

# Residential Design Guide



Supplementary Planning Guidance  
November 2000



STROUD DISTRICT COUNCIL  
Directorate of Development and Leisure

## Foreword

We are entering a period of great challenge in Stroud District as we seek to accommodate our share of the current national housing growth. Inevitably this means the construction of a lot of new houses, and it is absolutely critical that we embrace the current government's thinking on improving the layout and design of these new residential areas. At Stroud we will be putting much more emphasis on these matters as we look at housing schemes in the years ahead, and this design guide should help us considerably in that process.

In addition, anyone proposing to build new houses in the District should find that, if the advice in the guide is followed, the procedure runs more smoothly.

Chris Brine  
Chair of Planning Committee

# RESIDENTIAL DESIGN GUIDE 2000

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## The Purpose of the Guide

This guide has been produced to assist those wishing to build residential development within Stroud District. It includes advice for those looking to build one house alone, although it is primarily aimed at groups of houses, from small groups up to large developments of many hundreds.



The guide does not attempt to be prescriptive, and say that a particular approach should be followed. Rather it suggests ways of looking at a development, and sets out principles which, if adhered to, will be more likely to produce a positive recommendation.

## Background

Stroud District has suffered, as have so many parts of this country, from too much development in recent decades which conveys no sense of place whatsoever. Slavish adherence to standard highway requirements, minimum distances between houses, and standard house types, arranged in unimaginative ways on a site, have all too often been the norm. The result has been dull,

uninteresting development which at best could be from anywhere in the country, and at worst clashes with nearby more traditional development and detracts from the unique character of the District.

Much of this development occurred during a time when Government advice was that Local Authorities should not get involved in design matters - they were seen as primarily the concern of developers and their customers. The market was king.

This started to change in 1997, with the production of the revised Planning Policy Guidance Note 1, entitled 'General Policy and Principles'. This stresses that new buildings and their curtilages have a significant effect on the character and quality of an area, and are matters of proper public interest. It states that both urban design (the relationship of buildings to spaces), and the design of buildings, are material considerations, and makes it clear that "urban design" is not limited to urban areas, but is equally applicable to the countryside. PPG 1 advises Local Planning Authorities to reject poor designs, particularly where their decisions are supported by clear plan policies or supplementary guidance which has been subjected to public consultation and adopted. It tells us that it is proper to seek to promote or reinforce local distinctiveness, again particularly where this is supported by clear plan policies or supplementary design guidance.

The importance of urban design within the planning process took another step forward with the publication by the Department of Environment, Transport and the Regions (DETR), in September 1998, of 'Places, Streets and Movement'. This is described as a companion guide to Design Bulletin 32, on residential roads and footpaths, but marks a complete change in Government advice on how we should look at the design of new residential areas, and particularly the relationship between buildings, roads and footpaths. It stresses the importance of creating new quality spaces and places. Its emphasis can most readily be appreciated by looking at the chapter on key principles and issues, and noting that these include "Look at the place not the car", "Creating a high quality public realm" and "Responding to the local context". 'Places, Streets and Movement' (PSM) is used as the background for much of what follows in this guide.

The change in Government advice on the design and layout continued in October 1998 with the production by the DETR of 'Planning for Sustainable Development: Towards Better Practice'. Whilst obviously about a lot more than the design of new residential areas, it contains useful advice on how to make such developments more sustainable, and will also be referred to again in this guide.

More recently, Planning Policy Guidance Note 3, Housing, has been revised (March 2000) to introduce a new approach to planning for housing with a greater emphasis on design. In May 2000 the DETR published a new guide by The Commission for Architecture and the Built Environment called 'By Design - Urban design in the planning system: towards better practice', which aims to promote higher standards in urban design. Its central message is 'that careful assessments of places, well-designed proposals, robust decision-making and a collaborative approach are needed throughout the country if better places are to be created' (p8).

### **Using the Guide - the Relationship with the Local Plan**

At the same time as producing this guide, Stroud District Council is producing a Local Plan to 2011. The revised Deposit Version October 2000 contains an Environment chapter, which explains that this guide will be produced and adopted as supplementary planning guidance. It also contains three policies, B1A, B1 and B2, which underpin the production of this guide, and to which reference should be made when considering how to interpret the guidance in this document. In due course, it is intended that these policies will be part of the Development Plan, and will therefore be very significant in the determination of planning applications. These policies are reproduced in Appendix 1.

It is the purpose of this guide to provide more detailed guidance on how proposals for new housing can seek to comply with these policies.





# 1 What makes housing attractive?

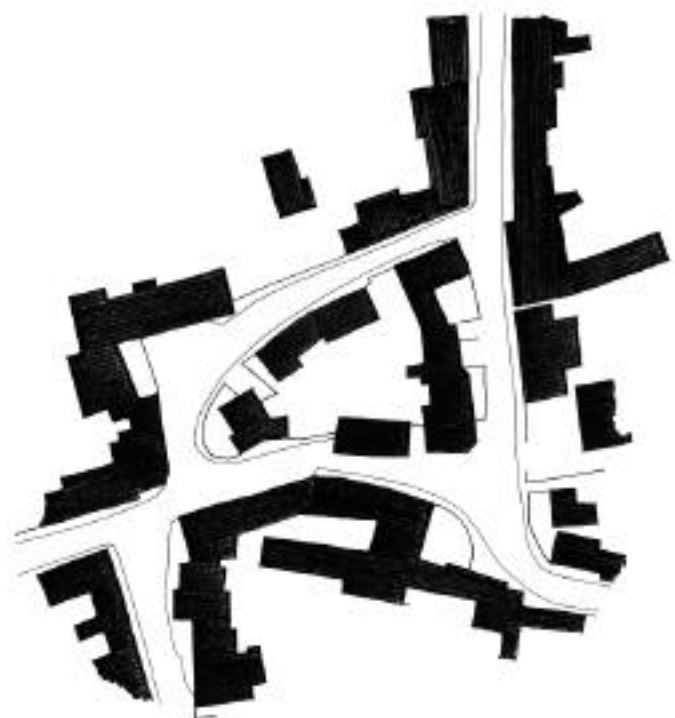
New housing is too often seen by the public as automatically a bad thing. However, housing does not have to be a blot on the landscape. Indeed, a large proportion of the reknown of the Cotswolds is due to the character of its settlements, which both enhances and is itself enhanced by the natural landscape setting.

There is general agreement that traditional unspoilt villages/towns are attractive, and houses in such areas in the Stroud District are in great demand. By looking more closely at one such town, Painswick, it is possible to analyse what it is that makes this such an attractive place. This understanding can then be applied to the design of new housing - not with the intention of creating exact copies, but rather to ensure that the new housing successfully interprets certain principles of good design.

Looking at an area of the town in plan (below right), it is immediately apparent, even without seeing the detail of the building facades, that this is not a new housing estate. There is a sense of a place that has evolved over time in a natural, unplanned way.

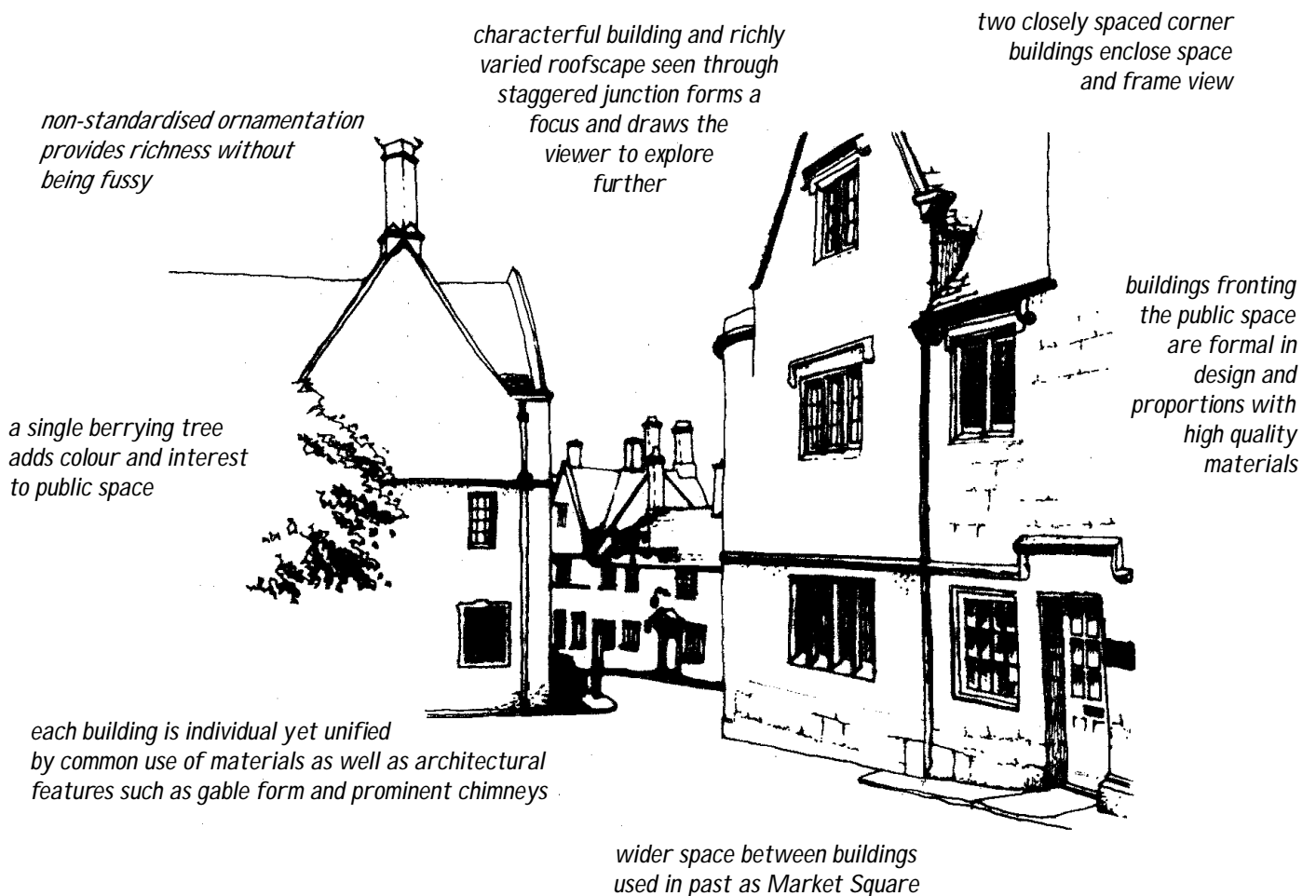
Specific aspects which help to make this a distinctive and attractive place include:

- *varied road widths, some as narrow as 3.5 to 4m between building frontages*
- *mix of building size*
- *very densely grouped buildings forming almost continuous edge to public space*
- *irregular pattern of building layout creating a variety of public spaces*
- *buildings generally positioned on the back of the pavement or directly fronting the road*
- *occasional buildings set back with garden or courtyard next to road*
- *hierarchy of spaces: market squares, courtyards, private gardens, alleys, through routes etc*
- *use of walls forming links where breaks occur in the building line*



These aspects combine to create a townscape which is rich and diverse, appropriately scaled for human activities. The buildings and layout reflect the historical development of the town, adding a further layer of interest.

Looking at the street scene in more detail one is immediately aware of the almost universal use of pale cream-grey local Cotswold stone. The use of a single building material throughout the old parts of the town gives a strong character which unifies the diverse building shapes, sizes and styles.



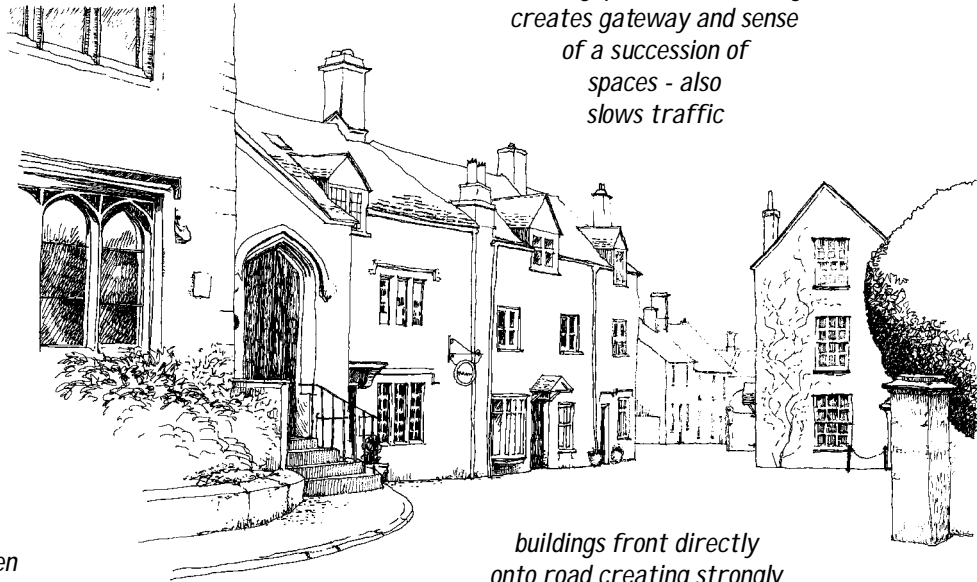
*chimneys and gable windows  
add interest to skyline*

*gable of house enlivened  
by traditional windows  
and climbing plant*

*narrow gap between buildings  
creates gateway and sense  
of a succession of  
spaces - also  
slows traffic*

*seen close up the  
grander buildings  
are richly  
detailed*

*clipped yew helps to  
enclose space and  
contributes to  
local character*



*contrast between  
grand, richly ornamented  
houses on New St and smaller simpler houses  
further downhill reflects historical development of town*

*buildings front directly  
onto road creating strongly  
defined edge to public space*

*the gable end  
of this building punctuates  
the space next to the Churchyard*

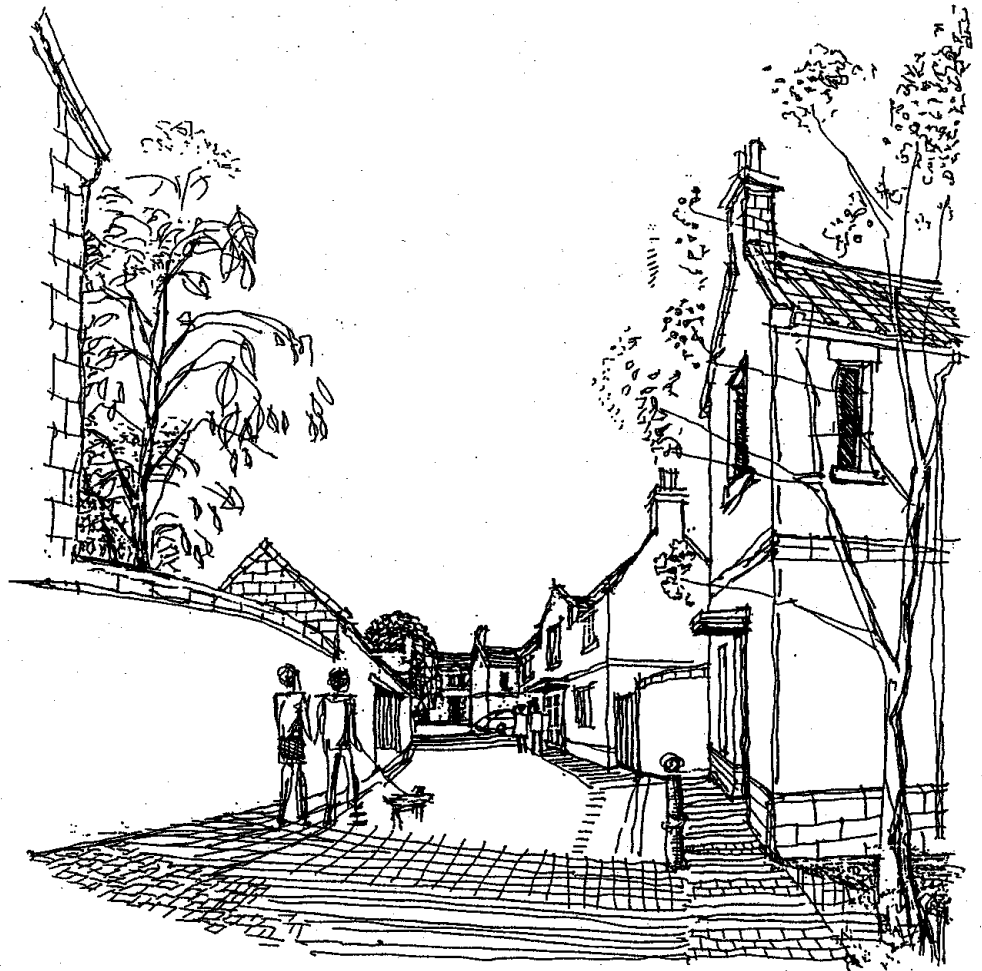
Aspects which lift this environment above the blandness and anonymity which characterise many of our recent townscapes include:

- *Articulations in building line creating changing vistas. Buildings frame, constrict, direct;*
- *Building frontages enclose series of spaces;*
- *Contrast between highly enclosed and more open spaces;*
- *Variety of focal points, landmark buildings;*
- *High quality buildings enliven the public space;*
- *Intricacy and complexity creating human scale and interest;*
- *Built form not uniform but linked by common materials and architectural details;*
- *Easily understood spaces: dimensions and character consistent with function;*
- *Spaces shaped by buildings rather than dominated by vehicle circulation requirements;*
- *Use of subtly textured materials which are appropriate to the area, and which mellow over time.*



Overall, the town has a strong sense of place, it is unique, though readily identifiable as a Cotswold town. It sits comfortably in the landscape with few if any discordant elements, the distinctive church spire serving as an historic landmark visible from a distance. Nothing is standardised; the road layouts and the relationship of the buildings to the roads show how the town functioned and evolved over past centuries.

The following chapters consider how to apply these principles to new housing in Stroud District in order to ensure the creation of attractive characterful places to live in that integrate easily into the existing fabric of the District, enhancing rather than despoiling it.



*Artist's impression of new development in Dorset*

# 2 The character of Stroud District

## Introduction

Underlying any new development in Stroud District should be an understanding of the existence of local characteristics in layout, design and materials, as evidenced in traditional settlements.

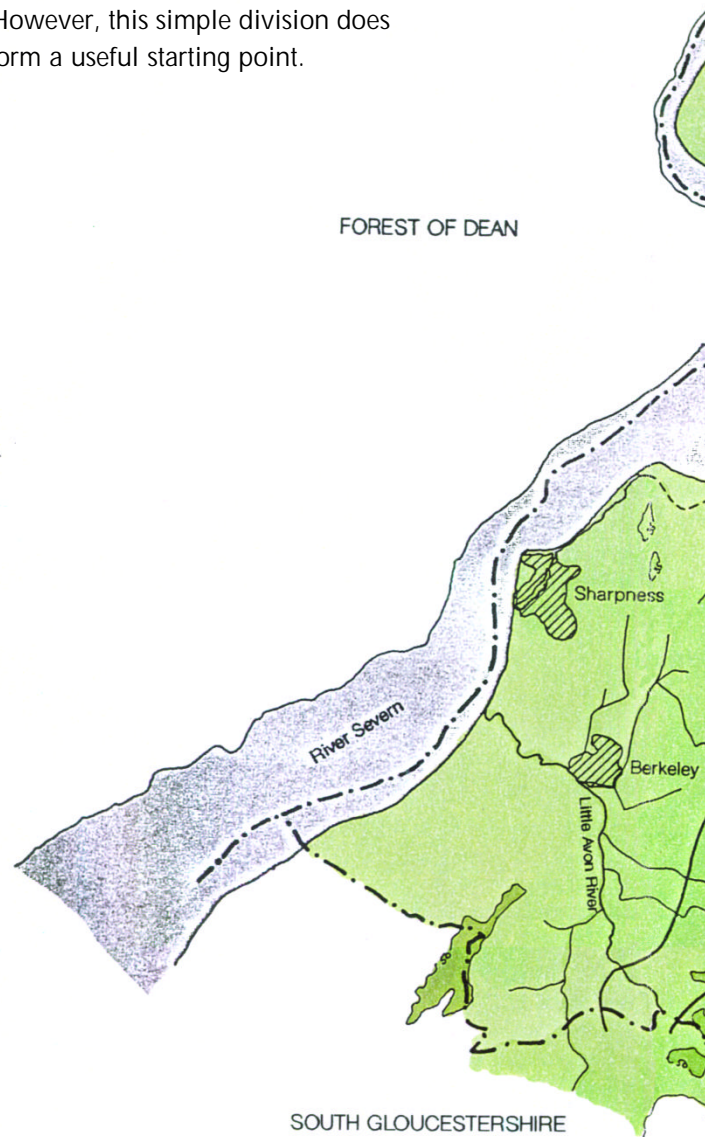
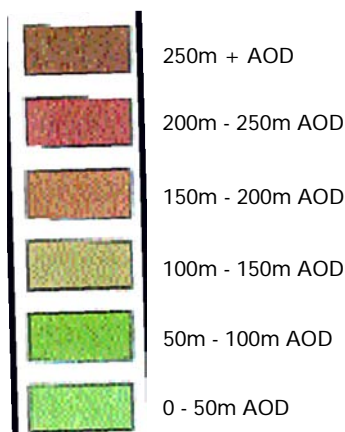
Traditional housing within Stroud District, in terms of its layout, its design, and the materials used, displays considerable local characteristics. It is these which make up "local distinctiveness" as discussed in the introduction to this guide. A common thread through much government guidance relating to layout and design in the late 1990s is the importance of local distinctiveness, and it is intended to set out in this guide what is meant by that in Stroud District.

It is important to state at the outset that the local distinctiveness which government guidance and this guide requires to be reflected and respected is to be found in the older, more traditional forms of housing that commonly make up the historic core of settlements. More recent development rarely displays any local distinctiveness of its own. Thus where this guide requires new development to respect and reflect local distinctiveness, it is the distinctiveness of traditional, vernacular development in the settlement which should be considered, and not the character of more recent development which may be closer to the site.

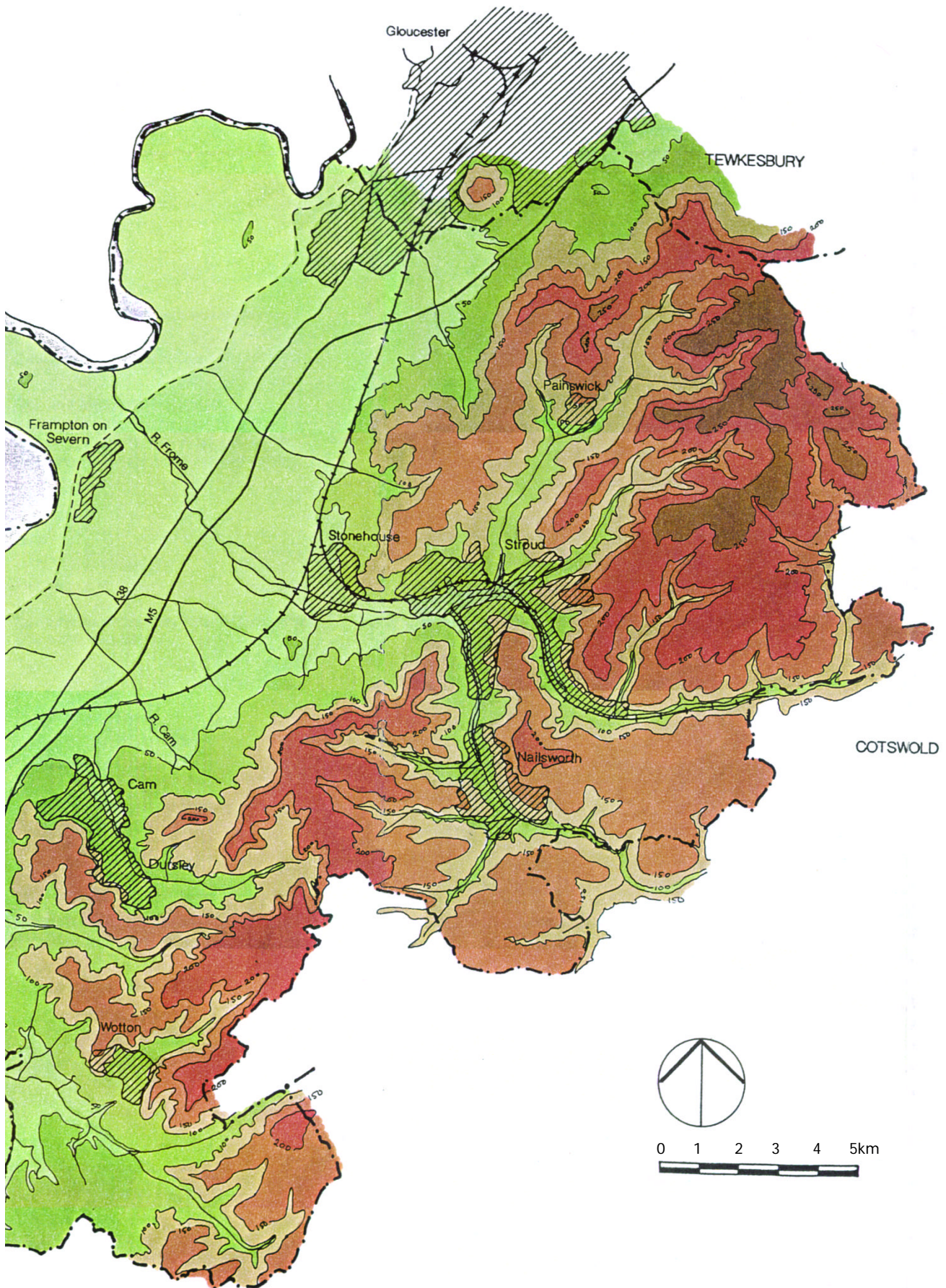
## The Cotswolds and the Severn Vale

The 1989 guide produced by the District Council discussed the different character of traditional development in the District largely by a simple division - the difference between development in the Cotswolds and in the Severn Vale. This does not tell the whole story, as significant variations exist within these two areas. However, this simple division does form a useful starting point.

### Stroud District Height in metres











It is the physical geography of the District that produced these two distinctive areas, and one of the main factors in the development of local style has been the materials readily available for building. Almost inevitably, readily available meant those materials that were to be found close at hand. Prior to the 19th century, transport of bulky building materials over long distances was not practical. Thus, in the Cotswolds, a pattern of building evolved using the local oolitic limestone, worked and dressed in varying degrees, as the principal walling and roofing material. Stone was quarried locally, and varied widely from quarry to quarry.



The physical form of buildings was largely dictated by the materials. Plan forms were narrow, reflecting the spanning capabilities of timber floor joists and rafters. Roofs were built at a steep pitch (45 - 55 degrees) because, at this pitch, relatively small timbers could carry the considerable weight of stone slates.



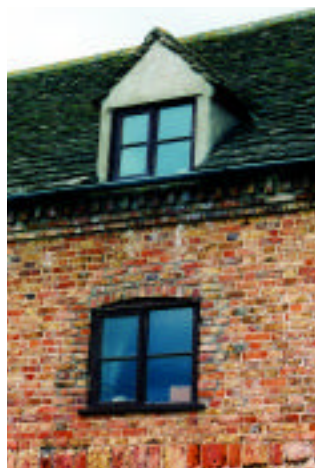
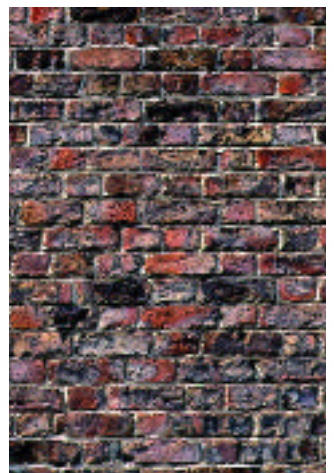
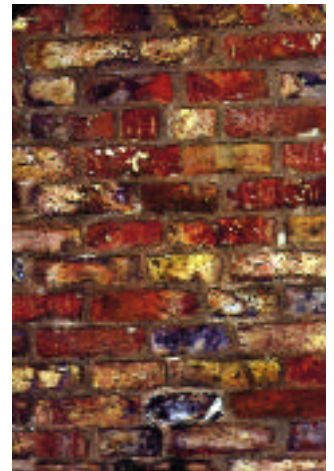
## Residential Design Guide 2000

Similarly, in the Vale, considerable use was made of naturally occurring materials, and local clays were extensively used in brick and tile manufacture. Brick detailing has developed considerably in the Vale. These vary from simple projecting horizontal string courses to complex brick laying patterns under eaves, verges and in chimney stacks. The traditional brick in the Vale is a multi, varying through reds to buffs, with burns and blemishes that are sometimes black or even purple in colour.

Roof pitches in the Vale are again relatively steep, although usually slightly shallower than the traditional Cotswold pitch - 40 - 45 degrees is more normal in the Vale. Profiled clay tiles are the main roof covering, mainly the double Roman and Pan tile types made from the red clays of the Bristol and North Somerset area. Plain tiles of similar origin are also widely used.

With these two strong and contrasting influences on building style existing side by side through the centre of the District, it is not surprising that there is an area on and below the Cotswold escarpment where a transition occurs between the two styles, and both are to be found within one settlement.

In addition, there are other significant local variations in layout, building form and materials which do not rely solely on a Cotswold / Vale split. In order to provide a greater level of guidance on the nature of local distinctiveness within Stroud District, the main settlements of the District will be further subdivided and examined in greater detail.



## Settlement types

The eight settlement types considered are:-

- Urban Compact
- Severn Vale Rolling Plain
- Severn Vale Estuarine
- Cotswold Compact
- Cotswold Steep Slopes
- Cotswold Valleys
- Escarpment
- Southern Escarpment Compact

Urban Compact . . . the use of brick in Berkeley lends itself to building forms such as these semi circular bays



### Urban Compact

*Settlements covered include Dursley, Nailsworth, Stonehouse, Stroud Urban Area, Berkeley. (Berkeley and Stonehouse, being on relatively flat land, tend to be less compact than the other settlements.)*

### Locally Distinctive Features

Built form	Wide frontages to the street, and shallow depths. A lot of terraced housing - some of which are small houses, but some are large. Mostly two-storeys, but a good proportion of three storeys, and some of more.
House positions	Predominantly on the back edge of pavement - otherwise set back by a few metres.
Streets	Narrow, and of variable width, occasionally narrowing to pinch points and widening to nodal points, which are usually hard landscaped.
Materials	Very great mix of materials - including stone, red brick, render, paint, clay tiles and slate. (Except Berkeley where predominant building materials are red brick with clay tiles).



## Severn Vale Rolling Plain

*Settlements covered include Brookthorpe, Cam, Cambridge, Coaley, Eastington, Frampton-on Severn, Hardwicke, Haresfield, Newport, Saul, Slimbridge, Stone, Upton St. Leonards, Whitminster.*

## Severn Vale Estuarine

*Settlements covered include Arlingham, Elmore, Epney, Fretherne, Longney, Upper Framilode.*

### Locally Distinctive Features

Built form	Wide frontages to the street, and shallow depths. A lot of terraced housing - but more detached than in Urban Compact. Most housing is of two-storeys
House positions	Predominantly set back from the back edge of pavement by a few metres.
Streets	Relatively narrow, although wider than Urban Compact, occasionally narrowing to pinch points and widening to nodal points, which are usually grassed (eg village greens).
Materials	Predominant building material is red multi brick, with limited use of render and paint. Predominant roofing material is clay tiles.

### Locally Distinctive Features

Very similar to Severn Vale Rolling Plain, except lower density, with greater occurrence of spaces between buildings.



Severn Vale Estuarine . . .  
traditional wide frontage buildings in Arlingham

## Cotswold Compact

*Settlements covered include Bisley, Minchinhampton, Painswick, South Woodchester.*

### Locally Distinctive Features

Built form	Wide frontages to the street, and shallow depths. A lot of terraced housing - some of which are small houses, but some are large. Most housing is of two-storeys, but a good proportion is of three storeys
House positions	Predominantly on the back edge of pavement.
Streets	Streets are narrow, and of variable width, occasionally narrowing to pinch points and widening to nodal points, which are usually hard landscaped.
Materials	Nearly all buildings in natural stone walls and roofs, with only very limited use of render and paint.

Cotswold Compact . . .  
a typically dense street scene  
in the centre of Minchinhampton



## Cotswold Steep Slopes

*Settlements covered include Amberley, Box, Brownshill/Bussage, Chalford, Eastcombe, France Lynch, Oakridge, Randwick, Selsley, Sheepscombe, Whiteshill and Ruscombe.*

### Locally Distinctive Features

Built form	Wide frontages to the street, and shallow depths. Most housing is of two-storeys, but a good proportion is of three storeys. Variation in size of house - some small terraces, many small cottages, some larger detached.
House positions	Great variation in set back from the road. Houses predominantly built on line of slope, facing down it.
Streets/Roads	Roads are predominantly along the slope, following the contour lines, with inter-connecting roads at acute angles. A lot of narrow inter-connecting roads. Irregular, often grassed spaces at junctions. Streets are narrow, and of variable width, occasionally narrowing to pinch points and widening to nodal points, which are usually hard landscaped.
Materials	Nearly all buildings in natural stone walls and roofs, with only very limited use of render and paint.



*Cotswold Steep Slopes.  
These plans illustrate the distinctive layouts  
that have evolved in Chalford in response to the  
steep gradients. Roads zigzag close to the contours  
with footpath links taking more direct lines up and downhill.  
Houses are generally aligned to benefit from the south facing aspect*

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## Cotswold Valleys

*Settlements covered include Cranham, Horsley, Miserden, North Woodchester, Nympsfield, Pitchcombe, Uley.*

### Locally Distinctive Features

Built form	Wide frontages to the street, and shallow depths. Most housing is of two-storeys, but a proportion is of three storeys. Some small blocks of terraced housing - many small cottages, and some larger detached.
House positions	Predominantly set back from the back edge of pavement by a few metres.
Streets/Roads	Streets are narrow, and of variable width, although usually wider than Cotswold Compact, occasionally narrowing to pinch points and widening to nodal points, which often contain grass (eg village greens)
Materials	Predominant building material is natural stone walls and roofs, but a more widespread use of render and paint.

Cotswold Valleys . . . many terraces in Uley are set back and at a higher level from the road



## Escarpment

*Settlements covered include Alderley, Hillesley, Kings Stanley, Leonard Stanley, Middleyard, North Nibley, Stinchcombe.*

### Locally Distinctive Features

Built form	Wide frontages to the street, and shallow depths. Most housing is of two-storeys, but a proportion is of three storeys. Some small blocks of terraced housing - many small cottages, and some larger detached.
House positions	Predominantly set back from the back edge of pavement by a few metres.
Streets/Roads	Streets relatively narrow, although wider than Urban Compact, occasionally narrowing to pinch points and widening to nodal points, which are usually grassed (eg village greens).
Materials	Predominant building material is natural stone walls and roofs, but the nearness to the Vale is reflected by a proportion of red and other multi bricks, and clay tiles. The use of render and paint is also evident.

**Southern  
Escarpment  
Compact**

*Settlements covered  
include Kingswood,  
Wotton-under-Edge.*

**Locally Distinctive Features**

Built form	Wide frontages to the street, and shallow depths. Most housing of two-storeys, but a good proportion is of three storeys. A lot of terraced housing - some of which are small houses, but some are large.
House positions	Predominantly on the back edge of pavement.
Streets/Roads	Streets are narrow, and of variable width, occasionally narrowing to pinch points and widening to nodal points, which are usually hard landscaped.
Materials	A mix of materials - including stone and brick, but characterised by a considerable use of render, much of which is painted.

Southern Escarpment Compact . . . a distinctive mix of materials in Wotton under Edge



Escarpment . . . a typical mix of stone and brick houses overlooking a green in Leonard Stanley



## Local Distinctiveness and Innovation

As is stressed later in this guide, an absolutely vital component of designing any development on any site is ensuring that it respects the character and existing features of the site itself. It will not be sufficient to simply take the features set out above and design a housing scheme without reference to the special qualities of the development site and its surroundings. This chapter is intended to give some guidance as to the nature of local distinctiveness within Stroud District, which should be reflected and respected on the development site. It is not intended, and should not be taken to mean, that adherence to this removes the need to carefully consider the site itself and its surroundings, in designing a scheme.

The Local Plan policies BE1 and BE2 quoted in the introduction to this guide explain that local distinctiveness should be reflected and respected, unless the new development introduces a strong and distinctive urban design itself. In Conservation Areas, within the Area of Outstanding Natural Beauty, on infill plots and in small

developments which relate strongly to existing development, it will usually be more appropriate to reflect local distinctiveness closely. This may be done through reproduction of the existing built form, using traditional materials, or it may be acceptable to incorporate historical references in a more modern interpretation.

The built environments which are highly valued in the District represent distinct styles of house building characteristic of certain periods in history. It is not the intention of this guide to insist that all new housing should imitate the styles of the past, indeed it would be a sad indictment of our era if the Conservation Areas of the future did not include areas of 20th century housing! The potential of innovation to create new and exciting places to live is recognised, and well thought out innovative housing proposals which meet the housing needs of the locality will be positively viewed.





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In general, it may be possible to incorporate small amounts of progressively designed housing into existing developments however . . .

*'at some point every small community will have a critical proportion of its whole size, which, if exceeded by any new development, of any style, will transform the original beyond recognition. At the root of this matter is a question of good manners, the need to respect those aspects of valued existing environments which are fundamental to their continuing existence.'*

On isolated plots, this may be less critical, and there will always be opportunities to demonstrate really good modern design.



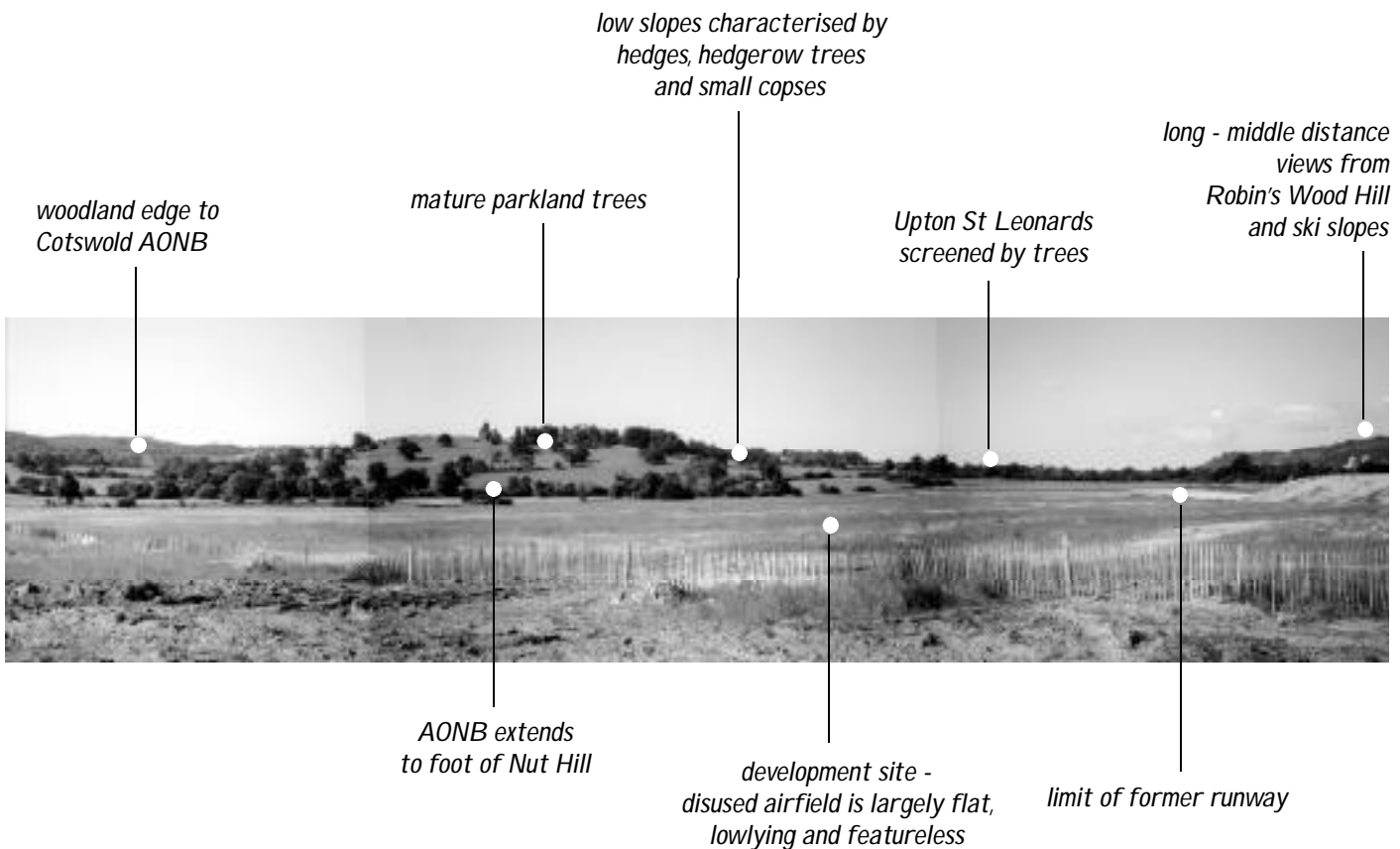
The use of traditional materials in a progressive design will often help to tie the building in to its environment.

## Site survey and appraisal

A detailed site survey and appraisal is an essential pre-requisite of any new housing development, regardless of its size. Copies of a site survey should form a part of any planning application which seeks to determine the siting of houses (i.e. applications for full planning permission, and outline permissions and approvals of reserved matters where siting is to be determined). Every site has its own specific characteristics, some of which make a positive contribution to the quality of the site, and some of which will detract from that quality.

For a scheme to be successful, it is essential that the design is based upon a thorough understanding of the site, in such a way that it should be obvious that the new development has been designed for this specific site and is not just a standard solution.

A thorough survey takes time but is a short term cost for long term gain in terms of an improved product in the form of more desirable housing.



Each site has its own specific characteristics

### Site constraints

It is essential that site constraints are understood at an early stage so that the design is not compromised further down the line. These may include:

- *Ancient Monument*
- *Scheduled site for nature conservation*  
*eg - Nature Reserve, SSSI*
- *Tree Protection Order*
- *Listed Building*
- *Conservation Area*
- *Protected hedgerow*
- *Protected species such as Badgers or Bats*
- *Protected habitat eg Otter holt*
- *Under - or overground services and Wayleaves*
- *Access rights such as Public footpaths*

Specialist advice is available within the Council or from other statutory bodies (Environment Agency, English Nature, English Heritage), and other bodies, such as the Gloucestershire Wildlife Trust, to assist the developer to ensure that new development does not conflict with designations of special interest.

Other constraints may not have the force of law but may make development less profitable, eg steeply sloping land (too many outline plans fail to take the effect of topography into account), bedrock close to the surface, contaminated land, high or fluctuating water table. Attention also needs to be paid to how the site is to be accessed. A site survey should highlight any detrimental views or other adjacent land uses which create noise, smell, pollution or other undesirable activity.

Retention of established vegetation can lend maturity to a site and help to anchor it into the existing landscape.

### Site capital

Site capital may include:

- *Good views onto or from the site*
- *Mature trees, hedgerows and other vegetation*
- *Watercourses*
- *Walls, high quality traditional buildings*
- *Good orientation*
- *Good drainage and soils*
- *Shelter from prevailing winds*

Where possible, aspects of site capital should be retained and enhanced. Developers must ensure a high standard of protection to vegetation during construction works.



Particular features, if retained, may serve as landmarks in the development and reinforce a sense of place. This may be a specimen tree, a stream, an existing building or wall, or a hedgerow.



There may be historical associations which give another, cultural layer of meaning to the environment and which should be carefully integrated into the new design, possibly even providing a concept around which to develop the design.

Often aspects which may at first appear to be constraints can, if skilfully handled, turn out to be assets. For example, a sloping site can produce dramatic effects and create distinctive character, good views, and may also help to ensure privacy or screen parking areas and roads.

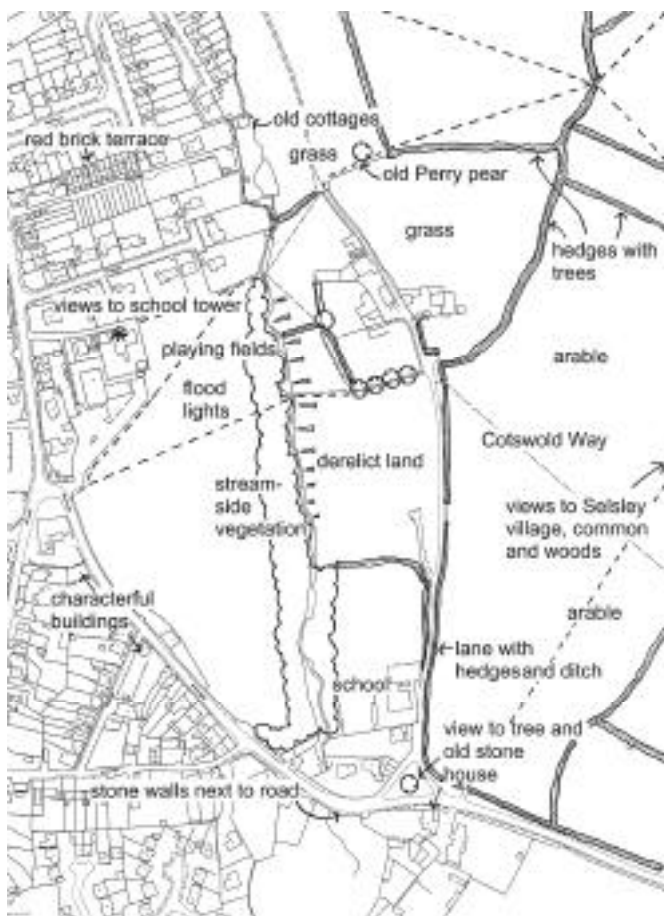


## Links to adjacent land and development

The development site cannot be considered in isolation. It has to belong in the broader environment in order to function successfully. This is not to rule out innovation, but any change to the existing context should be carefully considered and not appear to be arbitrary or careless. New buildings should tie in to the colours and massing of surrounding buildings. Landscape patterns should, as far as possible, be extended into the development by means of green corridors with trees, hedgerows or watercourses,

and where there are distinctive traditional boundary treatments such as dry stone walls or hedges with hedgerow trees, this pattern should be incorporated. Roads should link in with existing networks and connect to places of public interest, schools, shops etc.

Where habitat is preserved or created for nature conservation, this will be much more valuable if it is linked to other similar features in the wider environment.



The following are examples of aspects which may be relevant to analysis of the site context:

- **Settlements:** pattern/size
- **Roads and footpaths:** network/character
- **Buildings:** style/material
- **Land use:** agricultural/recreational/industrial etc
- **Enclosures:** type/pattern/scale
- **Vegetation:** species/patterns/scale
- **Water:** streams, ponds, wetlands etc
- **Views:** in/out of site, screening existing/required
- **Landmarks:** built/natural (inc trees)

### Other guidance

The developer should be aware of and have regard to the recommendations of Stroud District Council's Landscape Assessment. Where additional specific guidance exists, in the form of published Village Design Statements, Village Landscape Statements or similar, the developer should have regard to these from an early stage.

*'We need to reproduce the charm of existing settlements in a new way. We must create a variety of spaces and not allow the car and road to dominate.'*

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## Density of development

Many people assume that high density development results in low quality environments. Examples of traditional town/village centres (see Chapter 1) show this need not be the case. Dense development (over 50 dwellings/ha) can provide positive architectural form with a strong sense of enclosure, whereas many of the problems with traditional suburban layouts relate to low building density (less than 25 dwellings/ha) resulting in an environment which is neither building nor landscape dominated and lacks clear identity

It should be noted that density is a function of the overall volume of built development on a site and figures such as dwellings per hectare can be misleading if considered in isolation from building size.



*A typical suburban layout*

*High density development tends to be associated with village/town core/centre, also semi-industrial settings, eg - mill/wharf/canal.*





## Residential Design Guide 2000

Our experience of settlements leads us to expect lower density with increasing distance from the core of a settlement. While all rules are made to be broken, we should be aware of the consequences of doing so. In the illustration below, the high density gives the message that this is village core, but in fact the houses form an abrupt edge to a neighbourhood adjoining extensive public open space. The effect is one of fortification against the outside world - maybe not inappropriate in some cases, but for which there is no precedent in Stroud District.



Given the current pressure on land, there is a need to make the best use of that land which is to be built upon. The use of high density terraced/semi-detached houses can mean less materials are used, energy efficiency is increased, and space is freed up for other community uses.

Where a consistently dense layout is inappropriate, for example on the edges of rural settlements, density should be varied to give coherent groupings ('hamlets') of relatively dense housing separated by larger areas of open space, maybe attached to schools, community buildings, or as retained landscape features, linear woodlands etc.



Well conceived and executed dense layouts can work well, and have been shown recently (as in Poundbury) to be perceived as desirable. However extensive consistently dense areas can be confusing, reading as oversized village or town centres. Moreover, not everyone will choose to live in close proximity to their neighbour, however well designed the housing, and there will always be a demand for lower density housing. This should be carefully integrated into the overall scheme in a logical manner, avoiding the typical suburban layout. Landscape detailing, including planting, will be particularly important to form a successful framework to large detached houses from an early stage.



A particularly unsuccessful, but much used, solution, is the building of relatively large detached houses in small plots of land, separated from each other by as little as one metre, and often differing wildly in style. This runs contrary to our housing tradition, where large houses tend either to be town houses, built in tall terraces with minor distinctions in style, or characterful detached country houses of one-off design, surrounded by substantial grounds.



Part of the problem arises from over-rigid application of standards for garden size. In this day and age, many people do not want a large garden and the responsibility that goes with it, and it is better to provide a range of garden sizes, so that some large houses can be built as terraces with smaller than average gardens, and others can be set in generous gardens with room for planting, which can make a real contribution to the greening of the surrounding area. Where gardens are smaller than the normal standard, care must be taken in siting adjacent buildings to avoid loss of privacy.

This kind of variation can produce interesting layouts, but should not be used as an excuse to overdevelop a plot. Whilst each house on a development may have considerably greater or smaller gardens, the development as a whole should provide an average of 100 square metres of private useable garden per dwelling. The only exception to this will be where a design philosophy has been used on a site to produce an imaginative high density solution.

## Organisation

There is a logic and pattern to the organisation of traditional settlements, with buildings located around a principal route or public building, or space such as a church or market square. There is a clear centre to the settlement, with shops situated in areas of high concentrations of inhabitants, and a hierarchy of development radiating from the centre. Land unsuitable for building may survive as open space near the centre. Where competition for space is fierce - in wealthy towns with limited flat land for example - buildings will tend to be closely spaced and relatively tall. Other large houses will be found on the outskirts of the settlement in their own extensive grounds. All of these patterns are a part of our culture which we recognise, consciously or subliminally, and use to make sense of our surroundings.



*Plan of centre of Minchinhampton showing buildings clustered around the Market Place and key junction, with the church overlooking the market*

Particularly on large new housing sites, it can be hard for people to orientate themselves and make sense of their surroundings. Road layouts are often convoluted and meandering, with acres of uniformly spaced housing of identical, or arbitrarily different, size and style.

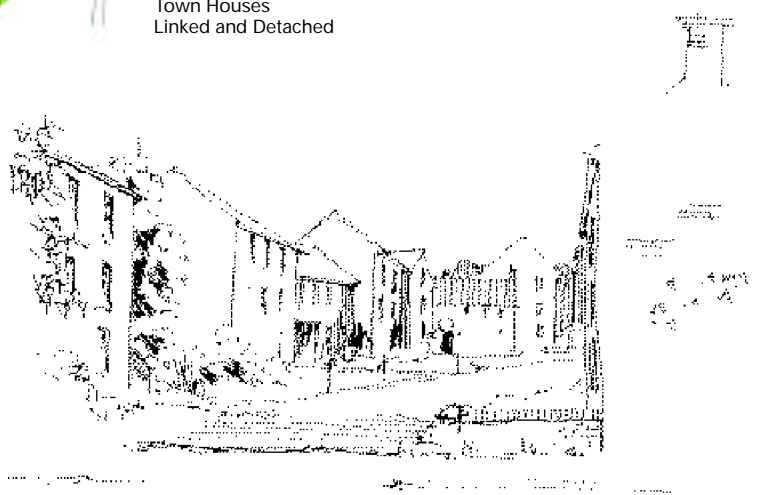
To avoid this, anything but the smallest developments should be organised in zones of different character, distinct in terms of density, house size and style, groupings, detailing. Areas should be created that are coherent and recognisable.



*Concept plan for a new housing site showing zones of different character*

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*Artist's impression of urban core housing*





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*This plan provides a further level of detail and starts to address variations in built form*

This is not to say that all houses of one type should be in one area. Instead, a majority of houses in one area might be large detached, but with a proportion of smaller terraced and semis, whereas another area might be predominantly terraced with a number of larger houses. Larger buildings such as small blocks of flats may be located on prominent sites to form landmark buildings; occasional detached houses might be set well back from the road so that the garden forms a green break in the built form. Mixing housing types will result in more mixed communities. This is good for security because different groups of people are likely to be at home at different times of day, thus improving informal surveillance of the neighbourhood.

## Key

- Landmark Building**
- Small Street** - building alignment encloses street spaces
- Fore Street** - formal alignment and co-ordinated building detail
- Green Street** - set back buildings - planted boundaries
- Lane** - informal alignment - narrowed entrances - shared surfaces
- Bus route**
- Footpath/Cycleway route**

Wherever possible, distinctions should arise from an understanding of the site and its context so that the different character areas appear natural rather than arbitrary and contrived. The local context may provide examples of traditional settlements which differ significantly from valley floor to valley sides, for example. People will be aware of quite subtle distinctions and the development should retain an overall unity.

Make use of landmarks, whether built or natural, pre-existing or introduced. Views out of the site to hills, a distant church spire or down a valley, all help to strengthen the sense of place.



## Mixed use development

Further distinction between areas can be achieved not just through mix of house types, but also mixed use. A development centred around workplaces and shops, schools and children's play, as well as nature conservation/wildlife areas will not only be less uniform, it also provides greater opportunities for residents to get to know each other and for a community spirit to develop. Anti-social behaviour is less likely where a range of different activities are catered for, and where people do not feel protected by anonymity. In addition integrating a mix of uses into the development benefits sustainability through reduced use of cars for journeys to work/school/shops/leisure (see Chapter 7).

When providing for children, it is important to design all external space with children's activities in mind. Far better to have an environment that is generally varied, rich and stimulating than to provide one fenced off playground in an otherwise sterile environment.



## Circulation

The problem of low density in typical suburban developments has been discussed above. However, the poor quality environment is not solely a result of housing density, but also due to unimaginative road-dominated layout. In the recent past, developers have felt obliged to adhere closely to local highway requirements in order to ensure adoption of the highways by the local authority. Rigid interpretation of guidelines for road traffic, along tried and tested lines, has resulted in standardised layouts, unrelated to earlier traditional settlement pattern, or to localised site features, with a consequent loss of local distinctiveness. Such road-dominated layouts lack enclosure, are inappropriate in scale for the creation of an intimate, homely feel and create characterless, uniform landscapes with no sense of place. The typical suburban layout differs little throughout the country.





## Government Guidance

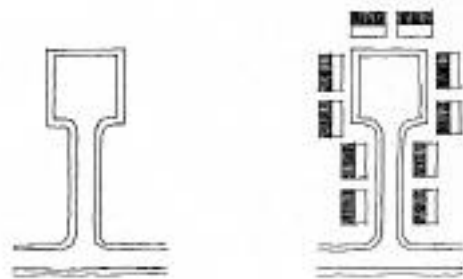
Roads form part of the public space and their treatment affects the quality of the public realm. Government guidelines are contained in Design Bulletin 32, with more recent guidance contained in 'Places, Streets and Movement', which aims to promote:-

- *A flexible interpretation of DB32, involving more responsiveness to site and setting in the layout of new development to achieve a better balance between highway requirements and other factors.*
- *Developments designed to emphasise a sense of place and community, with movement networks to enhance those qualities.*
- *The reduction of car use through the provision of local facilities and public transport within walking distance of housing.*
- *The detailed design of roads footpaths and cycle routes to avoid dominance by the car, and*
- *A move away from overly prescriptive standards.*

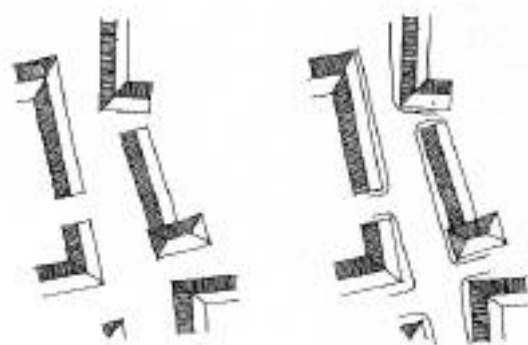
This is a welcome document, and Stroud District Council encourages the interpretation of standards/guidelines that give higher priority to pedestrians and cyclists and recognises the contribution of road design to the quality of the public realm.

## In practice

It is vital that standards set by DB32 and Gloucestershire County Council are interpreted flexibly, as advocated by 'Places, Streets and Movement' (PSM). The relationship between buildings and roads and footpaths is an important factor in determining the character of an area, and it is important that rigid and unnecessary highway standards are not allowed to force a development into anonymity. An important principle set out in PSM is that the buildings should be planned first and the roads fitted around them to create interesting streetscape/urban form.



*Conventional road and housing pattern*



*Poundbury housing pattern*

This is very important in Stroud District, where the application of rigid highway standards will nearly always result in a development which does not reflect and respect the local distinctiveness of the various parts of the District.



### Traffic calming

All residential areas should be designed for low traffic speeds - 15 -20mph. A gently curving road layout, which does not relate to built form and does nothing to slow traffic, should be avoided. Traffic calming should predominantly be achieved as part of the overall design. A design which does reflect the local distinctiveness of many parts of the District might include tight bends, reduced forward visibility, frequent direction changes, and narrow carriageways with pinch points. If these are included in a new development, traffic calming can be achieved without the use of artificial devices. Pinch points can be created by the positioning and alignment of houses and walls, rather than by a narrowing of the carriageway added at a later date. Traffic calming measures which appear as 'add-ons' are more likely to be resented by residents as an obstruction, and are a less appropriate way of achieving traffic calming in a new development. They are more appropriate when adapting existing roads to lower traffic speeds.



*Deliberately restricted forward visibility in the centre of Poundbury forces traffic to proceed with caution*



*An interesting scheme which illustrates many traffic calming principles*

Areas of pedestrian priority can be clearly indicated by design features such as change in surface materials and marker strips, gateways formed by built form or planting, the removal of footpath demarcation, and the absence of conventional parallel-sided carriageways.

### Legibility and Permeability

Road layout should assist users to orientate themselves within a development. Roads should link places in a logical way. New development should be integrated into the community, and this can be assisted by physically linking the development with existing roads and footpaths. Culs-de-sac ending in vehicle turning heads are not a traditional feature of Stroud District, and should only be used where no alternative exists. Instead, more traditional linked street patterns should be designed, allowing a freer movement of pedestrians through the area, as well as a street layout which better reflects the local distinctiveness of the area.

### Footpaths

Separate footpaths in residential areas are often perceived as dangerous places and should only be included where short, direct, well lit and overlooked, and where upkeep will be to a high standard. It will usually be better to design pedestrian friendly roads with low traffic speeds in residential areas as part of general traffic calming. Where footpaths adjoin rear gardens, boundaries should be above head height and strongly built for security. If security is expected to be a problem, the boundary can be reinforced with dense prickly planting, although care should be taken not to provide potential hiding places, or to create an environment that appears fortified rather than homely.



*Here buildings form a clear gateway*

### Treatment of parking areas

The treatment of parking areas should be seen as part of the overall design, and not as an afterthought. Parking areas should be overlooked, to provide surveillance, and in general people like to be able to see their own car. On-street parking, though out of favour in recent years, slows traffic and providing it is not too dominant, can be an acceptable way of providing for parking.

In most instances the choice will be between in curtilage (within plot) parking versus separate courtyards. In curtilage parking is excellent for security and tends to be the preferred option on most new housing developments. However, this option usually means houses have to be a minimum 6m distance back from road resulting in loss of back garden private space, decreased enclosure to the public space and generally weaker built form.



*Provision of parking space outside every house results in widely space housing and lack of enclosure to public space*



*Enclosure can be increased by boundary fencing to front gardens, tree planting and use of buildings with projections*



## Residential Design Guide 2000

The use of garages and parking areas to the side or rear of the house allows the positioning of houses closer to the road. Visual enclosure and delimitation of public from semi-private space can also be improved by the use of appropriate walling or fencing to the front boundary, and this can be reinforced with planting.



In some areas, such as where a densely built village core feel is being sought, parking within the curtilage of the dwelling is likely to be inappropriate. In such instances parking should be provided in courtyards, which should be situated close to the dwellings they serve. Parking courtyards can be attractively designed spaces with planting, enhancing the setting of housing. Where garages are included, these can be grouped and detailed attractively (see Chapter 6). The courtyards may be situated behind the housing and overlooked from rear windows, or in front, as part of the public open space, perhaps incorporating tree planting to soften the effect.



*Aerial view and sketch showing parking area designed to form attractive central square with formal tree planting*

Parking courtyards should be small enough to allow a feeling of ownership by the users, and this feeling of ownership can be enhanced by the use of gateways, actual or symbolic, defining the entrance(s) and indicating that this area is not open to the general public.



## The use of standards

The Council's 1989 Design Guide contained prescriptive standards in relation to garden size and distance between buildings. 'Places, Streets and Movement' makes the point that the use of such standards, particularly when combined with the rigid imposition of highway design standards and parking standards, has led to much mediocre development with no sense of place. This guide deals elsewhere with the need to be more flexible in respect of highway standards, and to subordinate these to the production of high quality places. Revised, more flexible parking standards have also been adopted by the District Council in the summer of 1999.

Standards relating to garden sizes and distances between buildings should also be subordinate to the need to design high quality layouts. However, such standards do still have a limited role to play, which will now be set out:-

### Garden sizes

It is important, as set out below, that occupiers of dwellings should have an area of totally private space, of at least 20 square metres. Beyond that however occupiers should have a choice as to whether they wish to have a small courtyard garden or a large garden with the opportunity for gardening as a hobby, and/or the growing of fruit and vegetables. It is not therefore necessary for every house to have a garden of 100 square metres of useable private garden. Rather, some houses may have considerably smaller gardens, of little more than 20 sq.m., whilst others have large gardens of 200-300 sq.m. or more. The emphasis should be on providing choice within a scheme. As a rule, an average of 100 sq.m. of useable private garden should be provided within a scheme, with no property having less than 20 sq. m. These standards may be relaxed on schemes where the garden is to be communal.

Where access to a garden is not available, for example in blocks of flats, provision of balconies big enough to sit out on should be considered.

## Distances between buildings

The reason for having standards regarding the distance between buildings is to ensure privacy for the occupiers of those dwellings. However, as discussed below, a well designed scheme can achieve privacy in other ways, by careful positioning of units and windows. Where a scheme succeeds in providing privacy in this way, no standards regarding the distance between buildings will be applied within the scheme itself. However, where a scheme adjoins existing housing, it is appropriate to apply standards to protect the privacy and amenities of the occupiers of those existing dwellings. In addition, the standards will be applied to new dwellings, where a scheme fails to address the issue of privacy in the way recommended later in this chapter. Those standards are:-

- *Where dwellings face each other and both have windows with clear glazing, a minimum distance of 25 metres.*
- *Where dwellings face each other, but only one has windows with clear glazing, a minimum distance of 10 metres.*

Over and above the application of standards, the layout of a well designed development will respect certain principles. These are explained below.

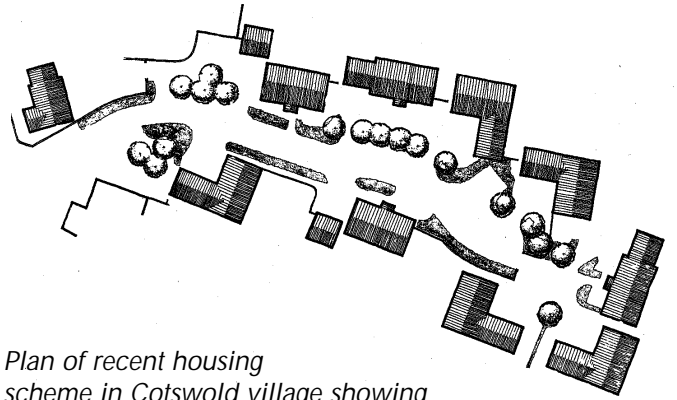
## Enclosure

Humans have a need for both prospect (a vantage point from which to survey and know one's surroundings) and refuge (the safe place which feels protected), and our built environment should satisfy both. An environment with only small enclosed spaces will feel claustrophobic to most of us, while wide open spaces, though exhilarating, are not spaces in which to relax and are certainly not homely. Enclosure is a quality which is important in residential areas, creating a human scale and intimacy. Enclosure also helps to define and organise space, satisfying another human need for recognisable structure and pattern.



The degree of enclosure depends on the ratio of the height of the edges enclosing a space, to the width across the space. In traditional tightly built settlements, a street may have a ratio of as low as 1:1 or 1:2, resulting in a very strong architectural form. Other traditional settlements will have wider streets and smaller houses and feel more open and rural. Small public spaces with proportions of around 1:4 or 1:5 height to width will feel comfortable; higher ratios will create a more imposing feeling. The degree of enclosure should be deliberately designed to create the desired effect.

Spaces may be enclosed by buildings; or in other ways such as planting or earth mounding.



*Plan of recent housing scheme in Cotswold village showing combination of buildings, walls and planting*

Where the built form is not continuous, the space may 'leak' away, meaning that it will be poorly defined and the sense of enclosure will be lost. The addition of trees and walls is one way to link the built form of detached housing to create a strongly defined public space. Where mounding is used, this should link to other features in the landscape, and not appear as an arbitrary addition.



## Legibility

Legibility concerns how easily people can understand a place. The use of landmark features to aid orientation has been discussed earlier (pp 29-30). The way a space is designed affects the way people feel and behave in it. It is important that the message given by the design is appropriate for the intended function of a space in order for it to be understandable. For example:

### Private and public space

There is a need for different degrees of privacy. People feel comfortable, and security is enhanced, in situations where it is clear where they may and may not go. Spaces where ownership is unclear should be avoided. On public and semi-public land there must be a clear responsibility for maintenance, usually either by adoption by the District or Parish Council or by means of a covenant requiring payments from residents into an independently run Management Fund.

The back garden, however small, should contain areas which are totally **private**. The most private areas will normally be close to the house. Less private areas may be acceptable further from the house, particularly where the garden is large. The design of private areas is achievable by care in orientation of buildings, positioning of windows, treatment of boundaries, adaptation to existing topography. The home owner should have complete autonomy over the detailing of this area, so far as it does not impinge on others.



*In this housing scheme in Bristol, screen walls form a feature of the design and provide a measure of privacy*



## Residential Design Guide 2000

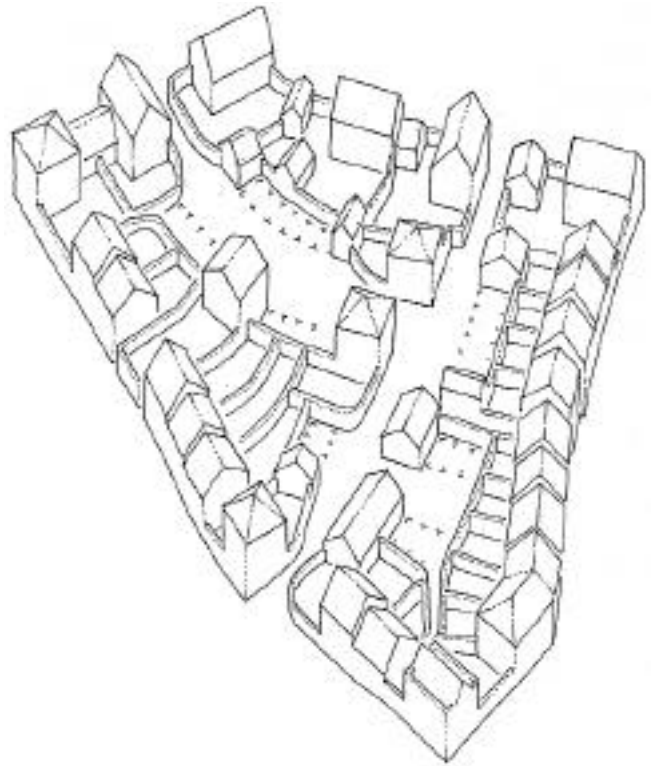
**Semi-private** space may be a front garden, or even a porch or car port. This is a space where people can encounter their neighbours without feeling that either is intruding on each other's territory, and there will be clear definition of boundaries while allowing intervisibility. Semi-private space helps to protect the privacy of the front of the house.



Semi-private space gives the residents a chance to display their own style, the down side of which is a possibly disordered and chaotic appearance. To counter this, the designer should make allowance for individual personalisation within a strong recognisable structure.



**Semi-public** space includes areas designed to give a clear message of belonging to the residents immediately adjacent, such as parking courtyards. Careful detailing of these spaces enhances security by giving the residents a sense of ownership, and indicating to non-residents that they should only enter if invited or on business. Detailing may include narrower transition zones symbolising gateways, formed by buildings, boundaries, mounding or planting, and reinforced by changes in surface materials. Where public footpaths pass through semi-public spaces, the extent of the footpath and its route should be clearly delineated. Where semi-public spaces are large, they will tend to feel more public, and if public access is not desired, more positive measures will have to be taken to make this clear eg actual rather than symbolic gates.



*View into village square*

**Public** space includes most of the road network, parks and community areas, shops etc. It should be more than just left-over space. Public space can be a valuable common resource providing opportunities for play, exercise or dog walking, as well as views and a feeling of space not possible in private gardens. Well designed public space can also serve to control storm water run-off and provide habitat for wildlife, as described in Chapter 7.

# Residential Design Guide 2000

The plans right and sketch below show how the value of a public space between houses, consisting in reality of a standard Minor Access road and pavements could, by repositioning of the buildings, have been expanded to form a small green for the houses to look onto. The replacement of some of the standard detached houses with terraced houses of similar floor area allows the creation of a stronger architectural form and produces a space of greater character.

The individual plots are slightly smaller (in fact the sketch shows the inclusion of an additional house) but this is compensated for by the provision of an area of public space that makes a positive contribution to the character and sense of place. The houses are no longer houses in any average housing development. They are houses in their own recognisable and unique setting. Moreover, the road form is now designed to restrict vehicle speeds and provide a safer environment.

*Plan as existing*

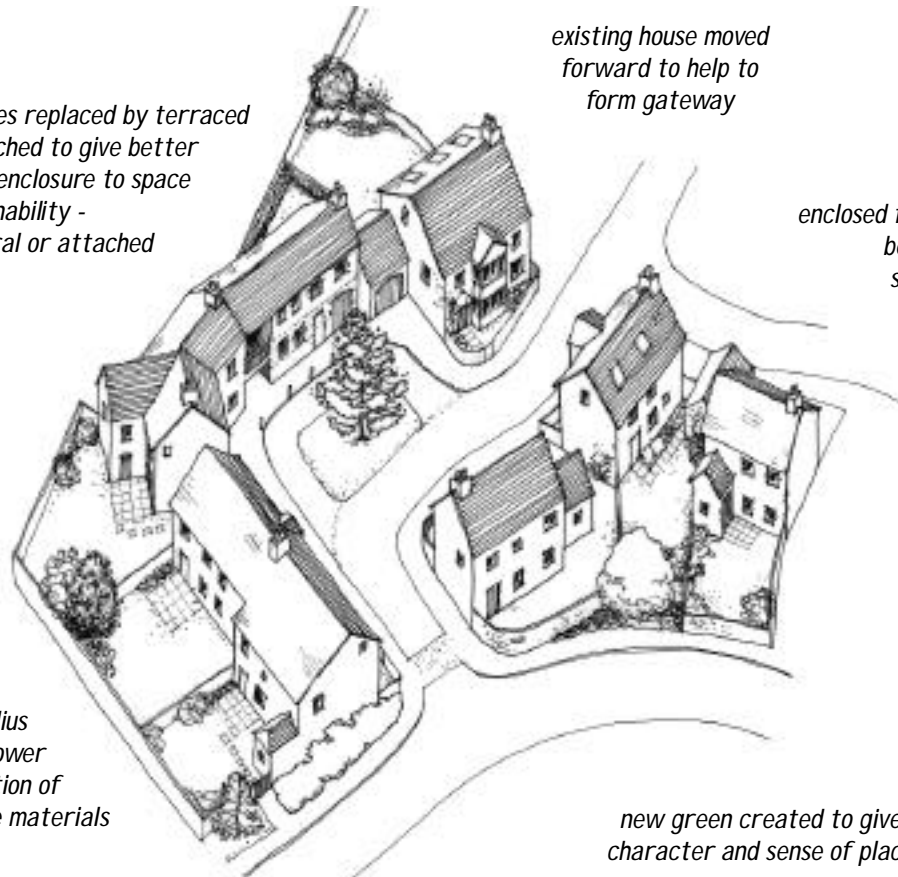


*Housing layout redesigned as illustrated below*

*detached houses replaced by terraced and semi-detached to give better definition and enclosure to space and for sustainability - garages integral or attached*

*existing house moved forward to help to form gateway*

*enclosed front gardens give better definition to semi-private space*



*traffic calming through tighter radius bends, slightly narrower roads and introduction of contrasting surface materials*

*option to include one extra house as shown due to denser layout*

*new green created to give character and sense of place*

Where public space directly adjoins private back gardens the boundary should be formed by an above-eye level hedge or wall, which may be buffered by a planted strip, particularly where the boundary forms the interface between built up and agricultural land.

## Static and dynamic space

Linear, enclosed forms are dynamic and encourage people to move directly through. Long stretches of linear space can feel alienating and inhuman, as well as causing wind tunnels and physical discomfort. Widening the space and decreasing the ratio of building height to distance between buildings makes a space more static.

This can also be achieved by creating offset routes through a space by means of central features such as planting or car parking. Static qualities are appropriate for residential areas as well as communal spaces where people are to be encouraged to linger and maybe meet others.

Terminating a linear space without 'closing' it in any sense is unsatisfactory. The photo left and sketch below illustrate the potential of built form to enclose and provide a visual 'full stop' to a space which currently ends lamely, appearing unfinished.



*Although the use of a 3 storey building is an interesting reference to the canal side site, the design is weakened by the lack of enclosure or focal point at the end of the road. The road appears truncated.*



*the addition of a small tree forms a link to the mature trees beyond the site and helps to humanise the scale of the large building*

*landscape planting to the wedge of land between road and footpath softens the landscape but should only be implemented if it will be properly maintained*

*adding a new building which closes the vista and forms a logical destination for the road makes the layout more coherent - the trees in the adjoining site are visible over the roof and the generous archway to the parking courtyard forms a focus and a link to the landscape beyond*

### Landscape

'Landscape' comprises the entire external space consisting of planting, earth mounding, walls and fences, and street furniture such as benches, lighting and signage. It is what people see first when they arrive at a new development, and any attempt to save money by economising on the quality of materials and design in the external space will greatly detract from the overall effect of the development. Good landscape design should be an integral part of the overall design, rather than an afterthought.

Planning applications should show clearly the landscape philosophy which is being followed and include comprehensive details at an appropriate scale (usually 1:200) of landscape proposals.



### Planting

Appropriate planting can do much to strengthen local identity. Unfortunately, many planting schemes are composed of a very small range of tried and tested species, usually evergreen, and look much the same across the country. In order to ensure that the planting reflects the unique character of the site and complements the new development, specialist landscape/ horticultural advice should be sought.

The form of new planting should be planned to eventually complement the built form. Blocks of planting, or individual plants, can help to shape and enclose space, screen views on or off site where necessary, or frame desirable views and direct or attract attention. Planting can also be used to moderate the microclimate of a site by providing shade or shelter. A specialist can advise on the use of plants whose individual characteristics will combine to form strong and effective compositions, and which will be suited to the conditions on site.

In rural settings outside private gardens, native species are usually preferable to exotics, both in terms of appearance, and for wildlife value. Anything conspicuously showy should be reserved for more urban environments





## Hard landscape detailing

As with planting, good hard landscape design involves selection of materials and forms which reinforce the unique character of the site and of the spaces which are created within it. Time invested at an early stage in planning the integration of essential site facilities such as street lighting will pay dividends in the creation of well designed, integrated spaces. The photo right shows lighting mounted on the side of the building so as to avoid a proliferation of clutter at street level. Similarly signage may be mounted on a wall rather than on separate posts, and where posts are necessary, it may be possible to combine several signs on one post.

Boundaries should always be designed to be in keeping with the local vernacular and should be of high quality and built to last. They make an important contribution to the overall character of the development.

Seemingly insignificant items such as roadside kerbs can actually have a large impact on the appearance of a scheme, and standardised pre-cast concrete upstand kerbs do little to reinforce a sense of place. In many parts of the District kerbs should be insignificant or left out altogether.

Well placed items of street furniture, particularly benches, help to make a space feel lived in and welcoming, and should be designed as part of the overall space to integrate with the path layout, planting etc.



## Lighting

Lighting design should be seen as an integral part of any housing scheme, and considered from an early stage from the point of view of function, security, aesthetics, and the environment. The specification of lighting for pedestrian areas will be very different from that required for heavily trafficked areas, with the emphasis on illumination of vertical rather than horizontal surfaces, good colour rendition, and absence of glare. New lighting in previously dark areas of the countryside can be extremely obtrusive and may even be considered as a form of pollution. Any lighting should be vandal proof, energy efficient and designed not to leak light upwards. Adequate provision should be in place for ongoing maintenance (particularly important for lighting of footpaths and cycle ways where people may feel vulnerable after dark).

Lighting standards and fittings should be appropriate for the setting. Modern designs are often preferable to overuse of reproduction 'Victoriana'.



*A modern lighting scheme in Birmingham.  
The design detail reflects the pitched  
roofs and dormer gables.*



*'When we build, let us build forever'.*

*'In a changing and unpredictable world the human need is for a secure anchor, a form of shelter that is familiar, secure and understandable. The only way to move forward is to start by looking back'*

***A Stroud District Council booklet, Historic Buildings - a guide to their repair and conservation contains useful information on the special architectural characteristics of houses in the District.***

Part of the blame for current poor quality housing developments must be taken by the acceptance of volume house builders' standard house types. These are designed to meet a shopping list of stand-alone criteria such as 'detached', 'four bedroom', 'with garage' etc, without attempting to incorporate more abstract concepts such as sense of place, community, and urban form. Moreover, the need to make a profit and minimise risk which underlies the use of standardised rather than one-off designs also results in cost cutting on those items not specifically demanded by buyers: Hence we have lower roof pitches (less materials used), no chimneys, flimsy or non-existent boundary treatments, minimal planting using standardised designs, and a minimisation of road surfaces (more houses per length of road means box-shaped houses, narrow frontage, close together even when detached). Imagination takes time and costs money, so layouts tend to be uniform, even computer-generated, giving highly consistent house spacings and a monotonous pattern on the landscape.

Whilst house building will always be profit driven, experience elsewhere in the country suggests that dwellings on higher quality, more imaginatively designed developments, which are an asset to the wider community, sell very quickly. As the public becomes more aware, there will be an increasing demand for a higher standard of development, not just in terms of specification (more bathrooms, luxury kitchens) but also in terms of the environment created by the development: character, sense of place, the creation of real, recognisable neighbourhoods rather than amorphous conglomerations of unrelated executive houses.

In addition, it will often be possible to design a development which does reflect and respect local distinctiveness but which is of a higher density than a more standard layout. This can provide a range of house types, including those of lower cost, whilst not reducing a housebuilder's profit margins.

*A modern development which succeeds in generating a strong sense of place. Elevations like this are very helpful in illustrating planning applications for large developments*



## General character

The character of new housing should be consistent with its setting, and in practice this means that large developments of closely spaced houses will usually be relatively modest in appearance, producing a well unified environment. The use of ostentatious designs in close juxtaposition should be avoided.

Larger houses should generally be sited on key plots where they will function as landmark buildings, for example at focal points or on corners. More individual designs may be appropriate on generous sized plots, usually on the rural fringe of a town or village, reflecting the small manor houses of the local tradition.



*Over busy detailing creates a restless effect, lacking in local distinctiveness*

## House form

Buildings can frequently be divided into family groups, each group being defined by elements such as type of plan, pitch of roof, materials, local patterns of building etc. It is important to recognise and maintain a family unit in buildings. For example, flat roofs detract from the pitched roof family, and differing roof pitches are incongruous, particularly when closely sited.

Perhaps the most important aspect of house form within Stroud District is its shape. As explained in Chapter 2, a characteristic of all of the settlements in the District is houses with wide frontages to the street, and shallow depths. Achieving a house type design which complies with Local Plan Policy B2 is unlikely to be achieved if a very deep house is designed. This will typically increase the height of the property for any given number of storeys, and produce a form of development which is out of character with traditional housing in the District. The basic house form should therefore be designed with a shallow depth. If a larger house is proposed, this can be achieved by a wide frontage, or by adding gables to the front or back, in the manner discussed in the next section.

*These large 4 bed houses have been designed to give a wide frontage and shallow plan*



	<b>Master Bedroom</b> 12'1" x 11'1" 3.68m x 3.37m
	<b>Bedroom 2</b> 10'9" x 9'1" 3.30m x 2.77m
	<b>Bedroom 3</b> 11'7" x 8'7" 3.55m x 2.62m
	<b>Bedroom 4/Study</b> 9'6" x 8'7" 2.91m x 2.62m
<b>Drawing Room</b> 17'10" x 10'9" 5.45m x 3.30m	
<b>Dining Room</b> 11'7" x 8'4" 3.55m x 2.55m	
<b>Kitchen/Breakfast Area</b> 17'10" x 9'2" 5.45m x 2.80m	

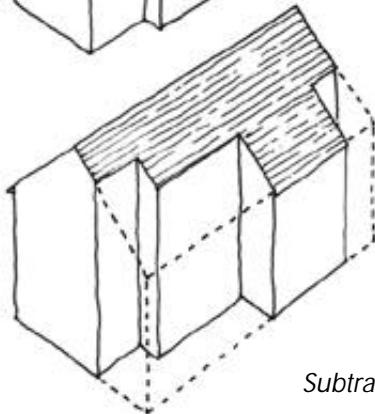
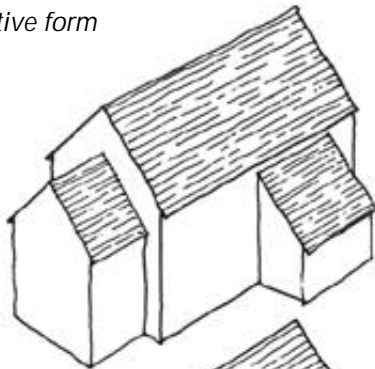


## Additive and subtractive form

Traditional massing of buildings frequently displays an evolution of the building over a number of years. Individual elements of the building are clearly identifiable in that one volume of building appears to have been merely added to the others. This “additive form” reflects an irregular and informal plan, which is often readily legible from one glance of the three dimensional form of the building.

More recently a “subtractive form” has developed in that buildings appear to have been conceived as a larger volume, from which parts have been taken away in an almost random fashion. It is the loss of legibility and the creation of unfortunately truncated and proportioned sections of the building, which renders the “subtractive form” unsatisfactory.

*Additive form*



*Subtractive form*

## Doors and Windows

Once the overall massing of a building is determined, the greatest single influence on the appearance of buildings is the proportion and disposition of the window and door openings. The placing of openings can either reinforce or destroy the visual emphases of an elevation.



Openings should be grouped in a legible pattern. Simple horizontal and vertical grid relationships are the most obvious. Whilst a more informal distribution of windows can succeed, particularly where it reflects the existing vernacular of older, cottage style housing, usually such a pattern fails to create a sense of repose. Limiting the number of window types on a building is also important.

The proportional relationship of openings to wall surface within an elevation determines the visual strength of the elevation. Dominant areas of masonry create a visually stable elevation, whilst a large percentage of windows may produce a very much weaker appearance, unless skilfully designed.

Similarly, openings occurring very close to the edge of buildings often appear visually weak: a substantial pier of masonry construction at a corner of a building is much better.



*A traditional window of pleasing proportions*



*Modern windows positioned almost flush with the front of the building giving a flat, bland appearance. In addition, the cill is too thin, the proportions relate poorly to the gable and the fake leading is unconvincing and inappropriate*

The form of windows in relation to the overall form of a building can affect appearance. If, for instance the building has a strong horizontal emphasis, vertically proportioned windows can help to counter the horizontal effect. The depth of window openings and the shadows cast by the head and sides of the opening are important in the way they can create a three dimensional character in an elevation. Modern standard windows are normally manufactured with integral cills and that cill dictates the location of the window within the wall thickness, invariably placing the window very close to the outer face of the wall, and making the building appear flimsy. Designers are encouraged to treat windows and cills as separate elements, which will allow the window to be set back into the thickness of the wall.

Design, materials and colour of windows should always be included as part of any Planning Application. Nearly all windows in traditional houses in Stroud District are painted white, and this will nearly always be the appropriate solution.

### **Detail design elements**

Where design is all the same the effect is monotonous and deadening: the human brain thrives on stimulation and complexity. Attention to detailing gives a hand-crafted, high quality appearance, lifting a development out of the ordinary. Good detailing contributes to the creation of a sense of place, uniqueness.

Detailing should be used to emphasise the qualities of a building, and should be appropriate to the scale of the particular architectural element. Many of the elements of a house are formed for constructional reasons, and their importance in the overall composition can be diminished or increased as the design so chooses. The following items fall into this category:-

### **Dormer Windows**

In recent years the use of dormer windows in new housing has increased, with the fashion in cottage type 1<sup>1</sup>/<sub>2</sub> storey dwellings. The most important factors in the design are the overall size and position of the dormer in relation to the roof on which it is located, and the size of the actual window. Traditional dormers do not appear as dominant elements in a roofscape and therefore the windows they contain are small in size. Designers must avoid over large rooms lit by dormer windows because the size of the window can be dictated by the lighting and ventilation requirements of the Building Regulations, to the detriment of overall appearance. Materials are an important factor in the design of dormers, particularly the gable above the window and the cheeks.





## Chimneys

The importance of chimneys in the overall composition of a house cannot be overstressed. The use of ridge and balanced flue terminals has in recent years, much reduced the numbers of houses built with traditional chimneys. The loss of the chimney is to be much regretted in that it provides vertical contrast, and acts as punctuation which defines the extent of a building. Chimneys can be placed where detailing will enrich the building, but designers are urged to ensure, wherever structurally possible, that chimneys are located on the ridges of roofs. Great care should be exercised in the use of externally expressed or "feature" chimneys. Traditionally the majority of chimneys even at gables were constructed internally, and if external chimneys are required today, they should be of a simple design, so that the chimney appears as a part of the design, rather than the centre-piece of it.



## Porches and Canopies

It is important that these elements reflect the spirit and character of the remainder of the dwelling, even if they are later additions. In general, flat roofs should be avoided, roof pitches should match, and the overall massing of what is evidently an entrance porch should not dominate an elevation. Columns supporting canopies should have good visual, as well as structural, strength and care should be taken to avoid narrow, mean looking piers of masonry work.

*Porches in close proximity should be of similar style*





### Garages

Garages should contribute to the overall built form and can help to create a positive built form even where houses are detached. Where there is resistance to terraced housing, use of garages to join properties may be acceptable.

Garages should not be sited where they form the focal point to a group of housing, eg at the end of a cul-de-sac. The garage door either as a single door, or double door is often the largest opening in the solid walls of a house. The garage door should not appear more important or dominant than the house front door. The double door in particular is a visually assertive and disruptive element. The use of two single doors ideally with a vertical theme is always preferred as a means of reducing the scale and impact of one larger door. Careful consideration should be given to the finish and colour of the door.



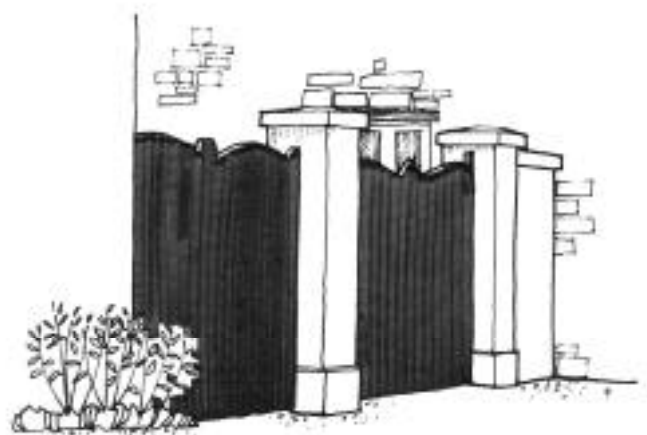
### Rainwater goods

These are a strictly utilitarian element. Modern plastic products have now largely replaced more traditional metal goods, and colour can have a very real impact on the overall perception of the building. Rainwater goods should almost always be of a neutral colour to minimise their impact on the building. Rainwater downpipes play an important part in breaking up an elevation, and rainwater pipes should always be clearly shown on elevational drawings submitted for planning permission.

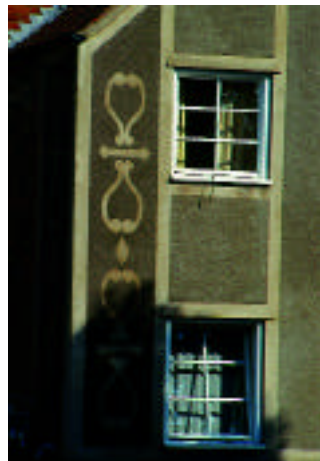
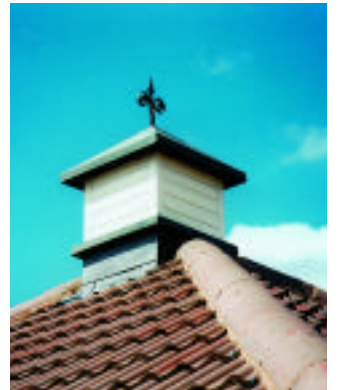
### Ornamentation

The need for variety in design should be balanced against the need for structure and repetition. Most attractive and successful housing has a recognisable overall character within which individuality can be expressed.

Ornamentation should not be about fussiness, but about treatments which result in richness, creating visually and mentally stimulating environments.







## Materials

The importance of the indigenous and traditional materials of an area has already been stressed earlier in this guide. Invariably the materials of new development should relate to the historical local materials, in colour, texture etc, as set out in Chapter 2.

On larger developments a limited variety of materials can create added interest, and aid the creation of a sense of place, providing the designer exercises a measure of restraint. Changes in materials are normally a response to a change in the method of construction of a building. Arbitrary material changes, with no strong constructional justification should be avoided as they produce a wholly restless effect. Tonal variations of colour with the same basic range of materials are much more harmonious than selecting strongly contrasting colours, particularly in walling materials. Introducing changes in material on two neighbouring and similar houses should always be avoided, as it is a device which is alien to the character of traditional housing in the District.

Developers are encouraged to seek alternatives to tropical hardwoods when specifying timber to be used in new housing developments. Some tropical hardwoods are now obtainable from managed and sustainable sources and the use of such timbers will be preferred. The Timber Trade Federation can advise on importers and suppliers of alternatives to tropical hardwoods.



*Excessive use of contrasting materials undermines local distinctiveness*

In October 1998, the Government published 'Planning for Sustainable Development: Towards Better Practice'.

Chapter 1 of this opens with the words: "The planning system has a vital part to play in ensuring that land and other resources are used more sustainably". The whole concept of sustainability now underpins much planning guidance in this country, particularly in terms of the location of new development. Much of the guidance in the document has been used to guide the production of the Local Plan, including sections on density, mixed use, developing brownfield sites. There are some detailed aspects, however, such as the section on energy efficiency, which are not appropriate to include within the Local Plan, and are better discussed in this guide.

## Stroud District Council's Commitment to Sustainability

Stroud District Council is fully committed to putting into practice the principles of sustainability. The principles put forward by Gloucestershire's Agenda 21 initiative, 'Vision 21', in "Sustainable Gloucestershire - an agenda for urgent action by local government" have been adopted by the Council.

The key challenges and objectives of the strategy are:

1. Enhance the physical environment, biodiversity and natural resources
  - *Minimise the impacts on the natural environment*
  - *Enhance the rural environment to meet social and economic needs*
  - *Enhance the built environment to meet social and economic needs*
2. Introduce new value systems
3. Embrace the new economy, and new ways of working
4. Promote effective education, awareness, information and communication
5. Adopt new decision-making processes and structures

Those sustainability issues which are most appropriately dealt with in this guide are discussed below.

## Sustainable Settlements

A sustainable settlement is one which provides as many opportunities as possible to reduce the length of journeys, particularly those undertaken by the private car. It is one which maximises the amount of energy and materials which it obtains from the immediate locality, and minimises its exports to the wider environment of pollution and waste products. Jobs and facilities will be located close to housing.

The design of new housing areas can contribute towards sustainability by providing for mixed use development, with workspaces, shops, schools and other facilities as well as housing. Dependence on cars can be further reduced by providing good access to public transport links, as well as attractive footpaths and cycleways. Further steps might include:

- *Garden space for vegetable growing and composting of waste.*
- *Recycling of domestic 'grey' water for non-food use*
- *Reedbeds for sewage treatment*
- *Public space and/or buildings to facilitate local produce markets, crèches, skill sharing and other community activities.*



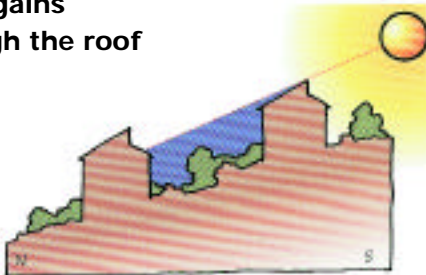
## Energy efficiency

'Planning for Sustainable Development' contains a section on energy efficiency and particularly emphasises the ways in which sites and buildings can be designed in an energy efficient way. It is essential that all new housing is built to a high specification in terms of energy efficiency, and indeed this is a requirement of current Building Regulations (Part L, Conservation of Fuel and Power). This may be achieved by a combination of some or all of the following considerations:

- *thermal insulation of walls, floors and roofs;*
- *Draught proofing;*
- *Double or triple glazing of windows;*
- *Heating (and cooling) systems: application of up-to-date technology to ensure efficient energy use; use of renewable fuels including solar power;*

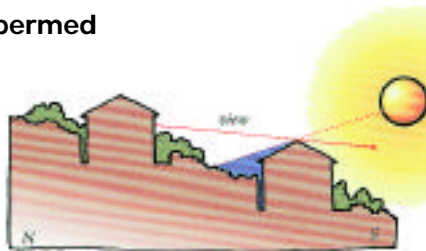
*Passive Solar Design options on sloping sites*

### Solar gains through the roof



*Tight spacing on a north-facing slope will cause severe overshadowing: the roof may be considered as a source of solar gain.*

### North facades earth bermed

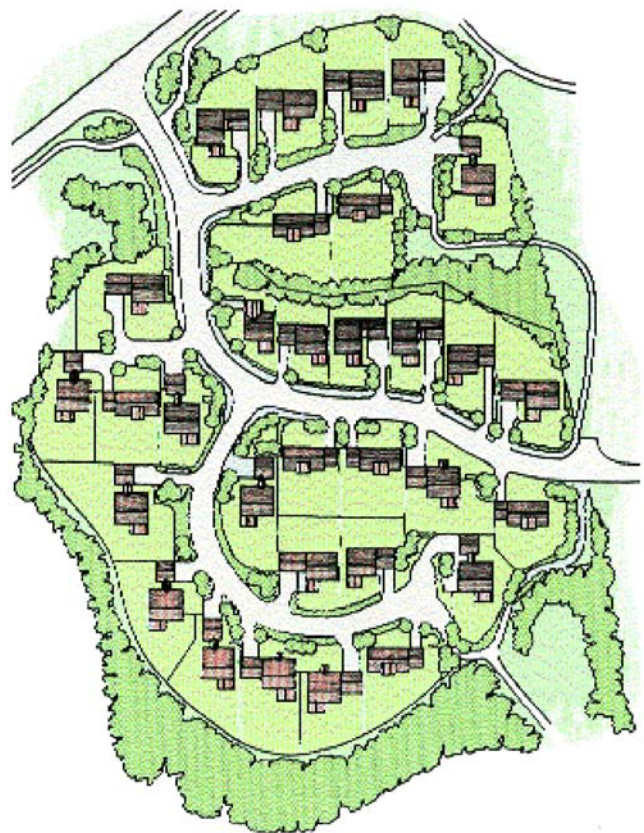


*South-facing slopes allow tighter spacing without loss of sunshine: cutting into the slope reduces exposure on the north side.*

- *Design, siting and orientation for passive solar gain;*
- *Use of earth sheltered housing, especially on sloping sites; inclusion of basements;*
- *Use of planting as windbreaks for shelter, as insulation, or for shade in Summer;*
- *Identifying opportunities for combined heat and power.*

In addition the 'embodied energy' of a development can be reduced by recycling of materials on site and sourcing bought-in materials as locally as possible.

Stroud District Council plans to establish a Millennium Social Housing project to build new very energy efficient houses as well as refurbishing others to a very high environmental standard.



*The Willow Park development in Chorley, by architects TRADA. Note how the road layout facilitates the southerly orientation of dwellings.*

### Surface water treatment

With increased building comes an increase in the area of impermeable surfaces including roofs, roads and parking areas. This means that rainfall, rather than being absorbed into the ground to replenish the ground water supplies, is directed into storm water sewers and piped to rivers flowing out to sea. The implications of this include depletion of ground water reserves, sudden fluctuations in river levels and harmful flushing of pollutants into our watercourses. Where possible this should be alleviated by the incorporation into new developments of measures to slow down the run off of surface water and retain it in areas where it can infiltrate back into the ground without damage to property or threat of flooding. These include physical features such as grass swales, infiltration basins and detention ponds (normally dry outside of rainfall periods), retention ponds and wetlands, as well as porous paving surfaces.

Best Management Practice guidelines exist (contact the Environment Agency) explaining how to design such systems, which can be attractive features in their own right, enhancing the general environment and potentially increasing demand for nearby housing. As with all public space, there are associated maintenance requirements, but these can be offset against the reduction in maintenance required for conventional drainage systems. It is also possible to store rainwater in containers incorporated in the design of the house to allow use for activities such as car washing and garden watering. Such systems, if properly designed, can also act as heat stores, helping to regulate building temperatures.



### Wildlife habitat and Biodiversity

The development of new housing frequently involves the loss of areas of wildlife habitat. Sites designated for particular interest (SSSIs, Nature Reserves etc) will generally be protected from development. Other areas which are not designated may nevertheless be of considerable value at a local level and for more common species. Wildlife habitat should not be considered in isolation, but seen as part of a network of similar sites. The importance of sites forming part of existing green 'corridors' linking to other areas of habitat should not be underestimated. Loss of a seemingly insignificant area may in fact result in isolation of other areas of habitat and even make existing populations of species unviable.

Areas identified as being of particular value at the survey and analysis stage should be retained wherever possible, and surrounding areas designed such that links are made to other areas of habitat, using new hedgerows, linear woodland, wetlands and such like. These areas will enhance the landscape setting of the housing and be a potential educational resource, as well as going some way to compensate for any loss of previously existing habitat. Wildlife areas should be generously proportioned to allow for the future growth of trees which may otherwise be perceived as a threat to buildings or to the public on paths and highways.

While considerable scope exists for new developments to incorporate measures to enhance wildlife habitat, certain habitats are virtually irreplaceable, and should be retained wherever possible. An example is ancient trees, which are important for highly specialised plant and animal communities which require hollows and dead wood to thrive. The loss of an ancient Oak tree cannot be compensated for by the planting of any number of young trees.

The developer should be aware of and have regard to the Gloucestershire Biodiversity Action Plan, launched April 2000. (Details available from [www.biodiversity.freeserve.co.uk/info.html](http://www.biodiversity.freeserve.co.uk/info.html)) which includes Action Plans for locally key habitats and species.

## Use of local materials and renewable materials

The use of locally produced materials when building cuts down on damage to the environment caused by freight, keeps energy costs down, and supports the local economy. In Stroud District this is particularly applicable for timber and stone, as well as some metalwork. A directory of local sustainably produced timber is being compiled by The Touchwood Partnership in Stroud.

Where possible the use of renewable or recycled materials is preferred in order to protect limited resources. Renewable materials are also likely to harmonise with materials used in traditional buildings.

