3 Shape of Development - Design Principles

Appearance and Relationship to Surroundings

3.10.1 The importance of Development Briefs has been stressed in Chapter 1. Local Planning Authorities will normally produce site specific development briefs for major housing allocations in Local Plans which will set out a framework for the development.

Character

3.10.2 Most new development will be an extension of an existing settlement and it is the character of existing buildings, roads, open spaces and landscaping which should provide the starting point for the design of a new development. A number of questions dealing with shape need to be addressed, for example -

- Is the existing settlement landscape or building dominated?
- What is the scale of the existing settlement?
- Is the settlement pattern formal or informal, linear or enclosed?
- Is the topography of the site a significant influence?
- Are there important views or features which can benefit the new development or its surroundings?

3.10.3 Answers to such questions will often establish a set of principles from which sympathetic new design can spring. The aim is to add to, rather than detract from, the total character of a place. Whether such development is to blend with the existing or contrast with it, neither will be successful unless they are based upon an appreciation of what already exists.
3.11.1 Large scale emphasises differences between old and new settlements.

3.11.2 Low density, but over developed by large dwellings.

3.11.2 Too many small dwellings can lead to parking dominance.

**Scale & Density**

3.11.1 All too often new development does not relate well to its landscape setting. Most problems occur where large estates are placed on green-field sites next to existing small scale settlements. Examples maintaining good relationships can be found in urban locations and small infill sites where the scale and design of development is more readily influenced by immediate surroundings. It is the failure to respect an existing scale within new large estates which emphasises the differences between old and new.

3.11.2 The size of building, the extent of car parking and highways, and the quality of space between buildings all interact to affect the appearance of development. A simple calculation of so many dwellings per hectare is inadequate to guide this design process. For example:

Low density development can become over-developed and dominated by buildings due to the excessive use of large scale dwellings.

Conversely, where higher density developments are appropriate, too many small dwellings can lead to an environment dominated by car parking.

In both cases the space about buildings is reduced in importance and unable to contribute to a distinctive and pleasing townscape or landscape character.
3.11.3 To determine the numbers of dwellings for a site the following main principles must be considered together:

**ENVIRONMENT:**
Dwellings should be comfortably accommodated to create good townscape and significant landscape appropriate to their scale and setting.

**HIGHWAYS AND PARKING:**
Car parking and highway requirements are directly governed by the extent of development being served. This must no longer be of incidental consideration as it has fundamental effects upon the quality of places.

**SPACE ABOUT BUILDINGS:**
This must not be treated as a residual element after other requirements have been apportioned to buildings and cars. Space gives a positive and unique dimension to what may otherwise be little more than a collection of buildings and roads.

These three main principles will now be amplified.

**Environment**

3.12.1 Sites are often considered favourable for development because they offer a close relationship with an adjacent settlement and have been allocated on the basis of a pre-determined density. It is important therefore, that development should have regard to the setting, its relative scale and how density should be interpreted.
Building Volume

3.12.2 Density is as much to do with the scale and volume of the building as it is with the numbers of dwellings. Higher density does not mean more of the same nor does it presume an increase in the building content of a site, but possibly a diverse range of smaller accommodation which remains at the right scale for the area. Conversely, where low density is appropriate, this does not imply a dominance of large scale houses. Building volume is an important factor in determining whether a development is to become building or landscape dominated.

Relative Scale

3.12.3 It is important to consider the scale of the site relative to its surroundings. For example, a development of a given size will have a greater impact on a small village than on a large town. In a small scale development a single identity may be appropriate, whereas a large development may benefit from being broken down into smaller areas each with its own identity.

Shape

3.12.4 It is often appropriate for a development to adopt distinctive characteristics of an existing settlement pattern. This is especially true for small sites closely associated with existing town or village centres.
3.12.5 Larger scale developments should not be universally low density or high density but should be broken down in scale and given 'shape'. This could be achieved by balancing distinctively low density areas, perhaps on landscape dominated outskirts, with a high density centre giving focus to the development. High density estate development is rarely applicable in Suffolk.

Site Elements

3.12.6 It is a misguided assumption that every square foot of a proposed site area is capable of supporting development at a given density. What is needed is a positive approach, where the various elements for a site development are identified at the outset. For example:

Where a large site needs to be serviced by a Local Distributor Road or other works, it should be recognised that the land taken up for these purposes cannot physically support housing nor contribute directly to a good residential environment. The space under existing tree canopies and boundary hedges cannot support development.

It may be necessary to break the mass and scale of development by incorporating spaces between areas or groups of houses with parks or green wedges. There may be specific requirements to screen the edge of a development by planting a tree belt or to soften a skyline or emphasise footpath routes. Unless space is allocated for these purposes before the number of dwellings is determined, such provisions can only be achieved at the expense of compressing numbers of dwellings into ever smaller remaining areas of site.
3.12.7 Before the development potential of any site can be considered it will be necessary to identify the major parameters affecting that site both in support of development itself and its relationship with its surroundings. Residential densities must apply only to areas suited for actual housing development and not to gross site area.

Highways and Parking

3.13.1 Scale and density of development is greatly influenced by highway and parking considerations. Roads are visually prominent because they form the pathways from where we approach and view development. Roads do not merely carry traffic; their design dictates townscape and forms places. Equally, the space required to accommodate roads and parking makes them a significant component in the density of development a site can support. DB32 offers opportunities to reduce the scale and impact of roads by applying standards which are both responsive and appropriate to different types and levels of development.

Development loading

3.13.2 To achieve the benefits afforded by this approach the number of houses within any development may be restricted to encourage the use of roads of a lower order more appropriate to its setting. For example:

If a site is approached from a small lane or street then the scale of any new road, and hence scale of development should reflect this. At a much larger scale, sites for development should be broken down into smaller residential neighbourhoods to minimise the use of Local Distributor Roads.
Pattern

3.13.3 Road layout is an intrinsic part of any settlement pattern and often it is the way in which roads inter-relate or shape space that reinforces a townscape identity. Consideration should be given therefore to creating road patterns more in keeping with traditional forms of settlement found in Suffolk.

3.13.4 Recently, highway design has been based upon a hierarchical approach which encouraged a "tree-like" structure for road layouts with development patterns fanning out in loose and random ways ending in culs-de-sac. This form of development can be appropriate on a small scale but becomes amorphous when used en-masse. Introducing road patterns which are joined in a network helps to give shape and variety to large developments. For example:

The edges of a large development could be made softer and more secluded using a cul-de-sac approach whereas more central areas could focus on traditional, formal and permeable patterns of layout which provide a stronger and more embracing identity.

Spatial hierarchy

3.13.5 The scale and density of each part of a new development should reflect the type of road to which it relates. For example:

Higher order residential roads should have dwellings set well back from the carriageway, and possibly at a lower density. Greater spaciousness would relate the size of road to a more impressive scale of surroundings and provide more space for landscaping. Lower order roads will provide the opportunity to create a more closely integrated arrangement of buildings and spaces.
Parking

3.13.6 The intensity of car parking is a significant factor contributing to the over-development of sites. The space required to manoeuvre and park a car cannot be physically reduced and as car ownership per household rises, any increase in housing density will have a disproportionate effect on the space required for parking. A balanced mix of house types should normally result in car parking densities of between 60-70 spaces per hectare. Exceptions to this might include urban style developments where more dominant architecture and high quality streetscape and surface treatments can offset the impact of parked cars.

Space about Buildings

3.14.1 The desire to maximise the level of saleable building accommodation has frequently led to minimal space between buildings - even for conventional family housing at lower densities. The welcome move towards a greater housing mix has tended to raise densities rather than to show any improvements in space standards. These were frequently set for privacy distances or garden size but when applied rigidly tended to reinforce uniformity.

3.14.2 Developing accommodation for smaller households results in smaller gardens but the space needed for a tree, for privacy or for daylight remains constant. A layout consisting entirely of small gardens reduces space about buildings which still retain conventional height and massing. A more diverse range of garden size is required, where larger gardens can accommodate screen and relief planting.

3.14.3 In traditional patterns of development, cottages with little or no gardens were frequently able to benefit from more spacious neighbouring properties or an open space. This emphasises the need to provide an appropriate mix of large and small dwellings on a site to achieve a balance of building scale and plot sizes.
3.14.4 In the absence of a balanced approach, those developers wishing to provide for large houses must accept much lower densities to achieve a sense of spaciousness. Equally, proposals for predominantly small dwellings will need to incorporate an element of compensatory open space, such as a square, green or park.

3.14.5 Unlike highways and car parks which form a continuous and significant spatial element, open space within housing areas is fragmented by numerous plot divisions. Areas of land forming private gardens are normally dispersed throughout a layout and do not appear as a visually significant space.

3.14.6 Substantial planting has only occurred on conventional developments where density is below 25 dwellings per hectare and where the proportion of open ground exceeds 50%. Often gardens will represent the only space available for storage and to accommodate wheeled bins. Other requirements will include working space for hobbies or clothes drying and for sitting out.

3.14.7 With such limited garden provision it is most unlikely that any significant planting could be accommodated or allowed to reach maturity. Even moderately larger gardens tend to be used for play or cultivation to the exclusion of significant planting.

3.14.8 It is inappropriate, in this document, to prescribe rigid formulae for private space but gardens should be of a size which is practical, useful and not uniformly small to the exclusion of planting.

3.14.9 Designs that show only tree planting in garden areas will be considered unacceptable unless sufficient space is allocated for the planting without causing obvious conflict with other garden usage. Most modern housing should rely heavily upon planting to enhance its appearance. Therefore landscaped space must provide an essential element in housing layouts and density of development must be set at levels that can accommodate these needs.
Spatial Organisation

3.15.1 The way in which buildings are grouped, and the way in which they relate one to another, is one of the most powerful influences on how we react to the built environment. Imagine walking through a house where room after room was of the same size, decorated in the same colour, and furnished in the same way; reaction to such monotony would quickly become boredom. An estate of standard houses, set to a rigid building line and having the same materials would trigger the same response.

Enclosure

3.15.2 Buildings can be arranged to create identifiable space each with its own unique character to which an observer will react in different ways. Spaces can be linear or static and can be likened to the corridors and rooms of a dwelling. They can be formal or informal in shape, building dominated or landscape dominated, large or small, and their precise character will be determined by the size and spacing of the enclosing buildings, the colours and textures of materials, the extent of planting, and the way in which the static ‘rooms’ are linked together by the linear ‘corridors’. It is this constantly changing pattern of small and large spaces, enclosure and openness, surprise and uncertainty which makes a walk around an historic town such an exhilarating experience.

3.15.3 There are no hard and fast rules governing the proportion of width of space to height of enclosing structures, but, as a general principle, satisfactory enclosure will be achieved where the width/height ratio of linear spaces does not exceed 2.5 to 1 and for static spaces does not exceed 4 to 1.
3.15.4 Applying these basic principles is the beginning of an appreciation of urban design and, with little additional effort, can be combined with other factors to create spaces of true quality. For example:

- a particularly fine tree could become the centrepiece of a static space

- a well designed property or a particularly striking feature can become the focal point at the end of a linear space

- an archway at the entrance to a linear space can create immediate interest as it poses the question, 'I wonder what is beyond the arch'?

3.15.5 Homes can be modified and personalised by their owners, but an unimaginative and boring layout cannot be so easily altered. Developers will therefore be required to produce layouts which clearly employ either the principles of buildings set within a dominant landscape indigenous to Suffolk or buildings arranged to satisfactorily enclose spaces of individual and distinctive identity.
Scale

3.15.6 The character of individual spaces will be largely determined by the scale and style of enclosing buildings, by the surface treatments and landscaping, and by the way in which the spaces connect one to another. The scale of individual buildings may be dictated by the need to relate to adjacent existing buildings but in any event, the overall scale should be appropriate to the part of Suffolk which the development occupies. It would not, for example, be appropriate to tack onto a village of small cottages or terraces a new estate of large detached dwellings. In a well landscaped and spacious ‘parkland’ setting however, such properties could be wholly appropriate.

Sense of Place

3.15.7 Good design in Suffolk will relate to local and historic character. The people of a place will have to live with any new development there and it is right that they should have a role in decisions about its appearance. All too often new roads are simply lined with standard detached or semi-detached units, a few trees planted, and future occupants are left with the awesome, if not impossible, task of trying to transform another chunk of anywhere into somewhere.
SPATIAL ORGANISATION
- how not to!

Little space for landscaping in front gardens

Buildings set to a rigid building line. Space between dwellings dictated by driveways

Standard "go anywhere" house types regardless of location

"Tunnel" effect layout - no variety of width, no sense of place - "it's all the same"

No change of level or surface to indicate that pedestrians have priority

Open plan front gardens frequently result in the unco-ordinated provision of sundry walls & fences by individual owners

No thought given to visual linkage of dwellings or enclosure of space

Unnecessarily dominant road/footpath system which allows the vehicle to dictate the layout

Token landscaping - no thought given to appearance of the development from the "outside"

Garages frequently of poor design, particularly if erected by owners as permitted development

Blank gable ends to suit standard house types - no regard to effect on streetscene

Front fences and paths set mechanically to visibly splay

No interest - one glance reveals all

Why design a road like this ......?
Variety of dwelling types but showing vernacular details

Impact of road reduced by shared surfaces - no footpaths

Landscaping used to shape views and to enclose space - not merely as an afterthought

Informal turning head complements informal arrangement of dwellings

Another 'point of interest' - "I wonder what's beyond those gateways?"

Buildings marked 'B' enclose the second identifiable space

Garage and planting used to complete enclosure of housing cluster

This group of dwellings marked 'A' enclose the first identifiable space

Clear change of priority at entrance to cul-de-sac says, "Motorists should take care"

Road and house layout creates interest - "I wonder what is around the corner?"

.....when it could be like this?

SPATIAL ORGANISATION
Privacy and Overshadowing

3.15.8 Care will be needed to secure a good degree of personal privacy in residential housing layout. It is essential to prevent the overlooking of areas of private garden, which is often at the rear of a property. Occupants of dwellings will suffer progressive loss of privacy where first floor windows overlook them at distances of less than 36 metres. It would be impractical to apply universal standards but this optimum distance for unobstructed views will be used as a benchmark for layout design.

3.15.9 Alternatively, upper floor windows of conventional cill height should be carefully located to avoid direct views into neighbouring private gardens unless the view from them is very oblique, or well screened by trees or buildings.

3.15.10 The views into living rooms from the public side of buildings also require protection. Reasonable internal privacy for living rooms can be achieved by screening large front facing windows, restricting unscreened windows to a narrow width, and avoiding unscreened front facing windows to through living rooms.

3.15.11 A reasonable size of private garden space should always be provided, and a major part of that space should be arranged to receive sunlight, particularly during the months of British Summer Time.
Public Open Space

3.16.1 Government advice stresses the role of Local Plans in identifying suitable sites for open space and ensuring that such provision is properly co-ordinated with other land use policies.

3.16.2 In the context of housing estate design and layout it is possible to identify three different but equally important categories of open space:

a) Structural Open Space
b) Formal Open Space
c) Informal/Amenity Open Space

Structural Open Space

3.16.3 This will not normally form part of the open space allocated to a specific housing site, since it is intended to provide a framework for the development. Such spaces often consist of retained landscape features such as copes on the skyline, ancient woodland/hedgerows and water features, or may be formed by new planting, providing a buffer to existing development or proposed major roads. These open spaces will normally be identified when land is allocated for housing in local plans.

Formal Open Space

3.16.4 Development Briefs will normally identify requirements for formal public open space which may involve considerable areas of land, enabling residents to enjoy walking and sporting activities.

3.16.5 The National Playing Fields Association advocates a provision of six acres of open space per thousand population. The Local Planning Authority requirements for the provision of open space will vary from area to area, depending upon identified deficiencies.
3.16.6 A proportion of the open space provision may be required for children to be furnished with approved play equipment. Where such play areas are required they shall:
- comply with any minimum space and safety standards of the relevant Local Planning Authority;
- have good footpath links with the rest of the development;
- be within easy walking distance for small children;
- not be secluded but be in well overlooked positions;
- be located away from elderly persons’ dwellings;
- have easy access for maintenance purposes.

Informal/Amenity Open Space

3.16.7 Apart from its recreational value open space is an essential element of townscape. As part of an integrated design it can greatly enhance the character of any housing development by the use of features such as ‘village greens’ formal squares, sculpture, varied hard surfaces and water. Amenity planting and opportunities for play by young children also help to enhance the character and enjoyment of a very localised housing environment.

3.16.8 Whilst it is not appropriate to set a prescriptive standard it is suggested that for housing estates with smaller than average garden sizes, 10% of the net developable area should comprise informal open space over and above space allocated for formal open space.

3.16.9 Developers are therefore advised to liaise with the local planning authority at an early stage to ascertain the requirements for the provision of open space, play space and all associated issues.
Maintenance

3.16.10 The majority of structural and formal open spaces, because of their future use by the community will be adopted as public open space by local planning authorities along with children's play equipment. Under these circumstances it is important to establish who will be responsible for maintenance of such areas and play equipment.

Security

3.17.1 The Town and Country Planning (Development Plans) Regulations require local planning authorities to have regard to social considerations in preparing structure plans and unitary development plans. Crime prevention must be regarded as one of these social considerations.

3.17.2 Landscaping will play an ever increasing role in making the built environment a better place in which to live. Planted areas have in the past been created with little thought to how they affect opportunities for crime. Whilst creating no particular problem in the short term, certain types and species of shrubs when mature have formed barriers where natural surveillance is compromised. This not only creates areas where intruders or assailants can lurk, but also allows attacks on vehicles to take place with little or no chance of being seen. Overgrown planting heightens the fear of crime, which often exceeds the actual risk. Planting next to footpaths should be kept low with taller varieties next to walls.

3.17.3 Where footpaths are separate from the highway they should be kept short, direct and well lit. Long dark alleyways should not be created, particularly to the rear of terraced properties. Where such footpaths are unavoidable they should not provide a through route. Changes in the use of materials can also have an influence in deterring the opportunist thief by indicating a semi-public area where residents can exercise some form of control.
3.17.4 The principal objective should be to design an area which creates a community allowing people to recognise where they live as being collectively their own neighbourhood. They should be able to readily identify those who belong to their community and have little difficulty in recognising the presence of strangers. This will enable residents to challenge criminal or anti-social behaviour.

3.17.5 Natural surveillance can be improved where some properties are occupied throughout the day. This is best achieved by using a mixture of house types which will cater for a variety of households.

3.17.6 Real or symbolic barriers such as changes of surface, or texture help to provide a sense of semi-privacy. This is particularly important at entrances to grouped parking areas to encourage self-policing.

Secured by Design

3.17.7 Careful design and layout of new development can help to make crime more difficult to commit and increases the risk of detection for potential offenders, but any such security measures must form part of a balanced design approach which addresses the visual quality of the estate as well as its security. Local Planning Authorities may therefore wish to consult their local Police Architectural Liaison Officer on new estate proposals. Developers should be aware of the benefits obtained from the “Secured by Design” initiative, details of which can be obtained from the Police Architectural Liaison Officer.