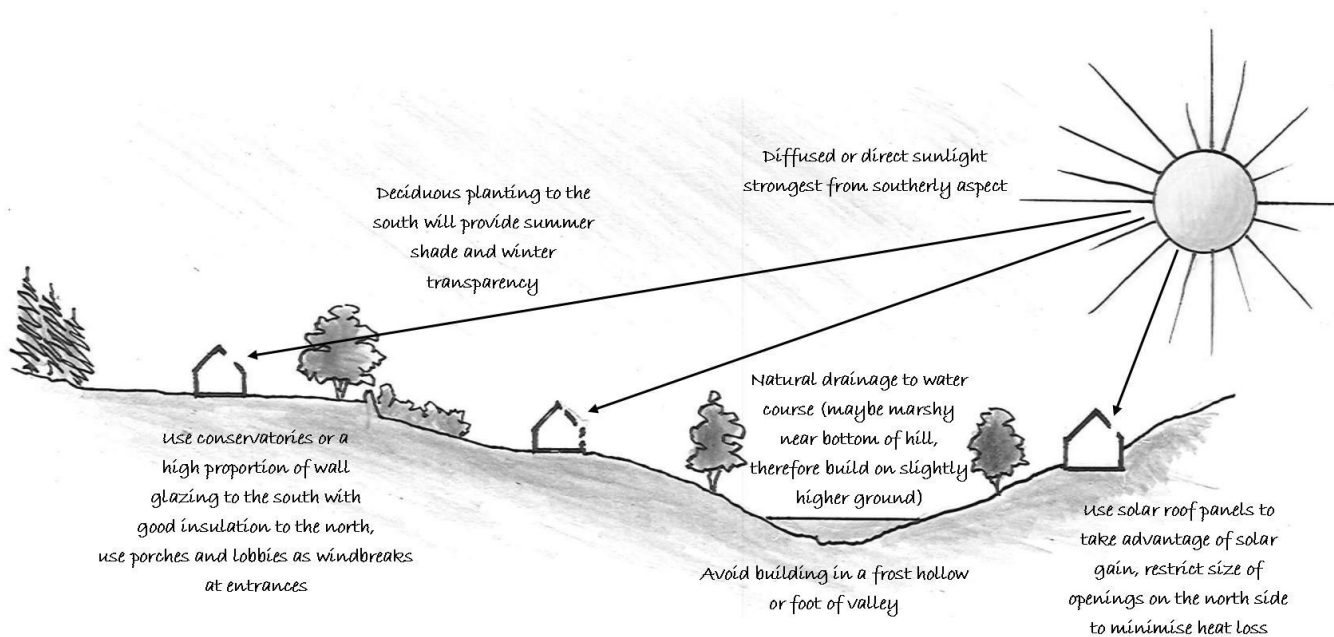
9.7 The design of spaces between buildings and landscaping proposals, including the creation and retention of trees and hedgerows, can help to ensure sheltered micro-climates. Providing shelter from prevailing winds helps to reduce demand for heating within buildings, can help reduce heat loss from buildings and enhances the microclimate in outdoor spaces.

9.8 It is therefore important to ensure that the layout of buildings avoids wind tunnelling and turbulence and that tree shelter belts are provided within, or on the edge, of exposed sites. The need to provide shelter must be balanced against the need to harness summer breezes for cooling and, as a consequence, reduce reliance on energy consumption for cooling. Building form has an important influence on energy consumption and conservation. Terraced houses, maisonettes and flats have a smaller surface area, retain more heat and are more energy efficient than detached houses and bungalows. In addition, narrow-fronted terraces are more energy-efficient than wide-fronted ones.

9.9 Consideration of renewable energy technologies should only be given once energy efficiency has been maximised and energy needs have been minimised. Simply bolting on renewable energy technologies without first reducing the energy demand of the building through sustainable design must be avoided.

Sustainable Energy Generation:

9.10 Development proposals should seek to provide a reduction in carbon dioxide emissions initially through energy efficiency measures and then through



the consideration of installing onsite renewable energy generation where it is feasible. It is important that energy sources are chosen that make the most efficient use of the resources available. There are a number of potential renewable and low carbon energy technologies that can be installed and used on a site including:

- solar thermal water heating;
- solar energy photovoltaic cells, tiles and panels;
- wind turbines;
- air, ground and water source heat pumps;
- small scale hydroelectric systems;
- wood pellet stove/boilers (biomass);
- anaerobic digesters/biogas.
- site wide heating systems through buried underground hot water pipes (referred to as district heating) using a renewable or low carbon onsite or offsite heat source including combined heat and power (CHP).

9.11 The appropriateness of these will vary from site to site. However, mindful of the importance of renewable electricity, the roofs of new dwellings should as much as is practical be oriented to face south and not overshadowed. If



Above, solar panels at Langholm Academy

solar photovoltaic (PV) is not installed by the developer south facing roofs should be structurally, and preferably electrically, prepared for the subsequent installation of PV panels by occupiers. For larger developments district heating systems are likely to be more economic than generating energy on an individual building basis, particularly for housing sites, whereas in the more conventional situations gas heating tends to be more efficient than electrical.

9.12 Heating systems which use locally available fuel such as woodchips or wood pellets can help to reduce dependence on fossil fuels and other remote energy sources where security of

supply could be an issue in the future. Using locally-sourced fuels will also help to support local businesses and reduces transportation costs and energy use.

9.13 The location and scale of a development will influence the success of sustainable energy solutions as different technologies are better suited to certain situations. It is important that developers have regard to the opportunities and constraints that different sites offer and develop an approach that maximises energy efficiency and production. Each site needs to be considered individually to ensure that its capability to maximise on renewable energy is realised and to ensure that the most appropriate technology is selected for each individual site.

Orientation:

9.14 The siting, design, layout and orientation (direction a building or structure is facing) of buildings can have a significant impact on energy consumption and the comfort of those using the building. Careful consideration should be given to the orientation of developments and the position and size of windows. A good site layout is one that successfully

manages to resolve the often conflicting considerations affecting the way a building should be orientated in terms of views, the sun, shelter, privacy, minimising impact, etc.

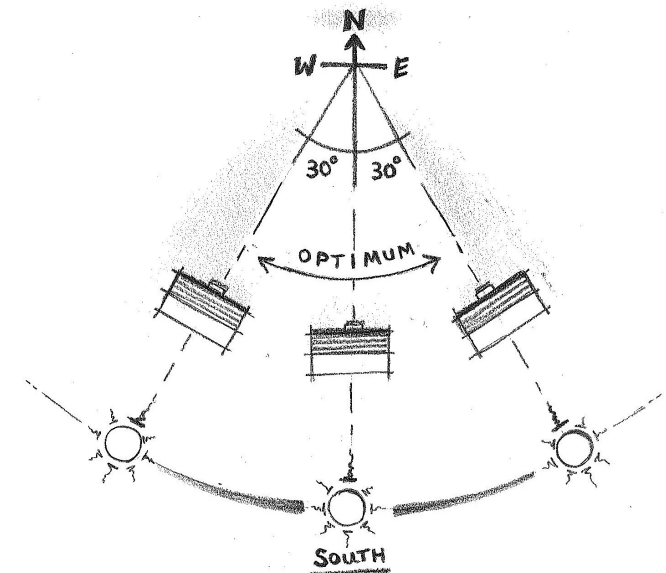
9.15 Historically, buildings were oriented to provide the most shelter from prevailing winds and so had windows on the sheltered side, which may not have offered the best view that modern buildings often attempt to do. However, this orientation also meant that the building could make the best use of the natural light and heat from the sun thereby reducing the need for artificial lighting or heating.

9.16 In more recent times, buildings have been oriented to make the best use of the views available rather than taking account of the prevailing climate or making the most of the immediate landscape. Thus, in order to produce buildings which both make the most of their locations and the available natural light and heat sources, we need to take advantage of the benefits that the development site provides. It is important that the design takes into account the climate so that a building can benefit from solar gain, daylight and natural ventilation whilst providing

shelter and comfort, known as 'passive design'.

9.17 Buildings that benefit from passive solar gain use less energy for lighting and heating and generally provide a brighter and more pleasant living environment. Where practicable, the design and layout of developments should seek to take advantage of passive solar energy. Orientating dwellings within 30 degrees of south is sufficient for them to benefit from year round solar gain. Larger south facing windows will absorb heat into the building while small north facing windows will help minimise heat loss. In high density developments it may not always be possible to orientate windows for passive solar gain but this could be compensated for through the installation of larger windows.

9.18 However, developments should avoid layouts that are designed entirely around achieving passive solar gain at the expense of other urban design considerations. Proposals comprising of largely south facing parallel streets will be unlikely to satisfy other important design requirements. Design decisions need to be made in the round to reach a considered balance between competing design objectives.



Above: Diagram showing the optimum building orientation for solar gain

9.19 Although shading may be required to prevent overheating in the summer, obstructions to south facing elevations should be limited in order to maximise the benefits from solar gain during the winter. It is also important to design out any potential for internal overheating and avoid any future need for mechanical cooling. Such measures to prevent overheating of the building might include blinds or screens, and wider eaves will allow sunlight into

rooms in winter when the sun is lower in the sky but will provide shade in summer when the sun is higher. Deciduous trees can be valuable by providing summer shade while allowing through low-winter sunlight.

9.20 The layout and orientation of buildings and landscape proposals should avoid wind channelling and turbulence (by decreasing wind speeds, loss from buildings will be reduced). Wind could be harnessed for natural ventilation within the building design and also be considered as a potential energy source.

Sustainable and locally sourced materials:

9.21 The minimisation of energy use in the construction, use and lifespan of developments should be a consideration at the design stage. Buildings should be designed to be constructed efficiently using materials that have minimal embodied energy, i.e. those which take less energy to produce and can be recycled. This would include using materials from sustainable sources and minimising negative impacts on the environment. For example using reused, recycled, recyclable and CFC-free materials, low embodied energy in construction processes. Materials should

be avoided that have a manufacturing process that is especially polluting such as PVCu.

9.22 In particular the use of timber in the construction of buildings, for both the structure and external finishing, should be encouraged. This is a locally sourced sustainable material supported by a well-developed existing local processing sector. This benefits and supports local businesses involved in the supply of sustainable construction materials and also helps retain local skills in the use of such materials while reducing the energy used to transport them.

9.23 Buildings should also be designed for their deconstruction so that the materials can be easily re-used at the end of the building's life.

xvii) Well-designed buildings and places should be adaptable to meet changing circumstances over time.

9.24 Successful sustainable development will be adaptable over its lifespan. Designing a place that will be enduring requires a degree of flexibility within the building design and the overall physical framework so that they remain fit for purpose and function effectively even

when our lifestyles or working requirements change. All buildings should be designed to meet the changing needs of occupiers over time. Where buildings have flexibility and adaptability built into their design to allow changes both internally and externally they will have a longer lifespan, and in the case of housing it allows residents to stay in their home and community if their needs change.

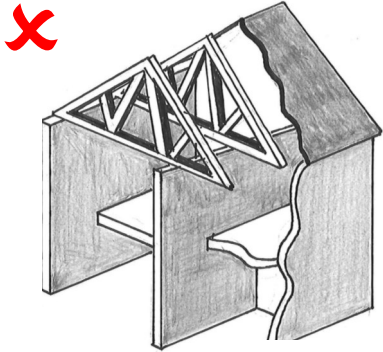
9.25 For housing, this means taking into account and meeting the changing needs as their occupants' age, have children, or use their homes in different ways. This may mean accommodating the needs of a growing family by having somewhere suitable to store a pushchair, providing a space for home working such as a study/office space, or making adjustments to cope with infirmity or disability. For other uses such as business or commercial it may mean that they are easy to extend or be able to be reconfigured and divided into smaller units or merged into larger units.

9.26 There are a number of ways in which new developments can be modifiable such as the following:

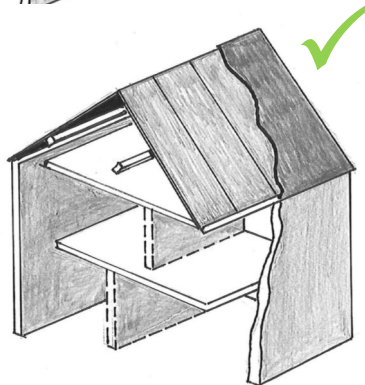
- *Flexibility:* this is the potential to use rooms and spaces for different

purposes, e.g. the use of a bedroom for a study as well as a guest room. This will depend on the space within the building, the room layout and the number of rooms.

- **Adaptability:** this is the potential to modify the spaces of a building by altering its fabric. Where possible, buildings should be designed to allow further development such as extensions and conversions and to allow internal spaces and layouts to be modified. This allows the space to grow and change with the residents or users.



The use of roof trusses and load bearing walls can mean that buildings are difficult to adapt for changing needs



9.27 Adaptations usually take the form of either enlargement or internal alteration to suit a particular need. Large floor spaces are generally the most adaptable allowing alternative internal arrangements. Using construction techniques which enable significant changes to be made to the building with ease will help to extend the building's use, for example non-structural partitions which can be easily removed or re-positioned to create new spaces or non-trussed roof rafters to aid the conversion of loft spaces.

9.28 Many buildings are designed with specific uses in mind. If the design becomes too specific this can mean it is very difficult to make changes to the building that can provide it with a new use at a later date. Within larger scale developments if small-scale commercial uses suitable to residential areas, such as convenience shops or small offices, are unable to be provided early on in the life of a development, designing buildings that are capable of conversion provides a way of incorporating suitable business uses at a later stage.

9.29 Some buildings are deliberately designed for short-term use, but in such cases the building should be designed to enable effective re-use or recycling of its components.



The building above has been designed so that it can be used as a house but should needs arise it can easily be converted to provide a local shop or business

10. Part 3: Design Process

10.1 To successfully integrate new development within an established area particular regard needs to be paid to existing communities, townscape and landscape to ensure that the proposed development reinforces local characteristics. This will help to create a place of distinction by building on local identity rather than creating 'anywhere places'. Understanding the context will ensure a development integrates successfully with its surroundings, thus enhancing or preserving local character.

10.2 In some cases, positive aspects of local character and identity may not be especially evident or there may be few positive features upon which to build. In such instances development on larger sites needs to begin to set a standard for the area by creating a high quality and distinctive place in its own right.

10.3 In order to raise the design quality of new developments it is expected that developers will follow the simple and logical design process as set out below. The key principle behind the design process is to ensure that development sites are fully assessed and understood before any detailed design solutions are considered. Developers will be expected to demonstrate that they have

undertaken this process to ensure that proposals adequately consider and take into account site constraints and opportunities and are locally distinctive.

10.4 The best developments are the result of careful consideration and appreciation of the site and its wider context. This requires a thorough understanding of the site, however small, and its surroundings together with an appreciation of all the relevant design issues.

10.5 Appendix 1 contains a site appraisal checklist and provides further guidance as to what to consider in carrying out a site appraisal.

10.6 The design should be underpinned by a robust analytical and contextual base of information. A developer needs to demonstrate a clear understanding of the existing situation, including the land adjacent to the site, and therefore the starting point of every development will be a detailed study of its physical context. The information gathered at this stage is critical to informing the design concept and final detailed design for a scheme.

10.7 The level of detail and depth of investigation should be related to the scale of the proposed development in relation to its setting and the complexity of issues to be considered.

10.8 The main steps in the design process are shown below however in reality it is not a straightforward sequential process but a continual process of evaluation, reassessment and amendment towards the design solution.

"It is clear that places which have enduring appeal and functionality are more likely to be valued by people and therefore retained for generations to come."

(SPP)

Site and Area Appraisal

Two stages - the desk top study and site visit to gather contextual information

Context: how well the development fits with the setting and character of the area

- local area
- site description and physical context
- services

Identity: how well the development ceates and reinforce local identity

- surrounding buildings
- use of space
- hard landscaping
- soft landscaping

Connection: how well the development connects to the surrounding access routes and how easy it is to move through the site

- pedestrian/cycle movement
- vehicular movement (public and private)

Community: how well the site connects and is accessible to exitsng open space and community facilities

- community facilities
- community aspiration

Constraints and Opportunities

Need to identify constraints and opportunities within and adjacent to the site.

Identify constraints to development such as:

- areas/features to be protected
 - ground conditions
 - flood risk
 - previous land uses and possible contamination
 - sources of noise and emmissions
 - compatible/incompatible uses located nearby
- Such constraints might limit the developable area or require mitigation

May also be opportunities to enhance existing connections, open space, and facilities which should be explored. Any positive attributes or features of the site should be incorporated into the scheme. Such assets can include:

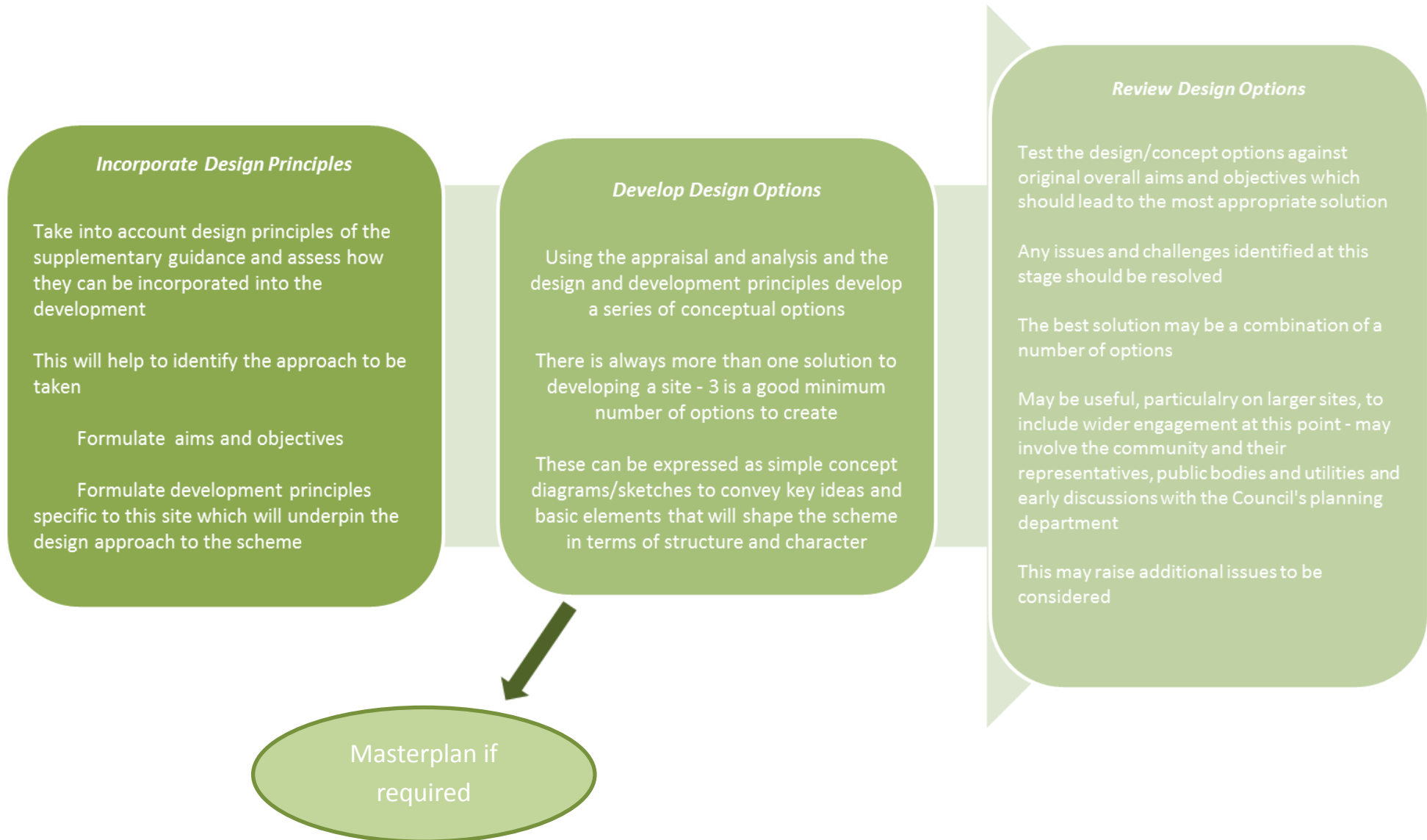
- existing buildings of value
- landscape features such as mature trees/hedgerow, topography, water features
- attractive views
- facilities and services
- microclimate

Policy Context

What are the relevant policy documents and how do they influence development of the site?

Analysis

From the desktop study and site visit bring together all the information gathered and evaluate and assess the issues and opportunities they raise in relation to the design and development of the site



Solution

The detailed design solution is developed to meet the requirements of development principles, planning policies and site guidance and also the masterplan where one has been produced.

The resulting design should be individually tailored to meet the site requirements as all sites and situations are different and require different solutions

Design solutions should positively respond to the character of the site and its surroundings based on site analysis and development principles

Where a Design and Access Statement is required it should set out the links between the site appraisal and the design of the proposals

Evaluation

The detailed design solution should be re-evaluated and reviewed and if necessary amended when assessed against the aims and objectives, the development principles, planning policy, etc before a planning application is submitted



Appendix 1: Site and Area Appraisal Checklist

Element	Considerations	Possible questions to ask (not exhaustive list)
Context: How well the development fits with the setting and character of an area		
Local Area	<ul style="list-style-type: none"> - Location of the site - General description of the surroundings - Proximity to local areas of interest such as nature reserves, ancient and semi-natural woodlands, conservation areas and other natural and historical features 	<p>Where is the site? How has a place developed over time? What are the age of surrounding buildings and structures? Are there any focal points or landmarks in the local area? Have views to and from these been identified? What aspects of local history may be relevant to future development (local events/festivals, local place names, information from the census)? What sort of landscape does the area have? Are there any natural history designations close by?</p>
Site Description	<ul style="list-style-type: none"> - Topography (levels/slopes) - Ownership of the site - Site history, including planning history - Adjacent land uses, and relevant planning proposals - Townscape - Conservation Areas - Heritage conservation (listed buildings, archaeology, scheduled monuments, etc.) - Focal points and landmarks - Views to/from/over the site - Microclimate (wind, sun, exposure, shelter) 	<p>What are the levels /slopes? What is the site's development history? Are there existing buildings and structures on the site? Are they positive features? Should they be retained? What are their characteristics? Is there a mix of uses in the area? How are these uses distributed? Is the site contaminated? Does the site need to be investigated (through records or by excavation) for possible archaeological value? What buildings and structures within the site can be seen from local or strategic points in the surrounding area? Should these views be protected? Are there existing or potential 'gateways' to the site? Which way does the site slope or face in relation to the sun? What is the micro climate of the site? Are there wind funnels/frost pockets/damp hollows? What are the prevailing winds in summer and winter?</p>
Services	<ul style="list-style-type: none"> - Public services and utilities, e.g. underground services, drainage systems, overhead powerlines (such as water, waste water, gas, electricity, etc.) 	<p>What existing utilities currently serve the site, where are they located and what is their capacity? Will additional capacity be required and how will this be provided? Are there any wayleaves or easement strips that cannot be built on?</p>

Identity: how well the development creates and reinforces local identity

<p>Surrounding Buildings</p>	<ul style="list-style-type: none"> - Building lines (groupings, rhythms and plot/feu sizes) - Building styles - - Entrances (styles and sizes) - Windows (styles and sizes) - Active frontages - Scale (height and massing) - Appearance (details and materials) 	<p>What is the urban structure and grain of existing neighbouring development including block size and shape, street patterns and widths? What is the plot to dwelling ratio in existing development?</p> <p>Are building lines of neighbouring properties continuous? Are there gaps between properties or irregular setbacks?</p> <p>What are the ages of surrounding buildings?</p> <p>What distinctive types of building elevations are there in the area? How wide are the frontages?</p> <p>Are there any locally distinctive ways of detailing buildings such as windows, doors, cornices, string courses, bargeboards, porches, roofs and chimneys?</p> <p>Does the area have a general scale of building that should inform the scale of buildings within the new development?</p> <p>What buildings/materials are used traditionally in the area, and which materials are available/prevalent in the region? What distinctive colours and textures are found on buildings, structures and surfaces in the area?</p>
<p>Use of Space</p>	<ul style="list-style-type: none"> - Use of spaces between buildings (public/private) - Day, night, seasonal variation of use - Prohibited activities, security arrangements 	<p>Is there a hierarchy of spaces, buildings and streets?</p> <p>Are levels of natural light to neighbouring properties likely to be affected by development on the site?</p> <p>What are the patterns of use depending on the time of day or the time of year?</p> <p>What is the relationship of neighbouring buildings to the site? Do neighbouring properties overlook the site?</p> <p>Are there any impacts such as noise from neighbouring uses?</p> <p>Is the area safe and comfortable for users?</p>
<p>Hard Landscaping</p>	<ul style="list-style-type: none"> - Location of street furniture - Condition and maintenance - How people use it - Public art/ sculpture trail 	<p>What is the nature of existing street furniture in and around the site? What is its condition?</p> <p>Is there easy access to existing areas that include public art and sculptures including trails?</p>
<p>Soft landscaping</p>	<ul style="list-style-type: none"> - Landscape character - Quality of landscaping - Need for ground modelling - Nature conservation area - Wildlife habitats - Tree Preservation Orders - Areas of water and how they move (including rivers, streams, lakes, ponds and 	<p>What is the overall landscape character of the site and its qualities?</p> <p>How could it be improved?</p> <p>What trees and hedgerows are to be found on the site (location, species, condition, size, tree preservation orders)?</p> <p>What are the boundary features of the site?</p> <p>What living things (fauna and flora) are to be found on the site? What do they depend on?</p> <p>Should they be conserved?</p> <p>Is the site liable to flooding?</p>

	swampy or floodable ground) - Play space/ recreational space	Are there any culverted or covered watercourses that could be opened up and re-naturalated? Are there any green open spaces such as parks in the area used for informal recreation or amenity? Where are they?
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Connection: how well the development connects to the surrounding access routes and how easy it is to move through the site

Pedestrian /cycle movements	- Desire lines - Disabled access - Existing access restrictions	Where are people coming from, going to? What, if any, are the existing and potential means of getting to and around the site for pedestrians? Is any group of people restricted from access due to a current aspect of design? Are there existing rights of way through the site?
Vehicular movement (public and private)	- Bus stops and routes, taxi stops, cycle routes - Surrounding road and street layout - Access, parking and circulation - Areas of vehicular/ pedestrian conflict - Use of traffic calming measures, e.g. speed humps, surfaces, crossing points, bollards - Servicing arrangements	What public transport routes and stops currently serve the area? Are there opportunities to improve access by public transport? What is the area's road hierarchy? Are there any current proposals for roads, right of ways or public transport that might be relevant to future development? What are the access points to the site? Are there existing or potential nodal points within or near the site? Are there any current transport conflicts that the development could alleviate perhaps through the use of traffic measures? How will the development be served by service vehicles such as refuse lorries, delivery trucks, removal vans, etc.?

Community: how well the site connects and is accessible to existing open spaces and community facilities such as shops, schools, community halls, leisure facilities, etc

General	-Community facilities -Community aspirations	Where are the local facilities (shops, schools, halls, etc.)? How close and accessible are they? Has the community actively expressed views on how they want to see their area developed either through local groups or through a community council? Will the development provide community facilities, such as a school, parks, play areas, shops, pubs or cafés?
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Appendix 2: List of Design Principles

Topic	Design Principle
Built Form and Character	<i>i) Proposals should create places that respect the landscape character, including topography, and visual qualities of the site and surrounding area, retaining and, where appropriate, enhancing existing landscape features.</i>
	<i>ii) Proposals should relate to and respect the form, scale, massing and pattern, of surrounding built forms.</i>
	<i>iii) Building materials and colours should be chosen for their high quality, to complement the site context and to strengthen the local distinctiveness of the area.</i>
	<i>iv) Proposals that form a new long term settlement edge should create a positive relationship with the adjoining countryside, providing an appropriate transition between the built up area and the adjoining countryside.</i>
	<i>v) Proposals should have adequate storage areas for refuse and recycling containers, either per unit or communally, designed and sited so as not to detract from the appearance of the development and to allow bins to be safely and conveniently taken to a collection point.</i>
Movement and Accessibility	<i>vi) All proposals should provide streets and spaces with the primary focus on the needs of pedestrians, cyclists and those with impaired mobility.</i>
	<i>vii) All proposals should connect into existing networks of streets and paths to ensure that new development is well linked into the surrounding area and where appropriate should provide a linked network of routes and spaces within the development.</i>
	<i>viii) All proposals should provide a balanced mix of parking solutions, including cycle parking, that are integrated into the design and layout to support its appearance without cars becoming visually dominant.</i>

Open Space	ix)	<i>Where proposals include an element of open space, whether this is open space primarily with soft landscape or hard landscape, then it is important that these spaces are easily accessible, provide a variety of functions and are well integrated in to the overall site layout providing links to the wider green network.</i>
	x)	<i>All areas of open space should be robust, adaptable and attractive.</i>
Public Realm	xi)	<i>Within the public realm the choice of hard materials should reflect the intrinsic street character of the surrounding area whilst also achieving continuity of movement, flow and, with it, connectivity.</i>
	xii)	<i>All areas of public realm should be robust, adaptable and attractive.</i>
Safe and Inclusive	xiii)	<i>Create safe and welcoming environments which allow full and convenient access for all and are inclusive for people of different abilities.</i>
	xiv)	<i>Proposals should be laid out and designed to help reduce opportunities for crime and anti-social behaviour and provide for natural surveillance.</i>
	xv)	<i>Private spaces should be clearly defined and enclosed to provide privacy and security.</i>
Sustainable	xvi)	<i>The design of places and buildings should maximise energy efficiency, sustainable energy measures and the use of sustainable and locally sourced materials.</i>
	xvii)	<i>Well-designed buildings and places should be adaptable to meet changing circumstances over time.</i>

Glossary

Adaptability: The ability of a structure to be altered, often structurally, to fit changed circumstances.

Amenity: Something that adds to a person's comfort or convenience; eg. privacy; lack of noise; attractive views.

Amenity open space: An area of land, generally green space and planting, which softens the urban environment, allows for informal leisure and provides a setting for buildings.

Architectural detailing: The designed detail on a building or structure, eg. decorative lintels, sill and eaves details.

Backland: Development to the rear of existing buildings, usually on land that is formally used by gardens or is partially enclosed by gardens

Built form: How a building looks, eg. size, shape, height, location in plot, etc.

Character: The combination of features and structures that distinguish one place /structure from another providing a distinct and recognisable pattern of elements to give a place identity.

Contemporary: Following modern ideas or fashion in style, design, techniques or materials.

Context: The character and setting of a site or area, including factors such as traffic, activities and land uses as well as landscape and built form. This can be the immediate area in terms of

the site context, or can be at a more strategic level and be town-wide.

Curtilage: The area of land immediately surrounding a house or other building and is reasonably associated with the enjoyment of that building, e.g. garden area.

Desire line: A route that people or animals instinctively wish to travel, often the shortest or straightest line between two points.

Desk top study: Will include the collection of data such as plans showing the site and its surrounding area, aerial photographs, and other relevant information including the identification of utilities and services, land contamination, public transport, listed buildings, sites of archaeological importance and sites of nature conservation interest, planning policy context, ownership details, planning history etc. Advice from suitably qualified specialists may be required, for example in preparing a preliminary ecological appraisal comprising of a desk top and field survey.

Elevation: An external face of a building or a diagrammatic drawing of this.

Energy efficiency: The result of minimising the use of energy through the way in which buildings are constructed and arranged.

Façade: The face of a building.

Fit for purpose: Development that meets the needs and requirements of the occupier.

Flexibility: The ability of spaces within a building to be easily changed in response to changing needs of the residents; usually non-structural, eg. the ability to use a bedroom as a study.

Form: The layout (structure and urban grain), density, scale (height and massing), appearance (materials and details) and landscape of development.

Grain: The general arrangement or pattern of development of an area. (See also urban grain).

Inclusive: A structure/place that does not exclude anyone; allows access to people of all abilities.

Infrastructure: Typically refers to the technical structures that support a society, such as roads, water supply, wastewater, power grids, flood management systems, telecommunications (internet, telephone lines, broadcasting), education and health facilities.

Key view: The line of sight from a particular point to an important landmark or skyline.

Landscape: The appearance of land, including its shape, form, colours and elements, the way these (including those of streets) components combine in a way that is distinctive to particular localities, the way they are perceived, and an area's cultural and historical associations.

Landscaping: Refers to any activity that modifies the visible features of an area of land, including but not limited to living elements, such as flora or fauna; or what is commonly referred to as Gardening, the art and craft of growing plants with a goal of creating a beautiful environment within the landscape but natural elements such as landforms, terrain shape and elevation, or bodies of water; and human elements such as structures, buildings, fences or other material objects created and/or installed by humans; and abstract elements such as the weather and lighting conditions.

Layout: The way buildings, routes and open spaces are placed in relation to each other.

Local distinctiveness: The positive features of a place and its communities, contributing to its special character and sense of place /identity.

Microclimate: The variations of climate within a given area, usually influenced by hills, hollows, structures or proximity to bodies of water. Can differ significantly from the general climate of a region.

Movement network: Interconnected system of streets, roads, cycle-ways and pedestrian routes.

Natural surveillance: (Also known as Passive Surveillance) – The deterrence of nuisance and wrong doing by the presence of passers-by or the ability of people to be seen from surrounding windows.

Natural ventilation: A method for reducing energy use and cost and for providing acceptable indoor environmental quality rather than using mechanical ventilation. Natural ventilation systems rely on pressure differences to move fresh air through buildings. Openings between rooms such as transom windows, louvers, grills, or open plans are techniques to complete the airflow circuit through a building.

Passive solar design: A building designed and orientated to make the most of the sun's warmth.

Sense of place: A feeling of appreciation for the distinct character of an area.

Setting: The context or environment in which something sits.

Site constraint: A feature of a site that may have a detrimental value and will need mitigation measures to be incorporated into the design.

Soft landscaping: Living elements, such as flora or fauna, and natural elements of a landscape scheme including landforms, terrain shape and elevation, or bodies of water.

Streetscape: The visual appearance of the street as a whole, including road, verges, gardens, buildings, trees, etc.

Street scene: The roadways, pavements, street furniture, trees, signage, building elevations and

other elements that comprise the street environment.

Street pattern: The layout of streets in an area.

Urban design: The art of making places. Urban design involves the design of buildings, groups of buildings, spaces and landscapes, in villages, towns and cities, and the establishment of frameworks and processes that facilitate successful development.

View: A view is defined by what is visible from a particular point.

Vista: An enclosed view or outlook, usually a long and narrow one.

Visual amenity: A pleasant or attractive element of the environment that can be seen.