

# The Urban Place Supplement

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For a Greener Essex



**EPOA**  
Essex Planning  
Officers Association



**Environment  
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**InspireEast**  
Ideas and actions for  
sustainable communities



**Essex County Council**

# Foreword

## Essex Design Guide Urban Place Supplement

A sustainable environment is a proposition that has come of age. Many people over the past few decades have championed either the urban environment, the natural environment or the human environment but rarely all three. When properly executed, these things are the building blocks for harmony and balance. Most now agree that the symbiosis that exists needs to be nurtured for, strong as the dependencies are, they never come together by pure chance. An element of intentional design is usually required.

This Supplement builds upon the foundations of the very first Essex Design Guide of 1973 which itself was superseded by revised editions in 1997 and 2005. The earlier document was, in many ways, revolutionary. It established a code that required the building industry to radically adjust its product which, in turn, changed the layout and appearance of new housing across the County.

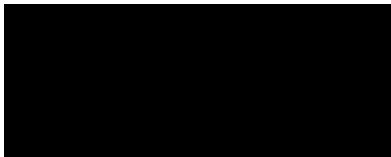
The Urban Place Supplement is just as demanding and rightly so. Never has a concern for the sustainability of our actions been better understood by the community and been more pressing than now. It matters not how close one may think the planet is to an environmental ‘tipping point’, the fact remains that we are approaching it – quickly. In almost every respect we are entering a period of consequences.

Also, communities are facing pressures and change that seem to be escalating. Lifestyles, consumption, commuting and social cohesion are linked issues that have a direct bearing upon the environment and the ability of people to feel safe and valued, and to maintain good health. These pressures appear more acute within urban areas and town planning has an important role in finding resolutions.

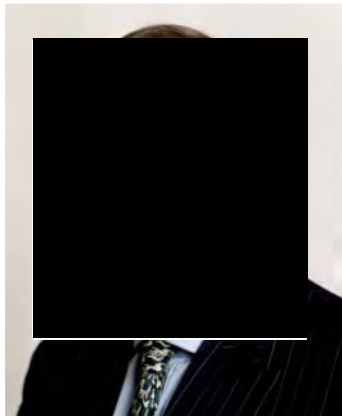
It is easy to forget the needs of nature when debating these big issues but access to the natural environment is proven to have an uplifting effect upon the human condition. There is no reason why there should not be a rich biodiversity within towns, close to where people live, work and go to school.

And what of design? These threads can be pulled together provided we accept that high quality design is more than just about aesthetics, important though this is. It is about attention to a wide range of big and little things – from ensuring that infrastructure is adequate to choosing an attractive pattern of paving.

I hope that the Urban Place Supplement inspires and encourages you to share our determination to make Essex a better place – by design.



**Cllr Peter Martin**  
Deputy Leader, Essex County Council  
ECC Design Champion





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Image 1  
An urban community for all,  
Freiburg, Germany

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## 1.0 Introduction

Viewed from the air, Essex appears to be a very green county yet it is one of the most densely populated regions of the UK. Part of this impression is due to our success in containing urban sprawl and limiting development in rural areas but it is a fragile relationship that needs continuous management. The persistent requirement for further economic and housing growth is adding to the pressure already put upon this rural-urban identity.

One purpose of town and country planning is to secure sustainable development. This purpose was made more explicit with the publication of the *Sustainable Communities Plan (2003)* which was the Government's response to the national shortage of (especially affordable) housing, pressures on the urban edge and neighbourhood renewal. The Plan can also be set against a background of a growing concern over our consumption of natural resources, the polluting effect of growth and the dispiriting quality of urban living in some areas.

The Urban Task Force had already reported in 1999 and recommended actions on the design and management of towns and cities, achieving local regeneration and improving quality of life and local governance for the purpose of achieving an urban renaissance. A review of good practice demonstrated that the quality of urban life in the UK had fallen a long way behind many parts of Europe.

*The Essex Design Guide for Residential and Mixed Use Areas* published by the Essex Planning Officers' Association (EPOA) in 1997 (amended and republished in 2005) has been an influential document in improving the quality of new residential development in the county. Where it has been applied, development is more responsive to context and the Essex 'character' of places. Materials are used from the local Essex palette, development is more legible, and streets are designed to slow traffic and connected to be permeable. Greater emphasis is given to spaces and their containment with continuous frontages a common feature.





Although the Essex Design Guide has successfully influenced the design and layout of housing in Essex it has been less capable in shaping responses to the more complex demands of a broader urban agenda. The quality of recent higher-density development has been patchy, often compromising the quality of public and private space in the search for extra capacity. Not all of these developments have been well received by existing communities and not all of them liked by the new occupiers. These developments have been poorly integrated into their urban context.

It is also clear that in Essex we are currently consuming finite resources at a rate that is unsustainable whilst producing an unacceptably high level of carbon emissions. Buildings are energy inefficient and urban planning discourages use of sustainable transport. Urban development is also often at the expense of nature, yet needn't be so.

This guidance therefore attempts to help deliver a consistently higher standard of environmentally and contextually sensitive design within Essex.

#### **Adoption of this guidance**

Each Council adopting the UPS has produced an adoption statement. This statement sets out how the UPS supplements the adopting authority's local plan or Local Development Framework policies. Local Planning Authorities may have specific policies and requirements that differ from this guidance and these would take precedence.



## 2.0 Scope

The Urban Place Supplement (UPS) does not replace the Essex Design Guide (EDG). Whilst the Supplement is more relevant for intensive urban development, the Essex Design Guide will remain the principal planning guidance for the design of new places in Essex, where it has been adopted by local planning authorities. In practice, this Supplement will be applicable to the majority of residential and mixed-use developments within urban areas as it provides additional guidance on most potential development scenarios ranging from the largest urban extensions to the development of small infill plots. It aims to bring about a design and development process that is more collaborative, responds better to meeting local opportunities and needs, and delivers high quality environments that produce fewer carbon emissions.

The Supplement does not attempt to reiterate the substantial pool of advice and guidance contained within existing publications on urban design and sustainable development. These documents are essential reading for designers and planning authorities and complement the rationale of the Urban Place Supplement.

The document is organised into three principal sections:

### **Urban context**

### **Influences upon quality**

### **Influences upon sustainability**

There are strong overlapping relationships between subject areas, and inevitably there are elements of inter-dependency between objectives. For example, one cannot deliver the proposed new standard of communal open space without addressing how space is allocated for car parking.



For the first time, the guidance proposes minimum and maximum housing densities relative to the location of any site within its urban context. This has been done so as to ensure the full realisation of development potential of sites in the most sustainable locations, whilst avoiding high density in places that are not. The UPS introduces a new method to better understand and assess local context. This is intended to work alongside Design and Access Statements (see page 34) to avoid development that is inappropriate in terms of density, scale and character whilst steering development towards solutions that enhance the quality and sustainability of our towns. It is also proposed, in the light of the concerns about climate change, that all new development should aim to meet a high standard of environmental performance.

Development schemes will not be based exclusively on either the UPS or the Essex Design Guide. Designers will need to refer to both documents. The Urban Place Supplement introduces criteria for establishing a range of development types for existing and new sustainable locations above 50 dph. However, elements of the UPS, such as those relating to sustainability and quality, can be applied to developments of any scale, location and type. Similarly, although the Essex Design Guide will continue to be particularly applicable to developments below 50 dph, the key urban design principles that it propounds will also be relevant to UPS schemes of higher density (see Diagram 1, page 10).

The UPS does not alter land-use allocations but aims to complement Local Development Frameworks (LDFs), local plan policies and District/Borough core strategies.

The UPS is not intended to be prescriptive but allows developers, designers, planners and other key stakeholders to imaginatively create sustainable developments in Essex.

**Diagram 1**

**Using the Urban Place Supplement and Essex Design Guide**

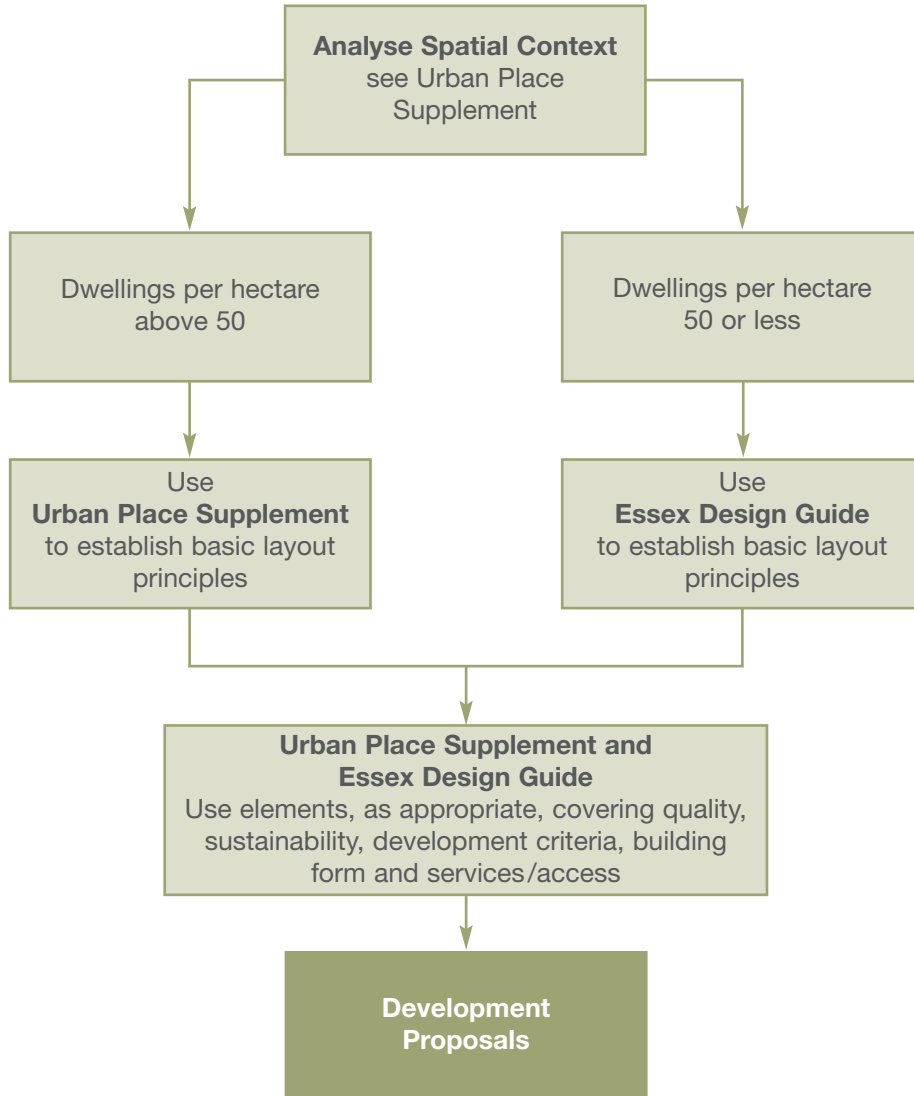




Image 2  
Residential street in Harlow

## 3.0 How to use this document

Most of the guidance contained within this document would apply to every development within an urban area. However, the guide avoids a prescriptive menu and instead relies upon a rigorous appraisal of a location that initially involves the determination of the spatial context of the site itself. The route from initial context assessment to pre-planning application design can be regarded as a 6-step process (see Diagram 2, page 14):

### Step 1

#### **Determine Spatial Context**

The location of a potential development should determine its minimum or maximum density and some aspects of its form. For instance, development opportunities that are close to either a town centre or neighbourhood centre (either existing or potential) are expected to yield the highest densities and greatest mix of uses. Descriptions of different spatial contexts (see pages 24–25) are provided to help decide where in an urban area a site is placed.

### Step 2

#### **Establish appropriate Development Type**

Diagram 5 (see page 123) can then be used to determine which development type is most applicable to any given situation. These are specified on pages 124–126.

### Step 3

#### **Undertake a Context Appraisal**

The next stage is to undertake a Context Appraisal, which should be a collaborative process undertaken in co-operation with the local authority and a variety of agencies. Section 4, Urban Context (page 16) sets out the framework for this stage.

Whilst a Context Appraisal and its ‘signing-off’ by the local planning authority is strongly encouraged, this work is not a prerequisite for a planning application and is advisory only.

The Context Appraisal methodology does not pre-empt the proper consideration of policy issues or replace the normal statutory consultation processes that must be followed when any subsequent planning application is submitted. When undertaken properly, Context Appraisals would assist and add value to, rather than place limitations on, the statutory consultation process.

#### **Step 4**

##### **Consultation**

Even though the process of undertaking a Context Appraisal will necessitate, by its very nature, discussions with a variety of people and organisations, it is recommended that this work be formally presented to the local community for their consideration and comment. It is recommended that expert community participation facilitators be employed by the design team to assist the process of engaging stakeholders constructively.

#### **Step 5**

##### **Determine the development form**

The result of this analysis and discussion will determine an appropriate development form that responds to the specific context of the site location. Development form is the overall shape and character of a development as determined by the individual building sizes and shapes, the disposition of built form in relation to open spaces, access arrangements and the accommodation of different uses within the development. The form should also draw upon the provisions of Section 5, Influences Upon Quality and Section 6, Influences Upon Sustainability and other specific studies that may be required by planning regulations.

#### **Step 6**

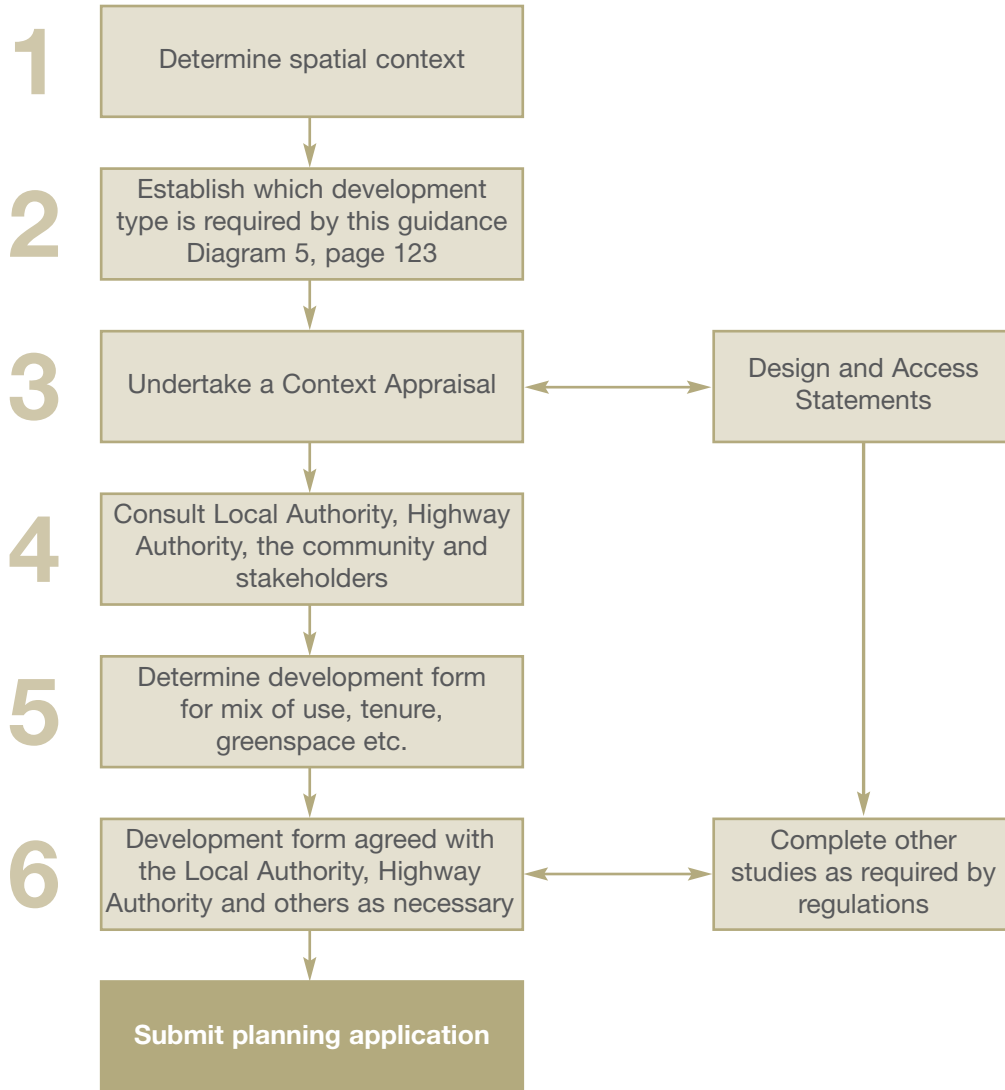
##### **Agree the development form**

Importantly, the Context Appraisal should ideally be 'signed-off' or agreed by the local planning authority prior to the submission of any planning application, having had regard to the feedback from the formal consultation stage.

It is expected that this process will be followed for either outline or full planning applications and is also recommended for the production of site development briefs, development frameworks and area master plans.

## Diagram 2

### Establishing the development form







**Image 3**  
High-quality residential development,  
Accordia, Cambridge

## 4.0 Urban context

### 4.1 Introduction

The need to better understand the circumstances and performance of urban areas and the communities that inhabit them tends to increase when densities rise. Often, development is either proposed or occurs without first appreciating the complex dynamics and the multitude of interests that exist. Seen in this light, is it any wonder that some higher density urban schemes are considered by many to be 'out of context'?

Developers need to be confident that the assessment of planning applications will be consistent and not respond unreasonably to illegitimate pressures for planning gain. Understanding the reasonable demands of a locality very early on in the planning process is generally regarded as helpful to all. The sections below describe a new approach for undertaking an audit of local context that is able to capture the nature and extent of these demands.

Higher density development above all needs to be in the right location. There is little point promoting compact development in places that are remote from local jobs, services and public transport. Indeed, it is positively harmful to the sustainability of the environment to do so. It is important to concentrate new jobs and housing close to the centre of urban areas and neighbourhoods so that it is possible to reduce our dependency on the car. There are, of course, many additional reasons why this makes sense and these are explained in Section 6, Influences upon sustainability (page 114). This UPS establishes guidelines for determining the minimum density and nature of new urban development.

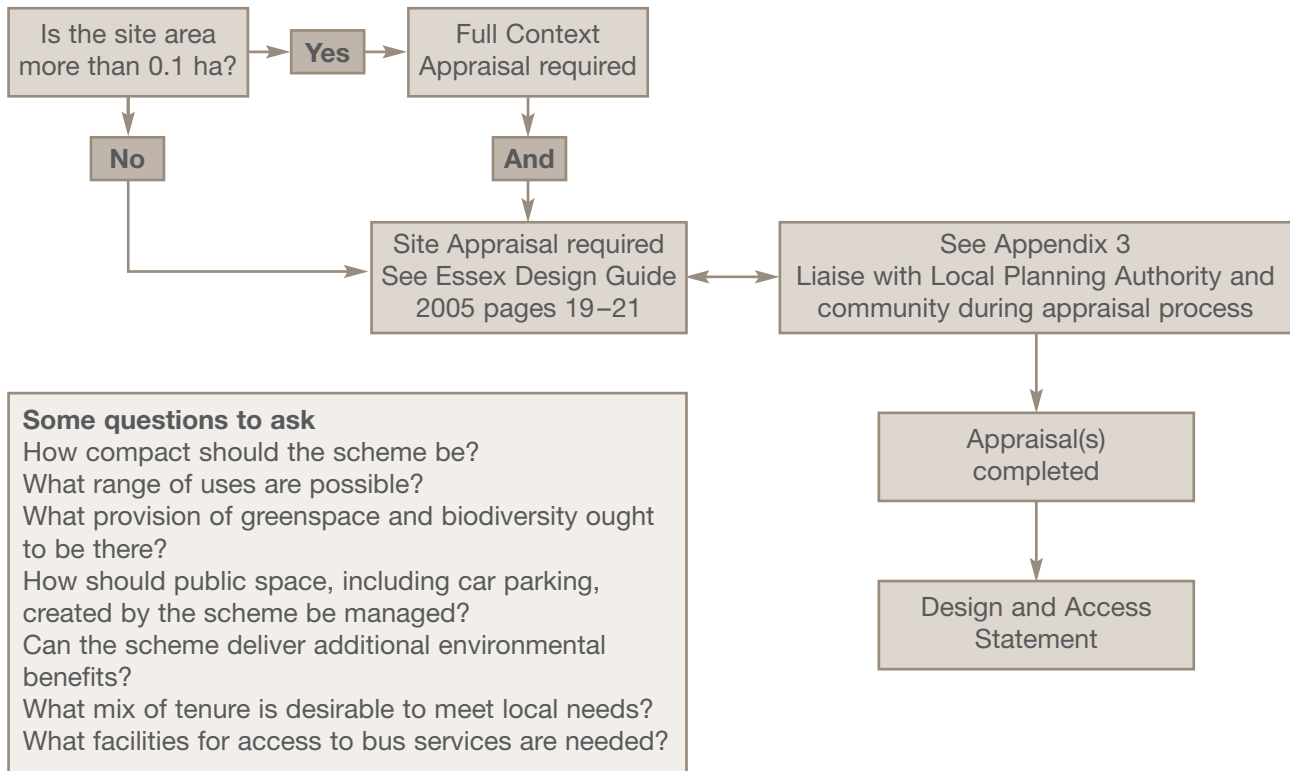
The objective in using this guidance is to follow a process that leads to greater appreciation of needs, aspirations and opportunities that exist within the local context. We call this process the Context Appraisal. The exercise will inevitably suggest a suitable range of uses, housing tenure and green space needs and should be used as a baseline to inform the right development approach for a site from which to begin initial design work.

A Context Appraisal should be undertaken prior to the commencement of the design process and would usefully facilitate initial pre-application discussions with the local authority and the community. It is not a substitute for a master plan or a site development brief but will contain valuable information that will help the production of either.

Much of the information necessary to complete this work is readily available from local authorities, agencies and health providers although only rarely has it been presented as a complete picture of local context. A full Context Appraisal would normally be produced for any development site over 0.1 hectare anywhere in Essex. However, it is considered unreasonable to expect a thorough audit of local need and opportunity on small sites of 0.1 hectare or less when a site will be largely incapable of responding to many of the findings. Nevertheless, a Site Appraisal will be necessary for sites in urban areas of 0.1 hectare or less (see Diagram 3 below).

**Diagram 3**

**The Context Appraisal Process**



## 4.2 Context Appraisal Methodology

Factors that need to be considered in this step-by-step appraisal process are set out below. See also Appendix 3 – Context Checklist.

### *Step 1*

#### **Spatial context:**

Determine where the proposed development site falls within the spatial context of the town. Urban Centres for all the major conurbations in Essex have been plotted and are available on the Essex Design Initiative website ([www.the-edi.co.uk](http://www.the-edi.co.uk)). Information on how to identify spatial scenarios can be found on page 123, Diagram 5. These will be one of the following:

- Site within 800m of the centre point of a large urban centre
- Site within 400m of the centre point of a small urban centre or neighbourhood centre
- Sustainable urban extension
- Large urban infill
- Small urban infill
- Other site locations

### *Step 2*

#### **Built-form context:**

Undertake a physical and desktop survey of the ‘unit of sustainability’ that the site falls within. For urban centres, the Context Appraisal will cover a wide area for it is the dynamics of the centre as a whole that will influence sites within these very central locations. As a minimum, the survey should report on:

- Broad historical morphology
- Street pattern and spaces
- Building heights, styles and distinctive features
- Materials (buildings and surface finishes)
- Landmarks (of varying significance)
- Trees and landscape
- Historic assets and designations

See page 20 and the Essex Design Initiative website for an example of a Built-form context.

### *Step 3*

#### **Functional context:**

- Identify opportunities for diversification, location and arrangement of different uses and assets within the area. This should include the examination of opportunities for integration of biodiversity enhancements and accessible multifunctional green space.
- Undertake a comprehensive audit of urban diversity which can be used to help identify gaps in provision. Most of the information required will be gathered by a combination of field and desktop surveys. Further data and opinion to assist with the audit is available from various local authority and agency sources which are provided as a checklist in Appendix 3. A number of web links have been provided in Appendix 4 and these are kept up to date on the Essex Design Initiative website.

### *Step 4*

#### **Operational context:**

- Investigate the management and stewardship of the locality. The manner in which areas are maintained and managed has a direct bearing upon their success. One might expect the most successful places to be both well managed and to have only a limited amount of accommodation available at any one time. The survey should capture current arrangements and capacity together with any proposals that may alter this picture. In undertaking the work, it will be helpful to note the relative quality or effectiveness of these arrangements as these will undoubtedly be issues of interest within the community and likely to be raised by them at the next stage.

### *Step 5*

#### **Community context:**

- Identify the needs and aspirations of the local community.
- Consider the drivers for investment. This should be a comprehensive assessment of potential end uses and not limited to commercial opportunities alone. The appraisal may also reveal investment propositions from service providers that could be built into the design of the scheme, such as accommodating a new children's centre, a doctor's surgery or a community meeting space.

## Example of Built-form context

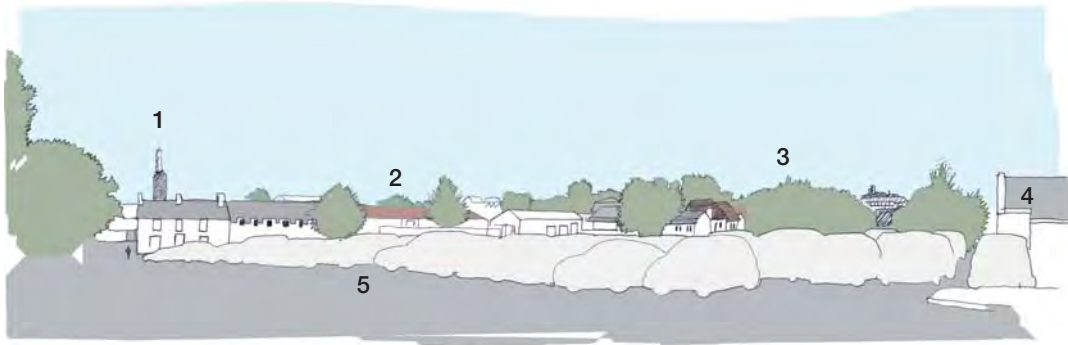


Image 4



Image 5

### Image 4

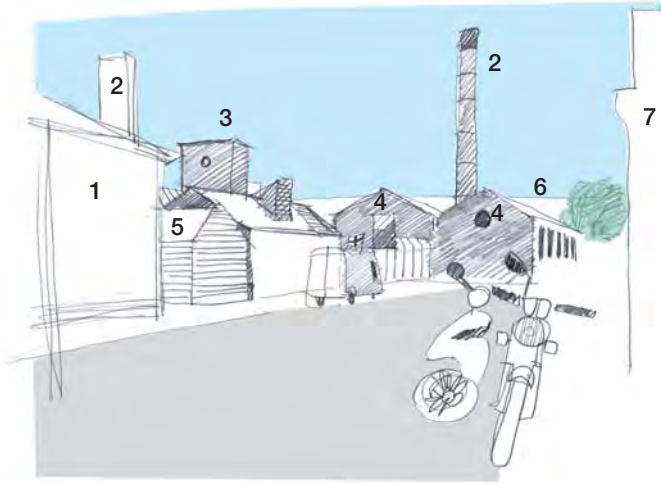
#### Current condition

1. Tower pulls away from town centre direction
2. Development site
3. Town centre hidden from view
4. Dark roof line and finishes provide a datum to the whole composition
5. Too dominant car park view

### Image 5

#### Proposal

1. Tower balanced by new development
2. Development site; increase density towards town centre, landmark focal point to balance tower
3. Increase density on adjacent site in future development
4. Pitched roofs to strengthen datum level
5. Bank of trees complement roof/skyline



**Image 6**

**Current condition and development potential**

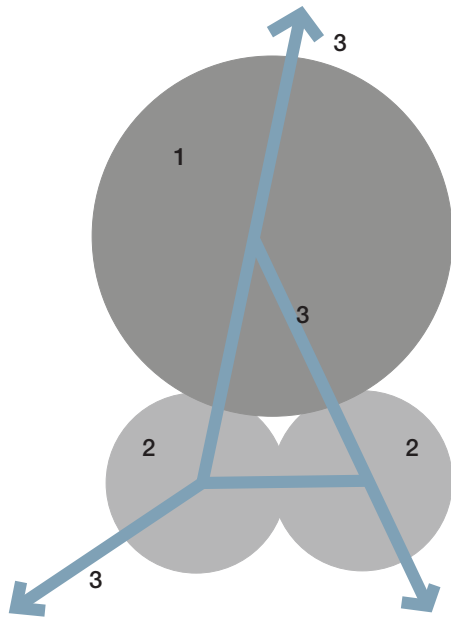
1. Offices fronting street
2. Vertical emphasis – chimneys
3. Brick water-tower – retain historic building
4. Existing buildings – retain to create a sense of place
5. Ad-hoc industrial buildings suggest a variety of materials
6. Roof skyline of recent development
7. Shop front buildings along street – motorbike shop

### 4.3 Spatial Context

Within this guidance, Spatial Context of a site is its location within the urban area as a whole. Urban areas are invariably most compact, intensive and tall at their centres, which is usually a consequence of land value determining economy and diversity in the deployment of space. Older centres tend to be more diverse and newer centres, less so. Both will contain shops, employment and services in addition to a transport interchange within the larger towns.

The outward spread of urban areas, and particularly those parts developed since the 18th century, have created neighbourhoods that also have a centre that mostly coincides with something of transportation significance such as a road junction or an interchange. Whilst these neighbourhoods are less compact, intensive and tall than the urban centre, they nevertheless have these qualities relative to their immediate surroundings and, as such, often contain a few shops serving local needs, some workspace and community buildings. It is here, in either the urban centre or neighbourhood centre that development should be most dense and diverse, marking out their economic and symbolic importance.

Importantly, the traditional neighbourhood is nearly always laid out on the basis of convenient, pedestrian accessibility with the edge rarely being more than a 5 minute walk away. Usually, neighbourhoods link up along established transport corridors to form a chain of development that increases in density towards the centre of each neighbourhood. Preserving and reinforcing this hierarchy of density is fundamental to achieving a sustainable urban form.



**Image 7**

1. Urban centre
2. Neighbourhoods
3. Transport corridors



**Image 8**

Neighbourhood (400m radius/5 minute walking distance)



Occasionally, a development site is of sufficient size for it to accommodate a new, sustainable community. At least 50 hectares is required for this to occur which equates to the same 5 minute 'walkable neighbourhood' model described above. In this situation, the ideal development would be arranged to have a compact mixed-use centre with progressively lower commercial and residential densities towards the extremity of the site. Such an arrangement is suitable for a large infill site within an existing urban area, a sustainable urban extension attached to the existing boundary of a settlement or even a regeneration area where a substantial tract of redundant or poor quality land is to be transformed.

New high density developments outside of town centres or neighbourhoods (either existing or new) are likely to appear out of context with their surroundings and would be less sustainable in use than development that is closer to services and good public transport. Therefore within the hinterland beyond these places there will be a presumption against high density development with an assumption for matching the scale and density of the immediate surroundings.

In using this guide, locations suitable for higher density, sustainable development have been identified as:

**Urban Centres**

**Neighbourhoods**

**Large Urban Infill**

**Sustainable Urban Extensions**

The context and nature of these locations, whether already developed or substantially vacant and available for development, is highly relevant to the Context Appraisal process either as features that must be preserved and reinforced or as characteristics that need to be changed.

The following descriptions of existing urban places in Essex may be typical:

**Existing Large Urban Centres** which are likely to have the following characteristics:

- Serves a town with a population greater than 35,000
- A public transport interchange
- A walkable radius of 800m (10 mins)
- A good range of shops
- A good range of services
- A good range of employment opportunities
- Building heights occasionally greater than 4 storeys

**Existing Small Urban Centres** which are likely to have the following characteristics:

- Serves a population between 10,000 and 35,000
- Local bus services (15 mins or less in each direction)
- A walkable radius of 400m (5 mins)
- A range of shops
- A range of services
- A range of employment opportunities
- Building heights occasionally greater than 3 storeys

**Existing Neighbourhoods** which are likely to have the following characteristics:

- Located in a town served by either a large or small urban centre as defined above
- A frequent local bus service with bus stops within walking distance (400m, 5 mins)
- A walkable radius of 400m (5 mins)
- A range of shops
- A range of services
- A range of employment opportunities
- Building heights occasionally greater than 3 storeys

**Sites for Sustainable Urban Extensions** which are currently likely to have the following characteristics:

- Minimum 50 hectares in extent
- Greenfield and occasionally brownfield
- Adjacent to an existing urban edge
- Lack of urban character
- Landscape-dominant
- Poorly served by public transport
- Remote from urban facilities
- Inaccessible/remote

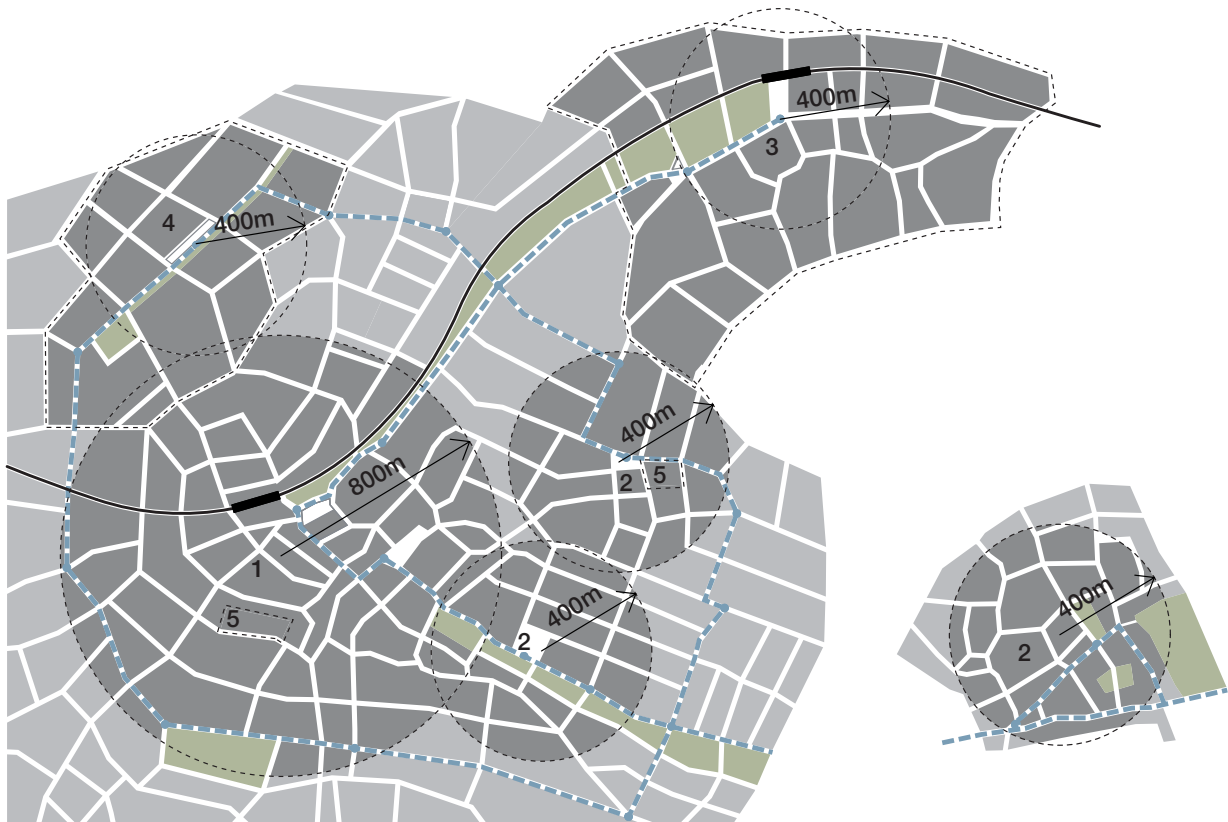
It is possible that an urban extension of 50 ha could contain around 2000 homes, green space, community uses and 100,000 sq m commercial space all within a built fabric no higher than 4 storeys.

**Sites for Large Urban Infill** which are currently likely to have the following characteristics:

- Minimum 50 hectares in extent
- Surrounding built context, existing urban character
- Probably brownfield and redundant institutional or industrial use
- Probably biologically diverse
- Existing buildings on site; possible re-use
- Few urban facilities
- Reasonably close to urban transport routes

**Sites for Small Urban Infill** which are currently likely to have the following characteristics:



- Strong built context and existing urban character
- Clear site constraints
- Probably brownfield or redundant land



**Image 9**

Assembled town diagram and small urban centre

1. Urban centre
2. Neighbourhood/small urban centre
3. Sustainable urban extension
4. Large urban infill
5. Small urban infill

-  Railway station
-  Green space
-  Bus route

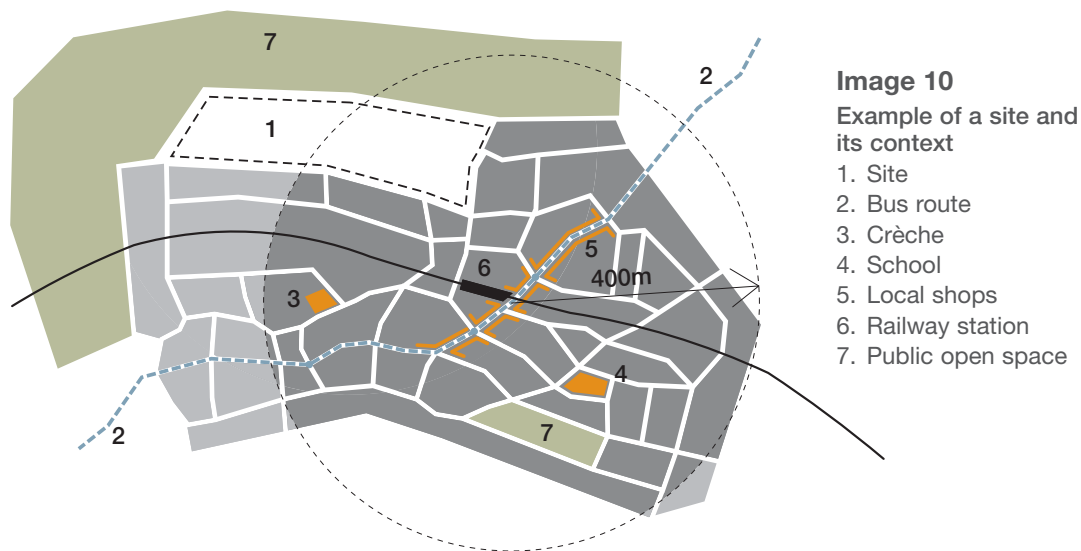
It is important to agree in writing with the local planning authority, the appropriate spatial context of the site at the start of the Context Appraisal process. This is important as the likely minimum density and development characteristics are established by this method.

## 4.4 Built Form Context

The Essex Design Guide will continue to be the primary source of design advice for residential development within the County. Its impact since publication cannot be over-stated and it has successfully defended the Essex building tradition against bland inconsiderate design. However, its provisions on architecture and built form do not always translate well for higher density environments and taller buildings. Nor indeed, do they always fit comfortably with the specific circumstances of our Victorian seaside towns and of our New Towns. These places, and places like them, have a distinct character of their own that is as important to them as the vernacular tradition is to our Market Towns.

It is essential to start with a demonstrable appreciation of this built-form context. This can be collated quite simply from an assemblage of photographs, sketches and map extracts with unambiguous explanatory text. It is important to examine not only the unit of sustainability the site falls within i.e. Urban Centre, Neighbourhood Centre etc., but also the general nature of the urban area as a whole.

Provided this work is regarded as a process to identify opportunities rather than one that imposes constraints, the result can be an urban pattern book for specific places that communicates character, guides the designer and engages the community.



In most situations, the general character of an area could be identified and represented on 6–10 sides of A4. More sophisticated analyses may include the recording of a wider variety of visual and other sensory cues that combine to provide the designer with a rich resource for interpretation.

Of course, the vast majority of urban areas have been subject to change over time. They often comprise a mix of building types (style, form, height and materials) and spatial types such as squares, streets and parks (size, proportion, enclosure and materials). The interplay between buildings and spaces and the scale of these relationships largely determine urban character, even before architectural style is considered. Whilst in very historic centres these differences may be quite subtle, highly unified urban areas are rare and most are generally quite diverse. Their evolution gives them the character they have today – not all of this is good, however. Negative effects can occur when a development has been imposed that breaks too many urban design rules on one site. It is perfectly possible, for instance, to place a modern glass structure between buildings designed in a local traditional idiom of brick and render if it mirrors the height, proportional arrangement and plot size of its neighbours – if it is ‘well-mannered’. Aesthetic tensions invariably occur when this rule of thumb is broken.

When undertaking audits of built form one should therefore be mindful of those situations where buildings are clearly uncomfortable within their surroundings and where it is unwise to follow their precedent. There are, of course, always exceptions but they need to be approached with extreme care. Individual buildings (where the local character is indeterminate) can be inventive and challenging provided they are well designed. They may be intentionally designed to stand out amongst their neighbours to become a new landmark or they may incorporate materials in an innovative way. However, buildings that incorporate features that assert themselves as becoming new ‘landmarks’ are often misplaced. They are rarely necessary for navigation around a built environment and, more often than not, are added on the whim of the designer. Used intelligently, landmarks have an important role in establishing a sense of legibility and drama for an area but this always needs to be informed by a rigorous understanding of the surroundings, existing way-marking and the relative importance of the building.

Whatever the circumstances and the design approach, the starting point is a review and analysis of the local built form context.



**Image 11**

Individual building in an area of indeterminate character;  
ARU Chelmsford, Ashcroft Building

## 4.5 Functional Context

Uses fill space and it is the nature of this relationship that largely determines the vitality and health of urban areas. Whereas planning policy over the last 50 years has had the effect of increasing the separation of functions, our present day objectives for sustainability require us to bring them together. The typical historic town once supported a wide variety of activities within buildings, streets and public spaces and it was these functions that attracted people to live in an urban dwelling rather than in the countryside. The nature of towns in Essex has evolved markedly and continues to do so, requiring, but not always receiving, continuous monitoring and attentive management.

This guide points to the reinvention of the sustainable urban form as a unit of liveability. Propagating existing areas with new uses and spaces that are needed or in demand, through sensitive urban planning, will improve economic and social conditions and repair some of the damage done in the past. Most of the Development Scenarios described in Section 7 require new development to bring forward a mixture of uses to assist with this urban renaissance but the Context Appraisal process recognises that variety of use cannot be achieved or sustained simply by prescription.



**Images 12 and 13**

Active public spaces create vibrant urban areas

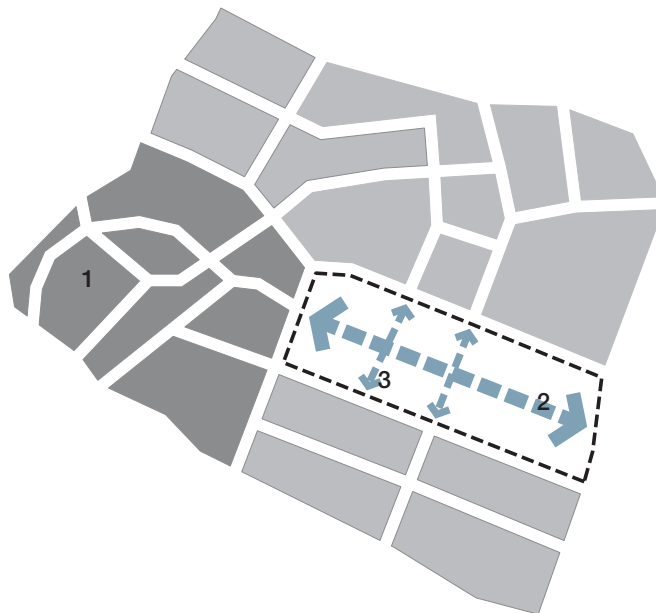




Understanding the current provision and disposition of uses within buildings and space is an essential prerequisite of planning for their improvement. The Appraisal therefore needs to include an audit of uses within the unit of sustainability the site falls within i.e. Urban Centre, Neighbourhood etc. The survey should identify specific uses rather than just Use Class (*Town and Country Planning Act Use Classes Order 2005*) and could usefully be presented as a map with catalogued index. At least two things will become apparent upon completion of this record.

Firstly, it will be possible to identify the commercial ‘centres of gravity’ within the surroundings and make reasonable assumptions on the intensity of the movement network in proximity to those uses and the routes people take to get there. This will help with the design of site layout in that it will suggest where people are likely to want to get to on a reasonably frequent basis.

Secondly, the Context Appraisal will provide evidence for what is there and hints to what is missing. For instance, it will show current provision of green space, sports fields and playgrounds making it possible to either plan for making good deficiencies or to counter claims that there is insufficient.



**Image 14**

Commercial centres of gravity/uses/movement

1. Commercial centre
2. Main link with potential for commercial uses
3. Internal connections

Additional information that should be included in this spatial mapping includes areas vulnerable to flooding, biodiversity structure of the area (an ecological survey of greater detail would be expected as part of the Site Appraisal), location of health facilities and the present location and intensity of the movement network. A complete list of data is contained in Appendix 3.

## 4.6 Operational Context

Recording the existence of infrastructure and facilities tells us little by itself. Importantly, it is necessary to understand how they are used and their capacity to accommodate further demands. Some aspects of an area's operational context require evaluation by the planning application process already, such as transport assessments – others do not. But it is important in the pursuit of sustainable communities that a broader and more methodical approach is taken that provides a better understanding of how an area operates, how much stress it is under and how much potential there is for growth before further investment is required.

This part of the Appraisal needs to examine a selection of the most critical aspects of the operational context of a locality including public space management (squares, streets and spaces), car parking management, the availability of school and pre-school places, vacancy of floorspace and the capacity of doctors' surgeries.

## 4.7 Community Context

Creating or maintaining buildings or spaces that are unused (or substantially underused) is pointless and wasteful. Yet there exists in many urban areas a vast resource of such space that is either in the wrong location, of the wrong type or simply under-valued and ignored. The community either does not or cannot envisage a use for such spaces.

Experience has taught us that communities sometimes need guidance in unearthing this potential or in realising the futility of hanging onto space that is never going to contribute to the life and vitality of their locality. This part of the Context Appraisal seeks to do two things; to determine what reasonable and realisable demands for space exist and to associate these demands with the known vacant or under-used space and the potential for creating new space.

Some aspects of this work will be quite straightforward, such as undertaking an audit of housing demand for tenure and type and establishing the capital investment plans of organisations, such as the local Primary Care Trust or Education Authority who may have space needs that are ideally met within a particular locality or place on a street.

Other information, such as the demands for specific types of workspace and determining how much of this could or should be provided within the local area, will need careful analysis that should be done in association with the local planning authority. It is in the interest of creating sustainable communities to bring demands such as these together in determining the manner in which new development or investment can either accommodate this space or be a vehicle for provision (such as through the use of planning obligation payments).

Of course, the existing residential and business community will have ideas and information of their own and the early collaboration between developer and people living and working in the area will be worthwhile. They may be especially interested in ways to improve environmental black-spots, increasing the provision of children's play space or reducing crime and anti-social behaviour. Participating in the Context Appraisal enables them to better understand the sometimes competing demands from the various interest groups and therefore better able to agree the priorities.

Completion of the Appraisal enables the design process to begin capturing the intelligence, data and local opinion that will help to shape the character and nature of the development. Usefully, the completed Appraisal can also be used as supporting information for the planning application and a sound rationale for the decision that follows.

## 4.8 Copyright

Context Appraisals will be substantial and important pieces of analysis that draw upon information gathered from a variety of sources. They will be invaluable to many organisations, enabling them to understand with greater clarity the state of urban locations and actions that need to be taken for their improvement and enhanced sustainability.

It would be unhelpful to hold copyright on the completed work which in itself may place limitations on the extent of involvement of individuals and organisations.

It is inevitable that as propositions for development come forward within a location and Appraisals are completed, an overlapping picture will emerge of that place. The Appraisals will work best through their transfer of information between sites, passing on evidence and data that is relevant and supplemented by review and updating as necessary. Over time, a comprehensive and complete picture will emerge. Appraisals will then become a substantial and important platform for monitoring and assessment of urban conditions that will enable better planning and investment decisions to be taken.

## 4.9 Site Appraisal

The Essex Design Guide requires Site Appraisals to be undertaken as part of planning applications. This is in order to demonstrate a clear understanding of a site and its constraints. There is no substitute for this and these appraisals will continue to be expected for every development. They need not be lengthy pieces of work but may well identify aspects of particular interest or concern that justifies further analysis. These may include the existence of listed buildings, or of a historic street pattern and associated buildings. The discovery of a minor watercourse for example, may prompt an assessment of the viability of a sustainable drainage system that is linked into the adjacent natural and built environments.

Further information on what a Site Appraisal should contain can be found within the Essex Design Guide and on the Essex Design Initiative website ([www.the-edi.co.uk](http://www.the-edi.co.uk)).

## 4.10 Design and Access Statements

The Context Appraisal methodology provides a tool for an audit and assessment of the local area which will inform the Design and Access Statement.

Whilst the Context Appraisal should be agreed/signed off in advance of a planning application, it can be included as part of the Design and Access Statement. The combination of both a Context Appraisal and a Design and Access Statement will ensure that any development proposal will be designed in context, with the involvement of the community (see Diagram 4, page 36).

Design and Access Statements became a statutory part of the planning system in 2006 and are required to support an application. The Statement

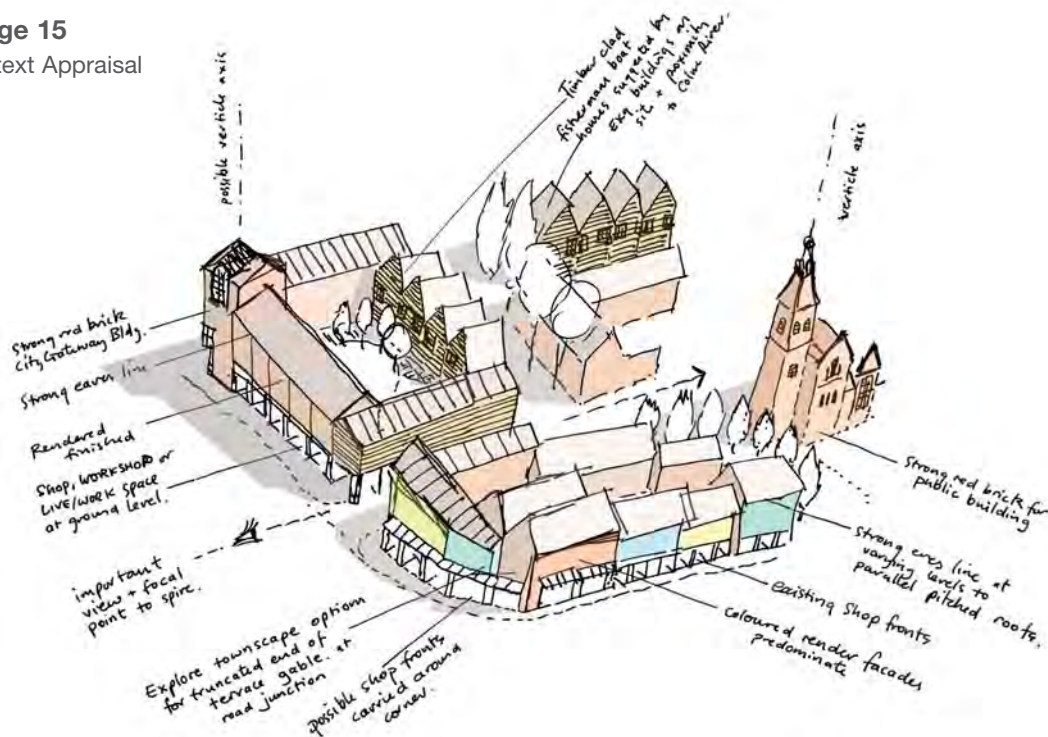
should address all access issues and describe the design process that has led to the development proposal. Statements should include a written description and justification of the planning application, incorporating photos, plans and drawings to further illustrate the points made.

Design and Access Statements:

- Accompany a planning application, but are not part of it
- Are needed with most types of application, but not household applications
- Need to explain and justify what is being applied for
- Can be linked to planning decisions through conditions (if developers are required to follow them)

For further information see *Design and Access Statements* published by the Commission for Architecture and the Built Environment (2006) ([www.cabe.org.uk](http://www.cabe.org.uk)).

**Image 15**  
Context Appraisal

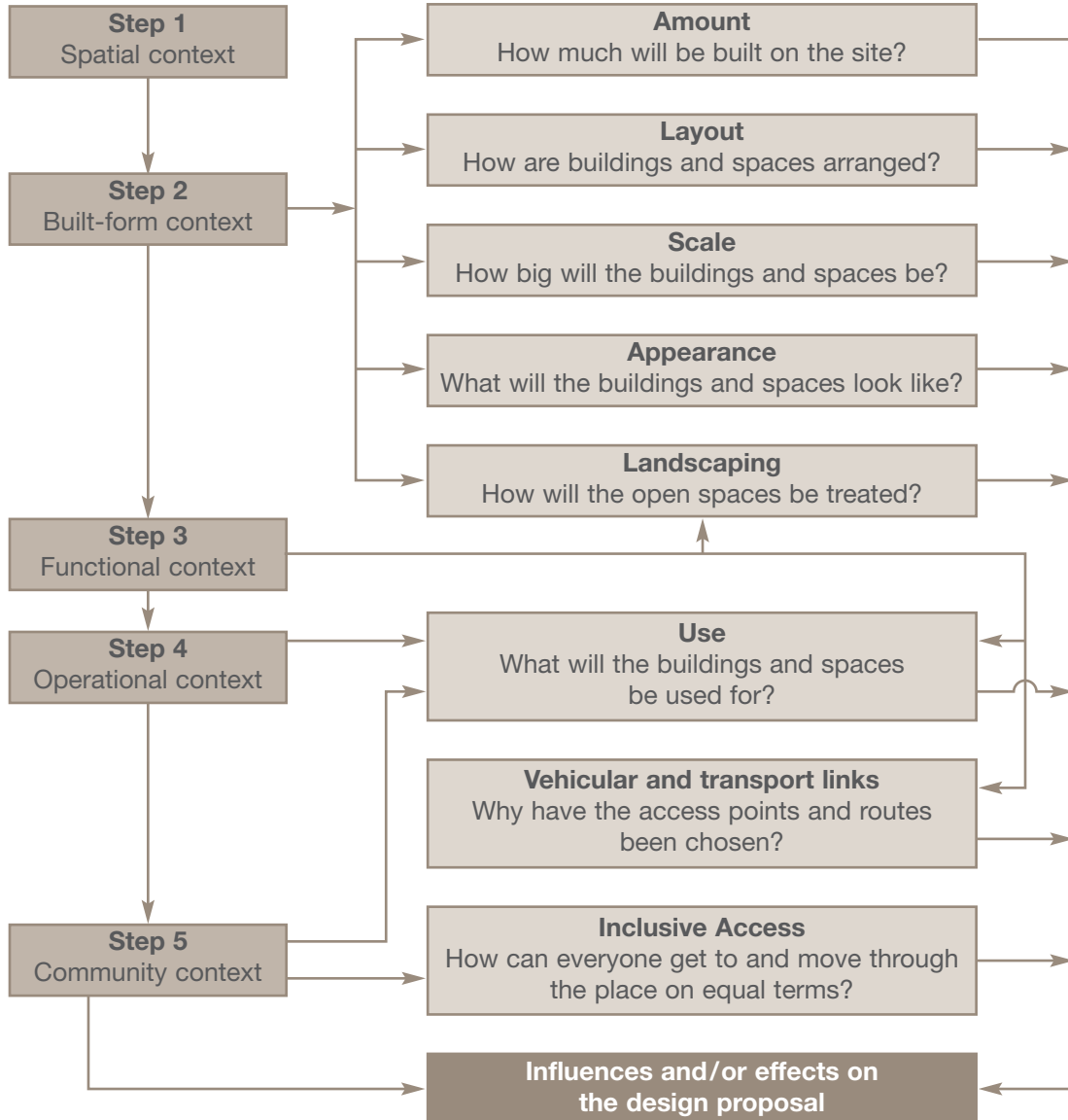


## Diagram 4

### How the Context Appraisal will inform the Design and Access Statement

Urban Place Supplement  
Context Appraisal stages

Design and Access  
Statement topics



## 4.11 Planning Obligation Agreements

Even though the process is a precursor to design, the completed Appraisal will be able to identify elements that should feature in any future planning application, such as additional workspace or a nursery. The most achievable and important elements will be included, having been agreed by the stakeholders.

Mitigation of the impact of development may fall outside of these initial decisions but, where appropriate, would include elements such as payments to increase the frequency of a local bus, highway improvements beyond the site or financial contributions for education infrastructure. The planning application will refine the necessary obligations for some aspects such as provision of affordable housing but the Context Appraisal should have determined priorities beforehand.

It is possible that, with this platform of agreement on both the concept of a development for a site and the substantive areas where planning obligations will be needed, the process of drafting associated legal agreements could begin. Refined up to the point of determination of the planning application, the agreement could be available to sign shortly afterwards with a useful avoidance of delay.

Core Strategies and supporting Local Development Documents set the framework for future development in an area and early discussions to identify key principles form part of this approach. Each District Authority will produce their own Core Strategy and supporting documents and in some cases will be developing a standard charge for infrastructure provision.

Essex County Council is producing (2007) a guide for developers and others on S106/planning gain as it relates to functions and services that are the responsibility of ECC. This document, *Developers Guide for Community and Transport Infrastructure Contributions*, should be used to inform Context Appraisals, planning obligations and highway requirements in relation to developments.

## 5.0 Influences upon quality

### 5.1 Introduction

In describing the very best urban environments it is impossible to disassociate the quality of architecture from the quality of space and functionality. These places work not only because they stimulate and delight the senses but also because they are fit for purpose. They invariably accommodate change without major adaptation, and this gives them a lasting quality that we often admire. Conversely, neglect and the process of abandonment and renewal are both environmentally unsustainable and damaging to civic pride.

This guidance promotes the belief that the quality of the public realm is paramount and that the architecture should be informed by the local context, civic aspirations and the idea that all things should be built to last. This requires a concentration of effort on those aspects of the environment that are our legacy to future generations and a fundamental shift in our thinking to help bring this about. Developers need to become place-makers and planners, engineers and architects should be visionaries.

Design quality is also synonymous with a safe environment and habitation that can easily be adapted if the circumstances of occupants change. It means that design solutions for a site have cognizance of the street, the neighbourhood and the town and that the needs of each are always taken into account.

Good design is reliant upon a number of simple physical and operational principles. Many of these are expressed in the Essex Design Guide but their interpretation and the adopted guidance is most relevant to developments of low to medium density (30–50 dwellings per hectare). Where appropriate, these design principles have been reinterpreted in this Supplement so that they are applicable for more compact urban environments (above 50 dwellings per hectare). Further detailed guidance on design quality can be found in other publications and links to recommended references are included on the Essex Design Initiative website [www.the-edi.co.uk](http://www.the-edi.co.uk)

This Supplement introduces a change in the way we assess schemes for design quality. The previous emphasis upon the amenity of individual dwellings has been subjugated by an overwhelming requirement for environmental geniality and sustainability. The guidance introduces new



priorities for place-making that is now dependent upon creating more substantial, high quality spaces for communal enjoyment. Its purpose is to put the fabric in place to allow for a more sociable urban environment within the context of compact mixed communities.

**All residential and mixed-use development should be planned and designed by architects working alongside and collaborating with town planners, urban designers, landscape architects, ecologists, engineers, commercial surveyors, BREEAM assessors and the community.**

The process of collaborative design where these project teams engage with agencies and the community is a vital part of achieving quality. The least satisfactory developments occur when this approach is not followed.

## 5.2 Urban Grain

In most towns, the pattern of streets and paths (how people move between places) has evolved over a very long period of time. Even for newer urban areas in Essex that are perhaps as little as 50 years old, the layout of routes and public space and the disposition of uses was conceived for the convenience and accessibility of the pedestrian. Redevelopment and road-building has invariably altered this pattern to the point that some places are now severed from their surroundings with commercial and service uses placed away from where people live and the quality of public space compromised by the need to accommodate the car.

This has altered what once may have been a fine-grained pattern of streets and paths into a coarse-grained pattern (**Images 16–17**). Despite these changes, the urban grain is likely to be (and needs to be) finest near the centre of a town or neighbourhood. This is where the greatest intensity of movement occurs and is where the richest pattern of uses can usually be found. Away from the commercial heart of the town or neighbourhood the grain can be coarser, which reflects the less intense demands on movement and agglomeration.

It is vital that new, more compact development occurs in such a way that its introduction does not alter the fine urban grain of these central locations and in these areas new development should be designed to imitate the existing pattern. As a minimum, the main streets should be connected to their hinterland by side streets that occur at approximately 90m intervals. More frequent connections are often desirable and should be accommodated if at all possible. **(Image 18)**

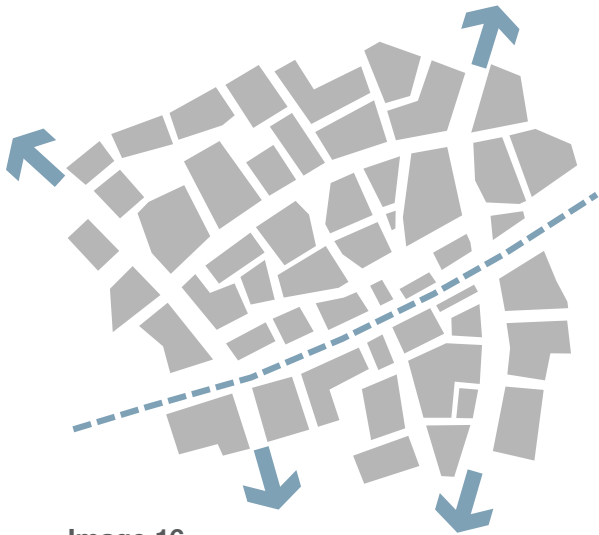
In those rare circumstances where a town centre or neighbourhood environment is coarse-grained (either by original design or because of alteration), new development that is built in accordance with the guidance within this Supplement will introduce a finer pattern that produces enhanced environmental sustainability.

An overriding objective will be to create patterns of movement to form a connected grid. This can have either a regular or a deformed shape but, importantly, each end of a street or path must be connected to others. Systems that lead nowhere else would not be appropriate.

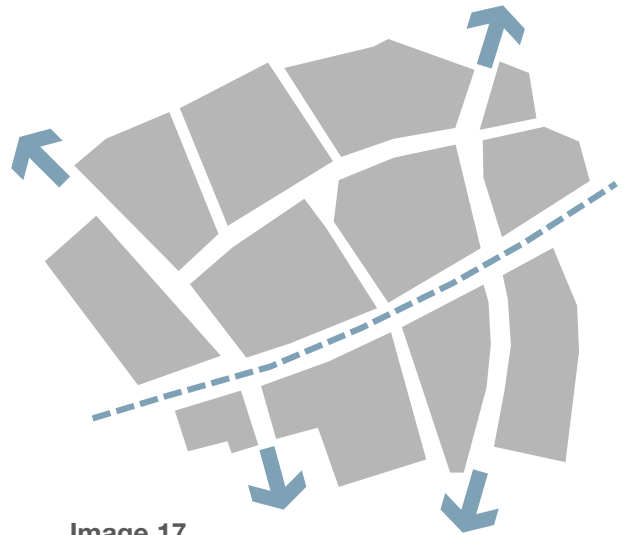
For large urban infill sites or sustainable urban extensions with an area of at least 50 hectares there is the opportunity to create a cohesive yet varied urban pattern across the new neighbourhood. It may be considered desirable, for instance, to develop a fine-grained orthogonal grid close to the centre and a less formal, deformed grid towards the edge. However, influences on the structure of the development may depend on factors such as the existing landscape character and site topography (see Essex Design Guide).

### 5.3 Movement

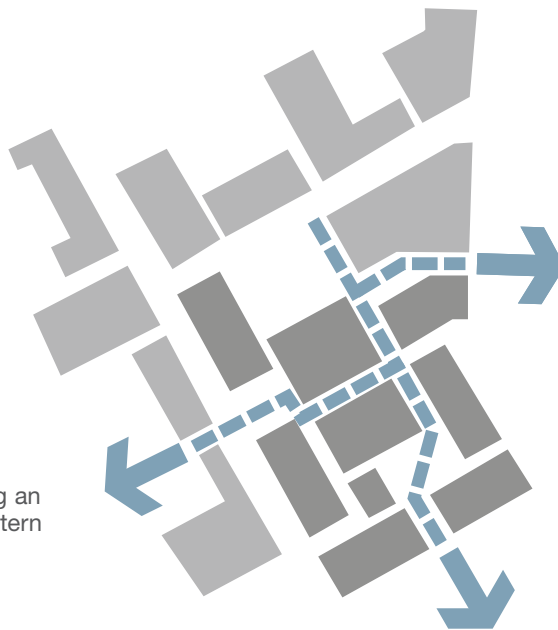
A well-connected urban environment which has convenient and integrated routes for pedestrians, cyclists, cars and public transport will be more able to support a range of viable travel options. The car is likely to be used less often if the journey to the local shops or school is direct, safe and attractive and the streets well maintained. Whilst dependent upon a range of supporting factors, it is desirable to design new developments in such a way that reduces demand for road space and realistically provides the community with alternative sustainable transport choices.



**Image 16**  
Fine-grain street pattern



**Image 17**  
Coarse-grain street pattern



**Image 18**  
New development extending an  
existing fine-grain street pattern

A close-knit pattern of connected urban streets and spaces produces a variety of benefits:

- Travel distance between origin and destination for local journeys is minimised
- It can encourage the establishment of fine grain mixed-use
- It can create a more sociable and safer public realm

An analysis of existing movement patterns and future development sites will determine approximate desire lines and will identify the potential to improve existing routes and to create new ones. A more rigorous prediction of traffic behaviour within the network arising from any development may be required by the Highway Authority who will make this requirement known at an early stage. Similarly, it is possible to accurately predict pedestrian behaviour using a spatial syntax model (see Glossary) making it possible to design the alignment and shape of the public realm to ensure maximum flows are captured along preferred routes.

Off-street footways must be designed to maximise personal safety with adequate lighting together with surveillance from surrounding buildings.

## 5.4 Mixed Uses

Urban development should, wherever feasible, enable mixed-use to take hold and to flourish if the circumstances are right. Much depends upon detailed design but location on a permeable and accessible street network and close proximity to a compact residential community is often critical.

Mixing uses can create a diversity of activity within the streets and contribute to the vitality and sustainability of towns and neighbourhoods by providing employment, leisure and cultural opportunities as well as services to the local area.

In applying this guidance there will be a presumption in favour of all development containing a mix of uses within the building and street blocks where that development is located either close to existing services and facilities or on a public transport corridor (see Mixed-Use street type page 64).

The extent and range of uses will depend on the needs and demands identified in the Context Appraisal together with local planning authority regeneration strategies or employment policies. In this regard, the Context Appraisal will add local detail to these policies and identify the opportunities for bringing about new employment, community space and service infrastructure.



**Image 19**  
Mixed-use  
development in  
Colchester

Notwithstanding the above, on sites within 800 metres of large town centres or 400 metres of neighbourhood centres/small town centres, at least 50% of the ground floor frontage of development facing Major Streets should be allocated for non-residential uses other than vehicle parking (see Glossary for definition of Major Streets).

The type of uses and block design will need careful consideration to minimise the possibility of conflict between uses with access arrangements, noise generation and safety issues satisfactorily addressed (see pages 96–100).

**All new development fronting a Major Street within a Town centre, a Neighbourhood, a Large Urban Infill or a Sustainable Urban Extension should comprise a mixture of uses that are identified by the Context Appraisal as desirable and viable. Elsewhere, the degree to which a location can support non-residential uses will be informed solely by the outcome of the Context Appraisal and its proximity to a Major Street.**

## 5.5 Public Space

The success and popularity of urban environments rely strongly upon the design and quality of public space. Nowhere is the quality of the living environment more important than in our urban areas. It is here that the competition for space is fiercest and the density of population and their demands, the greatest. In addition to the technical requirements on the space that enable the urban area to function, we also require public space to be attractive, safe and well-maintained. Achieving this requires considerable resources and co-ordination and the best places are a demonstration of commitment and civic pride. Streets, parks and squares and the relationship of buildings to these dictate the overwhelming character and identity of places – much more than the architecture and detailing of the built form. The best urban places occur when public space is attractive, inviting, safe and well-maintained. Such space makes provision for the complex needs of the residential and business community and provides a satisfactory balance between competing interests. A new requirement in this guidance is that public space should also be designed to accommodate biodiversity (see page 146).

It is therefore important to move away from considering this matrix of space as separate functional areas and, instead, think of the public realm as one shared environment. This necessitates a change in the way these places are designed and built.

Accessible Natural Greenspace Standards (ANGSt) have been devised by English Nature (now Natural England) as a means of providing benchmarks for assessing the provision of places where people can experience and enjoy nature. Accessibility to natural green space can make an important contribution to the quality of life in an urban area and the ANGSt targets help to determine this accessibility (see [www.naturalengland.org.uk](http://www.naturalengland.org.uk)).

Invariably, the public space network and the movement and activities it enables also connect with the surroundings to be part of a wider urban system that collectively shapes the sustainability of the town. Understanding these local and global spatial and operational relationships is essential and the Context Appraisal methodology is a convenient platform from which to discuss the needs and opportunities for good collaborative design. Evidence that this has occurred should be submitted with any planning application for site development.

### **Components of urban public space**

**Streets** – the space enclosed by the fronts of buildings comprising highway space, meeting space, commercial space, utility and recycling infrastructure, play space and green routes.

**Paths** – neither streets nor footways; not often incorporated in new designs but can be vital in linking streets, squares and other places.

**Squares** – visually static spaces suitable for sitting and socialising.

**Pocket Parks** – small spaces within the urban block structure.

**Recreation Grounds** – usually a legacy of earlier open-space planning; provision made for sport.

**Open Space** – for socialising, informal play, nature, landscaping, informal recreation, water management, cultural activities and entertainment.

**Parks** – formal landscape but possibly with open spaces and sports facilities. Provision for a variety of functions, depending on size.

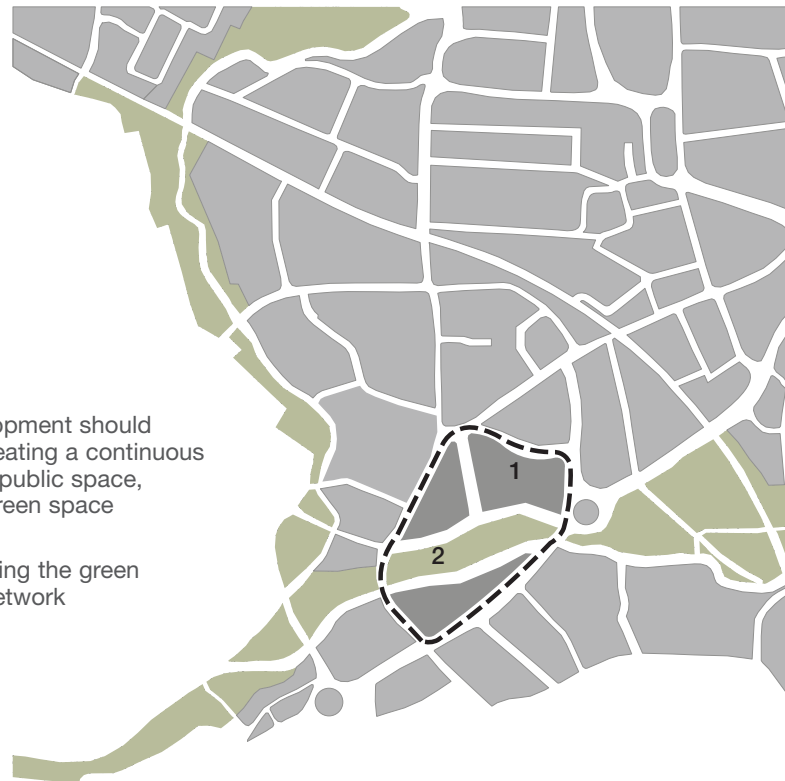
**Waterfront** – may host any of the above.

The Context Appraisal process makes it unnecessary to require an arbitrary amount of green space for every home or for every development, as planning policies requiring this rarely take into account the extent of existing green space already serving an area (see ANGSt targets). The result can be an ‘oversupply’ of green areas that are underused and which place pressure on the already overstretched ground maintenance budgets of local authorities. The requirement therefore is to provide green space that meets the needs of the new community and, if necessary, contributes to the improvement of the surrounding facilities.

So, if there is ample green space already within the vicinity of the site, the expectation would be that no additional provision need necessarily be made. However, where green space is provided it must be of a very high quality and should be:

- Part of a wider network, connected internally and to its surroundings
- Overlooked by building frontages
- Well-maintained and appropriately managed (see page 95)
- Accessible to all
- Ecologically diverse
- Of varied character and functionality to meet identified needs

Every development is expected to make a positive contribution to the public space system through the provision of quality streets, green space or both, tested against the criteria on the previous page. Green Space Strategies produced by local authorities will provide information on the wider green space provision and needs within an administrative area. However, the strategies are unlikely to include all public space such as urban squares and landscaped streets, and, therefore all urban developments should consider how the public space network at the very small scale could link up with the public space network at the more strategic scale – from doorstep to countryside.



### Image 20

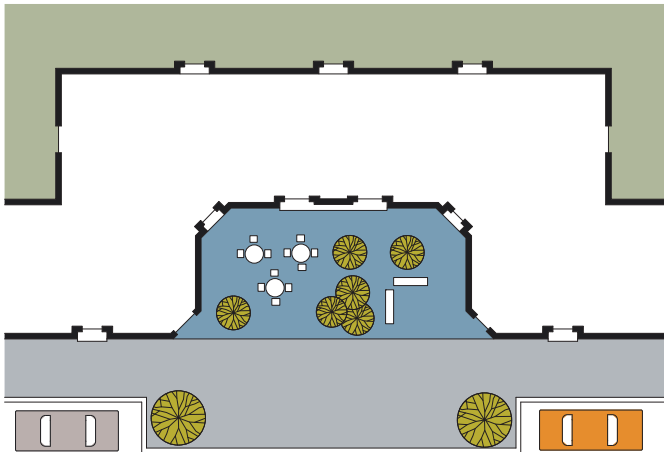
New development should assist in creating a continuous network of public space, including green space

1. Site
2. Connecting the green space network

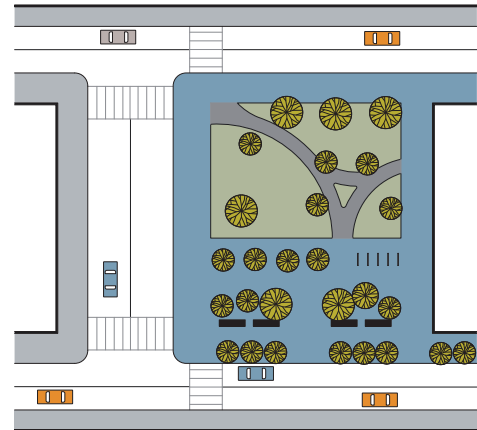


The local public space system should be mapped at a neighbourhood level within the Context Appraisal. In discussion with the local authority, the need for additional green space, its type and location, can be set against the baseline green assets previously identified. Every urban development should provide or contribute to public space and biodiversity and most will incorporate green space as well, linked as well as possible to the surrounding system.

Pocket parks, for instance, can be very small spaces knitted into the built fabric of a town, that provide places for sitting and socialising. They are usually too small for ball games but may include public art installations and may be predominantly hard-paved. Small areas of grass can be difficult to maintain and should therefore be avoided but, where appropriate, carefully chosen native planting should be used instead. The maintenance and adoption of pocket parks needs to be established and agreed with all relevant stakeholders.



**Image 21**  
Example of a pocket park



**Image 22**  
Square



**Image 23**  
Pedestrian link connecting a network of green spaces, Vauban, Freiburg, Germany



**Image 24**

Pocket park in  
Montpellier, France

The quality of public space relies on a number of factors including:

- Scale
- Enclosure
- Materials
- Detailing
- Continuity
- Security and safety
- Workmanship
- Street trees
- Microclimate
- Adoption and construction standards
- Public art

It is important to recognise that quality can only be achieved by adopting the same co-ordinated approach to design and detailing within the public realm as that required for the design of the enclosing buildings. All public space should be designed to be accessible: schemes should not provide segregated provision for less mobile members of the community. **(Image 25)**

Designing new spaces within a development provides a special opportunity to combine a consideration of these elements with a close attention to detail. The Essex Design Guide offers some advice on how this can be done but is supplemented here with additional notes that are of particular relevance to a more urban environment.

This supplement introduces two new road types for Essex (see page 64). The designs of these have been developed to take account of the specific needs of an environment where a variety of scales of space are necessary to accommodate a more demanding set of urban performance criteria. The Mixed-Use Street allows for parking, servicing and landscaping for those places at the heart of a neighbourhood or a large development where residential, commercial and service uses interface. The Play Street introduces the possibility of creating very safe and neighbourly spaces that are a step or two away from the main traffic routes within the spatial system and where homes are the principal land use.



**Image 25**

Wheelchair and pushchair ramp incorporated with steps, Paddington Basin, London



**Image 26**

Intimate urban environment with street trees

### *Scale*

Understanding the power of scale within an urban context is vital. It can be used to create a sense of drama or visual intimacy or it can reflect the functional or symbolic importance of a place. It can be almost imperceptible or it can be striking and it is these contrasts that help to define the character of a town.

Generally, the scale of a space ought to reflect its importance in relation to the town as a whole. Large-scale enclosed spaces must have a substantial civic meaning for them to make sense and it is unlikely that many towns in Essex will have more than one in its centre. More common, is the hierarchy of smaller-scale spaces that make up the spatial system but, even here, the same rule on symbolic importance applies. A mixed-use street, for example, needs to be wider and scaled to its functional commercial role. The space is scaled to accommodate a greater robustness for user demands as are the enclosing buildings. **(Image 27)**



**Image 27**  
Large-scale commercial street



**Image 28**  
Small-scale residential street

Conversely, the scale of residential streets ought to mirror their place, within the hierarchy, on the spatial system (**Image 28**). However, it is important to ensure that these spaces are able to function without undue inconvenience or conflict arising between users; such as enabling convenient access by service vehicles.

### *Enclosure*

The pedestrian-scaled environment described in the Essex Design Guide relies upon achieving, in part, a degree of spatial enclosure that feels comfortable. The Essex Design Guide suggests that it is ideal for the width of a space to be equal to or less than the height of the enclosing buildings. In practice, this is difficult to achieve for lower density development but is relatively straightforward as density and building heights increase. Higher density therefore offers the potential to design spaces that are more dynamic and visually captivating than in the suburbs.

The enclosure and width of spaces will, of course, vary according to function and the proposals in this guidance for new street types (see page 64) and car parking (see page 80) provide the designer with a great deal of flexibility. For instance, it is possible to combine a 14m wide street (measured between building frontages) with on-street parking, a 6m wide carriageway and 2.5m wide pavements to each side. The height-to-width relationship in this situation for a street containing 4 storey buildings would be approximately 1:1.

Very narrow pedestrian spaces that link more important routes could add particular drama to the urban environment but the design of these will need to take account of fire engine accessibility.

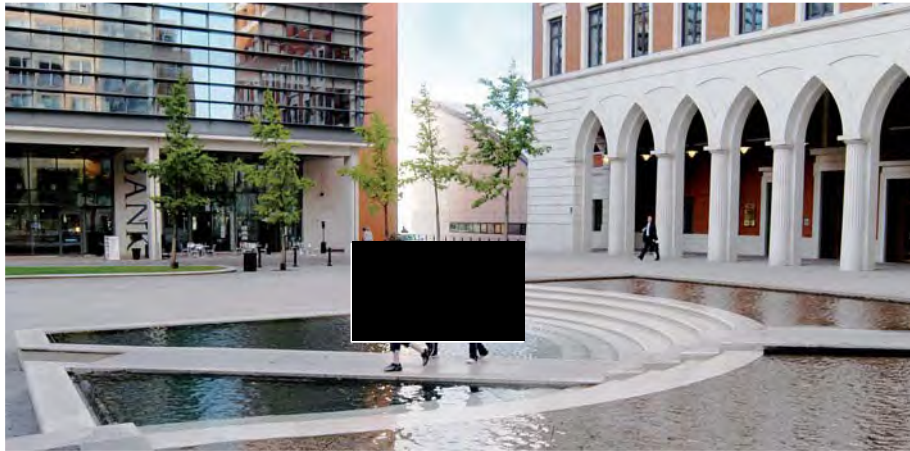
### *Materials*

As a general rule the quality of the design of public space is more important than the quality of the materials used. A well-designed scheme would not necessarily be compromised by the employment of simple, inexpensive materials but a poor scheme would not be lifted by the use of expensive ones. It is therefore more cost-effective to engage competent design teams for public space than to rely upon the specification of elaborate paving.

Hard landscaping materials need to be aesthetically pleasing, structurally robust, have good weathering characteristics and only require simple maintenance. These materials need to be imaginatively applied to make places attractive, and detailed so that the surfaces are not easily damaged. It is therefore essential that, within footways, surface materials and their method of laying need to be assessed for their suitability for occasional vehicle traffic and, in most cases, footways will need to be designed to resist axle loads of commercial servicing vehicles (approx. 8200 kg = 1 standard axle). Different surface materials can be used to subdivide large areas of hard surfacing to create different spatial effects and define routes or areas of different use. However, incidental changes in material or colour to identify land ownership or responsibility for maintenance will not be acceptable.

Generally, the highest quality materials, such as granite setts and yorkstone paving, should be reserved for those locations of special significance. For instance, urban or neighbourhood centres and squares which are designed to attract people in numbers should 'show-off' their civic importance through the use of more expensive materials. Elsewhere, a limited and subtle palette of materials, sizes, shades and textures should be used to act

as a backdrop to street activity and architecture. The Highway Authority needs to be consulted and approve all matters relating to existing and proposed highways, including materials. Commuted sums will be sought for the use of materials that require more costly maintenance.



**Image 29**

High-quality materials and design mark important public spaces

### *Detailing*

The quality of the public realm can be seriously let down by poor attention to detailing. Where this occurs it is invariably because there has been a failure to apply some of the prerequisites of good design such as working in close collaboration with other design disciplines and utility companies. It can also be down to inadequate on-site supervision of contractors.

It is preferable to consider potential aspects of detail as an integral part of public space design which will include:

- Junctions between materials, kerbs and crossings and changes in direction of paving
- Location and orientation of manhole and access covers
- Columns, poles and ground fixings and the design of paving around them

- Integration and pattern of tactile paving
- Tree pits, root barriers and irrigation
- Combining and grouping of signs and street furniture
- Location and design of drainage gullies and grilles, where technically possible
- Design of falls
- Road markings
- Paving texture

Underground ducting for utilities and services should be incorporated into new highway construction wherever possible especially where non-standard materials are used. Ducting has many long term benefits including reduced maintenance costs and helping to increase the longevity of the highway. Ducting is best applied to new developments as and when services are branched off the main utility supply line. Regardless of whether ducting is used or not, all utilities should be located either under shared service strips or the footway but never in the carriageway.



**Image 30**  
Junction demarcation with street trees. Note the continuous footway across the junction; Copenhagen



**Image 31**  
Quality materials and design help to create pedestrian-friendly environments

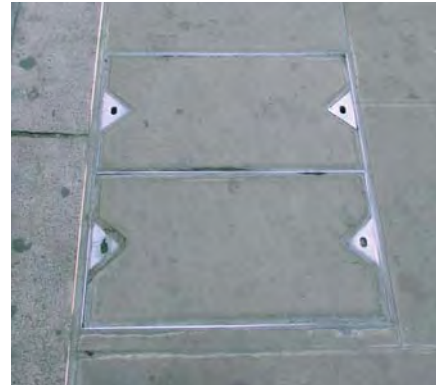


Routes for services should be planned early in the design stage so that manholes and access cover locations can be co-ordinated with surface finishes and aligned with block paving. Where alignment is not possible round covers should be used.



**Image 32**

Poor finishing: concrete-filled recessed manhole covers



**Image 33**

Careful construction: cut paving fills recessed covers; an alternative may be to use cast iron where agreed as being appropriate

Where legal adoption or ownership boundaries need to be marked on the ground the preferred option is the use of small metal studs. These studs can be of any non-ferrous metal fixed at 1m centres secured firmly to the surrounding hard surface (**Image 43** illustrates what to avoid).

The maintenance of these boundary indicators will be the responsibility of the developer, landowner or management company. The paving material should always be continuous between building or garden front and the road kerb.

The preferred method of introducing tactile paving for the visually-impaired in areas of footway is a blistered surface that replicates the surrounding paving material, laying pattern and colour – avoiding random, patchwork footways (as **Image 39**). Alternatively, milled granite studs can be incorporated into the paving.



Image 34



Image 35



Image 36



Image 37



Image 38



Image 39



Image 40



Image 41



Image 42

- 34. Carefully detailed ground fixings
- 35. Heritage paving
- 36. Crude utility meter casing on footway
- 37. Benches and other street furniture designed into the scheme
- 38. Trees can have a high impact in the street
- 39. Pre-cast concrete blister units create patchwork footways
- 40. Thoughtful detailing helps to integrate existing features
- 41. Custom-designed street furniture could include artist commissions
- 42. Edge detail



**Image 43**

What not to do:  
Plot demarcation by ignoring the existing footway creates a disjointed public realm

### *Continuity*

It is important that on large development projects brought forward by a number of different developers or in regeneration areas where the entire network is to be upgraded, the design of streets and the choice of materials are consistent and logical across the whole of the area. In these circumstances it is essential for there to be continuity in design and the use of materials. A level of consistency could be achieved by adopting design codes for the public realm developed in conjunction with an area master plan. Special consideration should be given to the transition between a new area of public realm and the existing public space network.

## *Workmanship*

Good workmanship begins with good design and to be effective it must be carried through all stages of a project; that is, the specification, detailing, implementation, site supervision and in the maintenance regime. Also, it must be supported by the allocation of adequate resources such as skilled labour, time and funding. The care and commitment of all contractors in achieving the highest standards are essential and will ultimately reduce future construction failures and drive down maintenance costs.

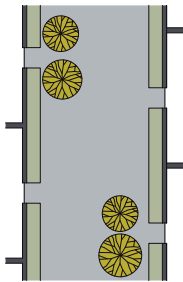
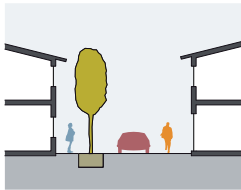
## *Street trees*

Trees have an important role in the sustainability of our towns. Species that are appropriate for their location, well planted and maintained can deliver many benefits including shelter, improved air quality, support for wildlife, climate moderation and reduced risk of flooding. They also have the effect of softening and humanising what would otherwise be a hard urban environment.

Choosing the right tree is vital, and a list has been compiled in conjunction with this guidance to suggest trees suitable for specific locations (see Essex Design Guide). These species are generally better suited to the sometimes difficult conditions found within urban areas whilst also requiring the minimum of maintenance. The list is not exhaustive and other appropriate species could be considered. Where services are close to street trees, a suitable root barrier should be provided, such as root deflectors, to protect against damage to services, cables and pipes.

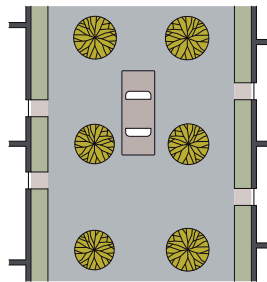
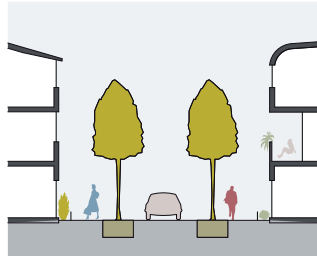
Root barriers are constructed before planting and can incorporate single trees or protect entire tree-lined streets. For established streets, creating root barriers around each tree is often the best solution whereas for new roads and footways a long straight barrier between the planted zone and services is preferred.

Tree planting should be undertaken by appropriately qualified contractors who understand the technical requirements of pit size, irrigation and staking. The design of tree guards, grilles/porous gravel should be compatible with the chosen design theme of the space as a whole and submitted for planning permission as part of the public space proposals for any development.



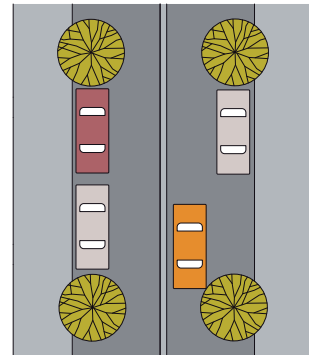
8m

Image 44



11m

Image 45



16m

Image 46

- 44. Play Street: informal tree planting to guide and slow down vehicles
- 45. Narrow street: trees to zone the space
- 46. Mixed-Use Street/wide street: trees between street parking bays

### *Microclimate*

The microclimate refers to the climate of a site or specific location that deviates from the normal regional climate. Significant climatic differences can exist between two adjacent areas and small scale variations are the result of local influences that include topography, urban development, water bodies and vegetation.

Architects should take advantage of favourable microclimate characteristics while mitigating any adverse climatic features. Improvements to poor microclimates can be made by the use of vegetation and areas of open water. These features can be used to encourage urban cooling, and to create wind breaks and summer shade. Generally, development proposals need to be designed to enhance local microclimate and planning applications should be able to demonstrate how this is to be achieved. However, in designing for enhanced micro-climatic conditions, regard should be given to the effect these features will have upon the performance of renewable energy infrastructure planned for the site.



**Image 47**

Trees can be used to provide shade from the sun and shelter from the wind, Montpellier, France

### *Adoption and construction standards*

For a long time the public realm has been regarded as the responsibility of local authorities.

However, this need not be so and there are an increasing number of examples where special arrangements have been made to entrust the care of the urban environment to special-purpose companies, associations and communities. These can have the benefit of being owned or controlled by the users of an area, allowing area management to be more responsive to local expectations.

These arrangements are to be encouraged and within Essex it will no longer be assumed that highways will be adopted and public space maintained by the local Highway Authority. Whatever arrangement is agreed, public access within the public domain will be an unalterable principle. Gated communities and restricted access to public space at any time will not be contemplated. See *Secured by Design* ( [REDACTED] ).

Adoption, management and maintenance should be discussed with the Highway Authority at an early stage in the design process so that:

- Design specifications for street works can be agreed (see Street Types page 63).
- Car parking and commercial vehicle access management arrangements are understood which may necessitate the implementation of a strategy that extends beyond the site itself. Developers will be required to fund any additional controls in the wider environment that are thought to be necessary as a consequence of the development.

Construction standards would need to conform to those required for adoption even if it were decided to dedicate the street as a public highway without adopting it for maintenance purposes. In this case it would have the status of a private street and an advanced payment code would be required or an exemption issued.

If the Highway Authority wished to adopt a Play Street it is likely that the adopted area would coincide with the vehicle running lane only, leaving elements within the street which are the maintenance responsibility of another organisation or company. The demarcation of responsibility should be clearly and legally defined and any demarcation on the ground should be through the use of metal studs. Further guidance on management and maintenance is provided on page 95.

## Public art

The pursuit of beauty and sensory stimulation within public space requires, amongst other things, the pursuit of public art. Artists are among a number of professionals whose skills can be brought to bear on improving the visual and cultural richness of the environment through a wide variety of measures including structural fabric and infrastructure design, landscape and environment management, education and community development.



Image 48

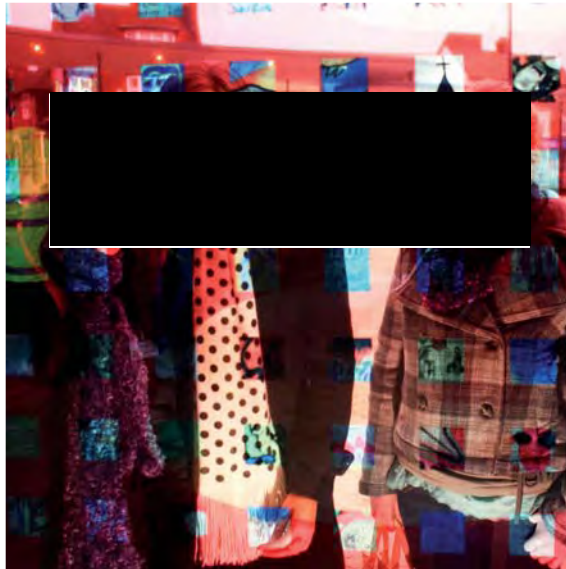


Image 49



Image 50

48. Entrance to Liverpool Theatre, photograph by Len Grant
49. Glass artwork at Chelmsford bus station
50. Illuminated entrance feature at Chelmsford Park and Ride



The benefits public art brings include:

- Making a development distinctive and unique
- Increasing development and land values
- Positive press and media coverage
- Developing good relationships with local communities
- Improving the environment for staff, tenants, owners and visitors

All initiatives in the built environment will benefit from the skills and approach of an artist. These include the identification of local context and opportunities, community collaboration, site appraisals and contributing to design teams, masterplans and other development partnerships.

It is strongly recommended that every development project on sites over 0.1 ha or involving the construction of at least 10 dwellings includes the use of artists and artworks. It is recommended that up to 1% of the total development cost (including fees but excluding the cost of borrowing) is allocated for art.

To be most effective, artists should be engaged at an early stage in shaping any proposition for development and certainly in advance of the submission of a planning application. If necessary, the advice of the local authority or Essex County Council should be sought on the process of employing public artists.

## 5.6 Street Types

Streets are the principal components of the urban spatial system. They can be much more than just corridors for movement. They need also to be places where people feel comfortable and safe and enjoy urban living. Demands on their design are complex but not many have received adequate attention beyond the pure functionality of transport and infrastructure.

They should be places that encourage people to be outside. The best streets are designed for public encounter and for business and offer urban users options for recreation, socialising in a pavement café or square or simply for watching other people.

To assist the achievement of a more sustainable and vital public realm, where some or all of these qualities could take root, two new street types have been added to the Essex County Council approved Road Types:

- The Mixed-Use Street
- The Play Street

### *Mixed-Use Street*

This street type (**Image 53**) links neighbourhoods in urban areas where commercial or retail use may be mixed with residential and where access may be required for service vehicles over 7.5t to load and unload. This road type may also serve as a local bus route. They are designed to be the major street within any urban or neighbourhood centre but can also be used where a development is intended to attract a variety of uses that require more spacious servicing and access arrangements.

The best quality surface materials are reserved for this street. Variations on the standard street type are possible although differences will need to be discussed with the local Highway Authority.



**Image 51**

Retail activity extending into the public realm



Image 52

Successful mixed-use street,  
Hennef, Germany

Built frontage will be required along the back of the footway but occasional set-backs are permitted where these create small spaces for sitting out.

Overall the carriageway should be at least 7.5m wide, which would comprise a 0.5m over-runnable central reservation with 3.0m wide running lanes each side and a margin of 0.5m width between the running lanes and the footway or parking bays. A footway at least 3.0m wide is suggested each side of the carriageway, separated from it by a zone of 2.0m wide which should accommodate short stay car parking lay-bys, bicycle parking or local widening of the footway. Street trees, lighting columns, parking ticket machines and bus shelters can be incorporated within this zone as integrated features of the street design, taking sight line constraints into consideration.

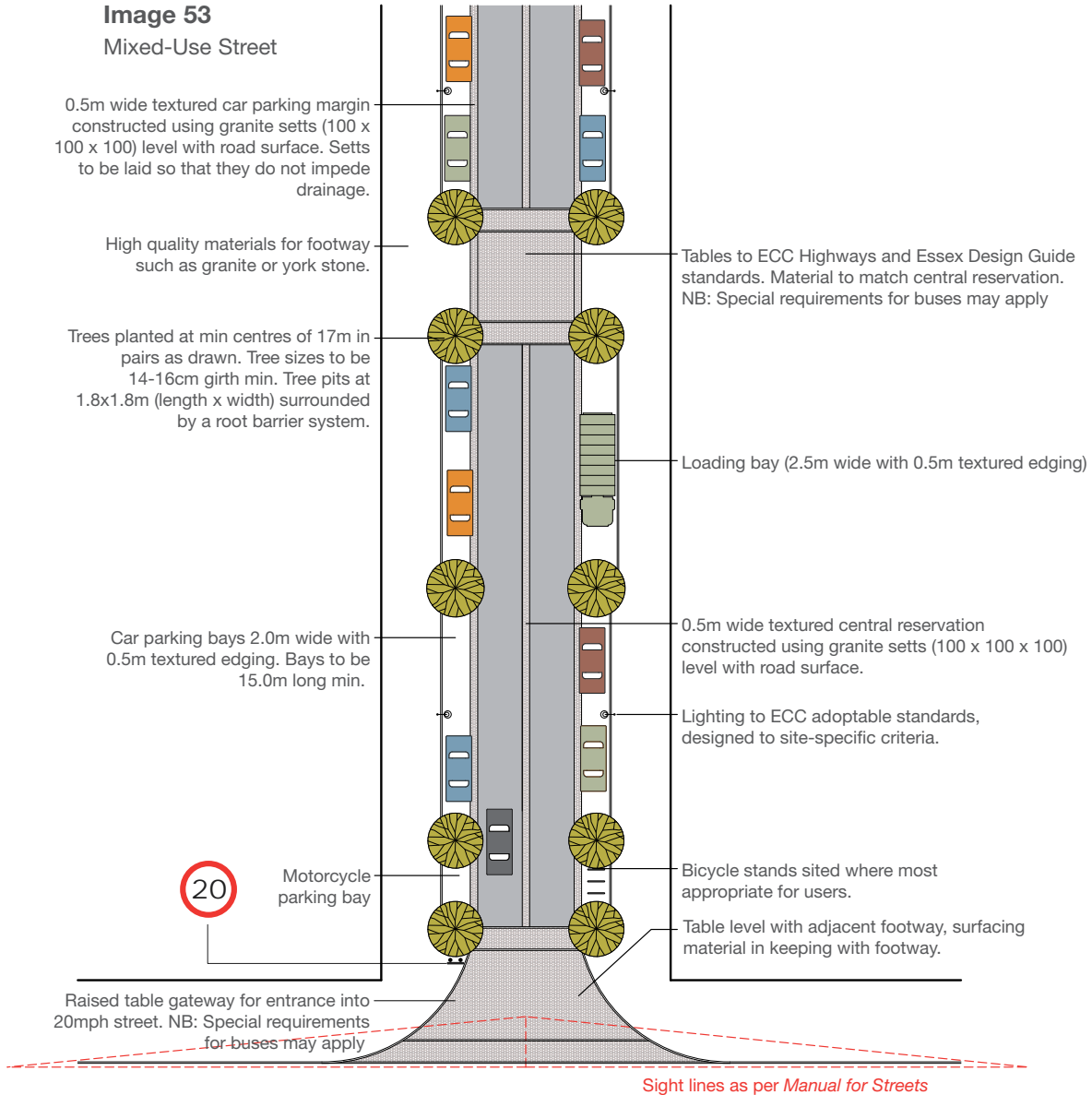
Goods and loading provision must be considered at the design stage of any proposal to ensure that it is dealt with in the most satisfactory way. To accommodate delivery vehicles, lay-bys for unloading will need to be 2.5m wide which will have the effect of localised narrowing of the footway. Small delivery vehicles may service units from these on-street loading bays providing that they do not restrict traffic flow. Development proposals should consider the operational requirements of mixed-use units that front the street and issues relating to deliveries must be discussed and agreed with the Highway Authority.

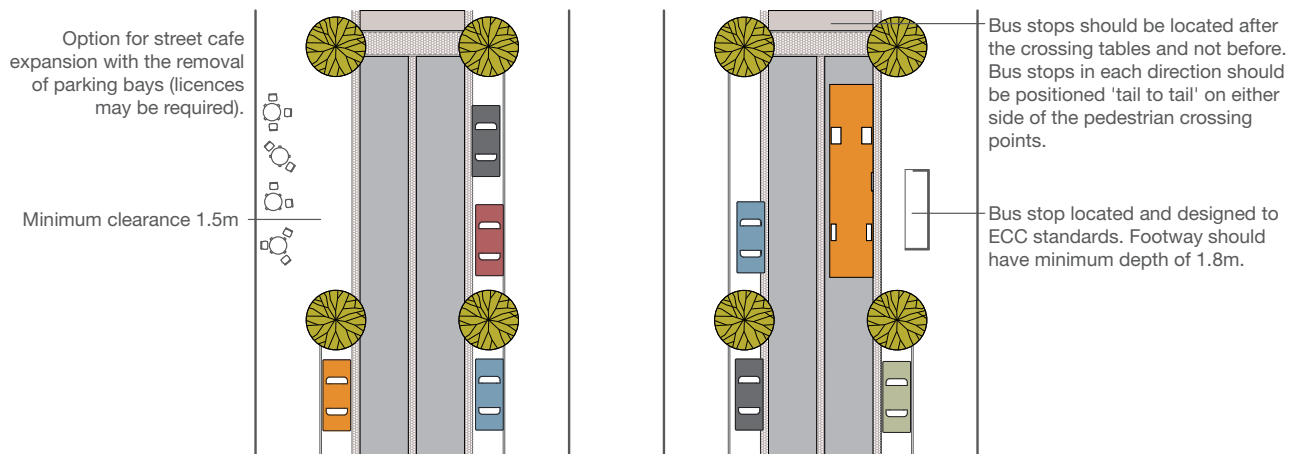
Rows of street trees should generally be spaced at 17m centres, which would allow parking bays for two cars or one short loading bay between them. Trees should be set back a minimum of 1.0m from the kerb line of the carriageway.

These streets should be designed to regulate the speed of traffic to 30 kph (20 mph) or less. This should be achieved by raised tables at street junctions. Road humps should not be used. Speed restraint measures are required to be located at least every 60m along the street. As it is desirable that side street junctions will occur approximately every 100m, an interim speed restraint measure will be required between these junctions.

This road type may take access from an existing County Road, either Type 1 or Type 2. Junctions require a minimum kerb radius of 10.5m. The minimum length of Mixed-Use Street from the junction required to be straight is 22m from the channel of the main road. Sight lines should be as recommended in *Manual for Streets* Department for Transport (2007).

**Image 53**  
Mixed-Use Street





**Image 54**

On-street café and bus stop options for the mixed-use street

### *Play Street*

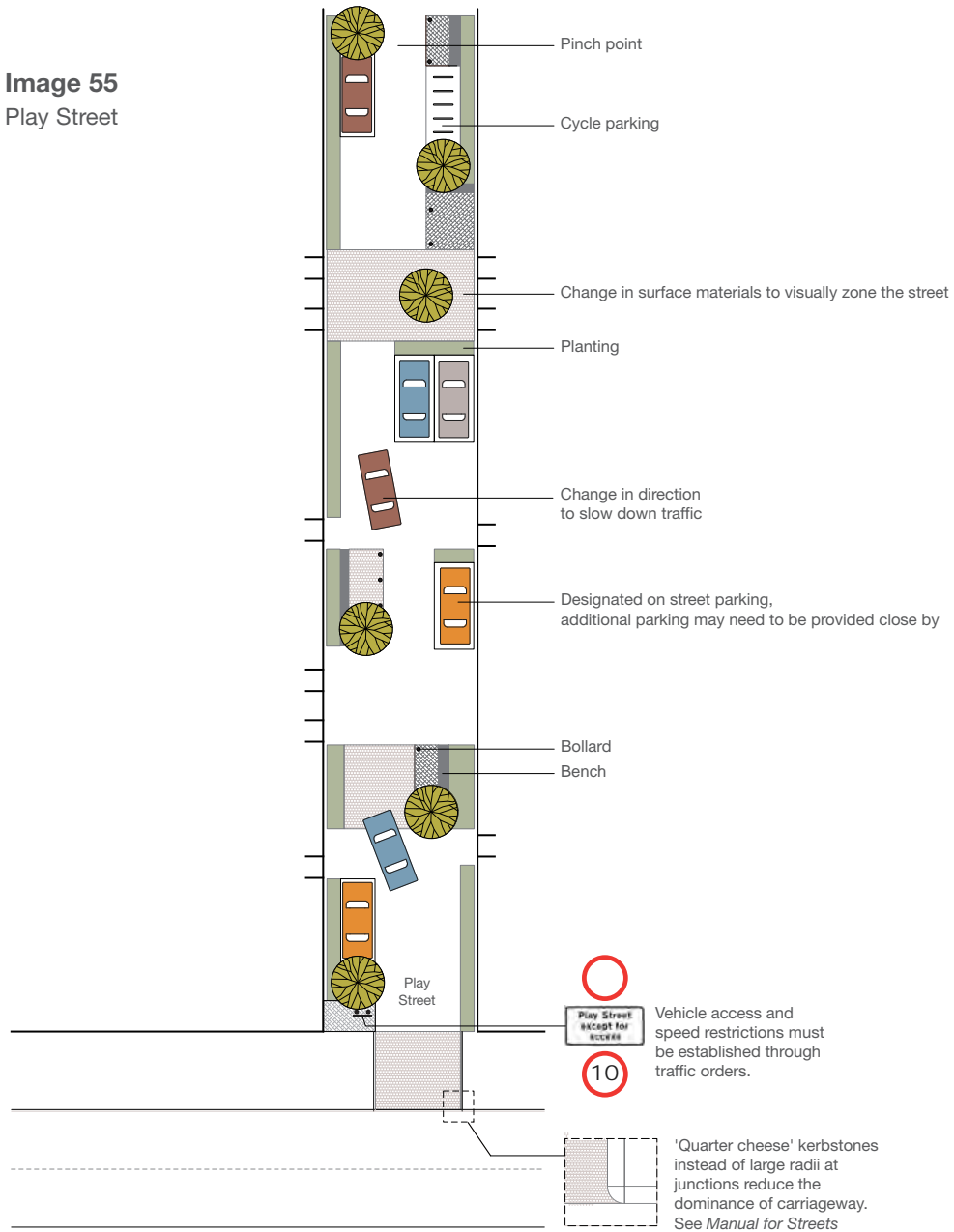
These are residential streets in which the road space can be used as a playground for children (**Image 55**). Play Streets are appropriate in all types of residential areas and for all dwelling types including apartments. They can be used in a mixed-use environment provided that the servicing needs of non-residential uses are met without compromising the design and functional performance of the street.

Play Streets are covered under Section 29 of the Road Traffic Regulations Act 1984. Vehicle access and speeds can be restricted through traffic orders, either at all times or on particular days or particular times of the day.

Although through-traffic should be discouraged, the permeability and connectivity of street layouts should be maintained for pedestrians, cyclists and, where feasible, local traffic. The layout of the Play Street should contribute to keeping vehicle speeds low, by physical means such as alignment, public art, play equipment, cycle stands and bollards.

Trees and planters should be part of a fully integrated design. These features should not be located so as to cause vehicles to pass closer than 1.0m to buildings which front directly onto the street. Vehicles should not have to travel more than 400m along these streets before entering a street with a higher vehicle speed. This distance should be measured from any point along the length of a Play Street.

**Image 55**  
Play Street



It is possible that the opportunity may be taken to retro-fit a Play Street into an existing urban area that lies adjacent to a development site. In these circumstances the existing community should be involved in the initial decision, the design of the project and its implementation and to obtain the necessary commitments for future maintenance and management.

In new developments, prospective residents should be made aware that they are moving into an environment that is designed to turn the street into an active communal space and that users share the whole road space on equal terms. **(Image 56)**

The engineering approach for a Play Street is to make the space available for traffic sufficiently constrained for vehicle speeds to be kept very low whilst still allowing access for essential service vehicles. The path a vehicle takes to pass through these areas should not be marked out on the ground but a clear, 'tracked path' needs to be between 3.1m and 4.8m wide. Some sections of up to 15m in length can be narrowed to 2.5m for one-way 'shuttle' use but these pinch points cannot occur more frequently than every 50m along any street. Culs-de-sac and one way streets are not encouraged and should only be used when no alternative arrangement is possible.

When vehicles enter a Play Street, entry features such as road texture/colour changes or 'gateway' structures will immediately make drivers aware that they have entered a space where children play. Entry and exit signs, which have been developed by the Department for Transport for Play Streets, must be used.

In locations where it is considered necessary to maintain visibility, a stopping sight distance of 12m should be applied. Longer views will encourage drivers to increase their speeds and should be avoided where possible.

Sight lines at junctions with other Play Streets need to have an X distance of 2.4m and a Y distance of 9.0m. Traffic priority should not be indicated at junctions between Play Streets. For junctions with 20 mph roads the X and Y distances should be as recommended in *Manual for Streets*.





Image 56  
Play Street

*Art by [Signature]*

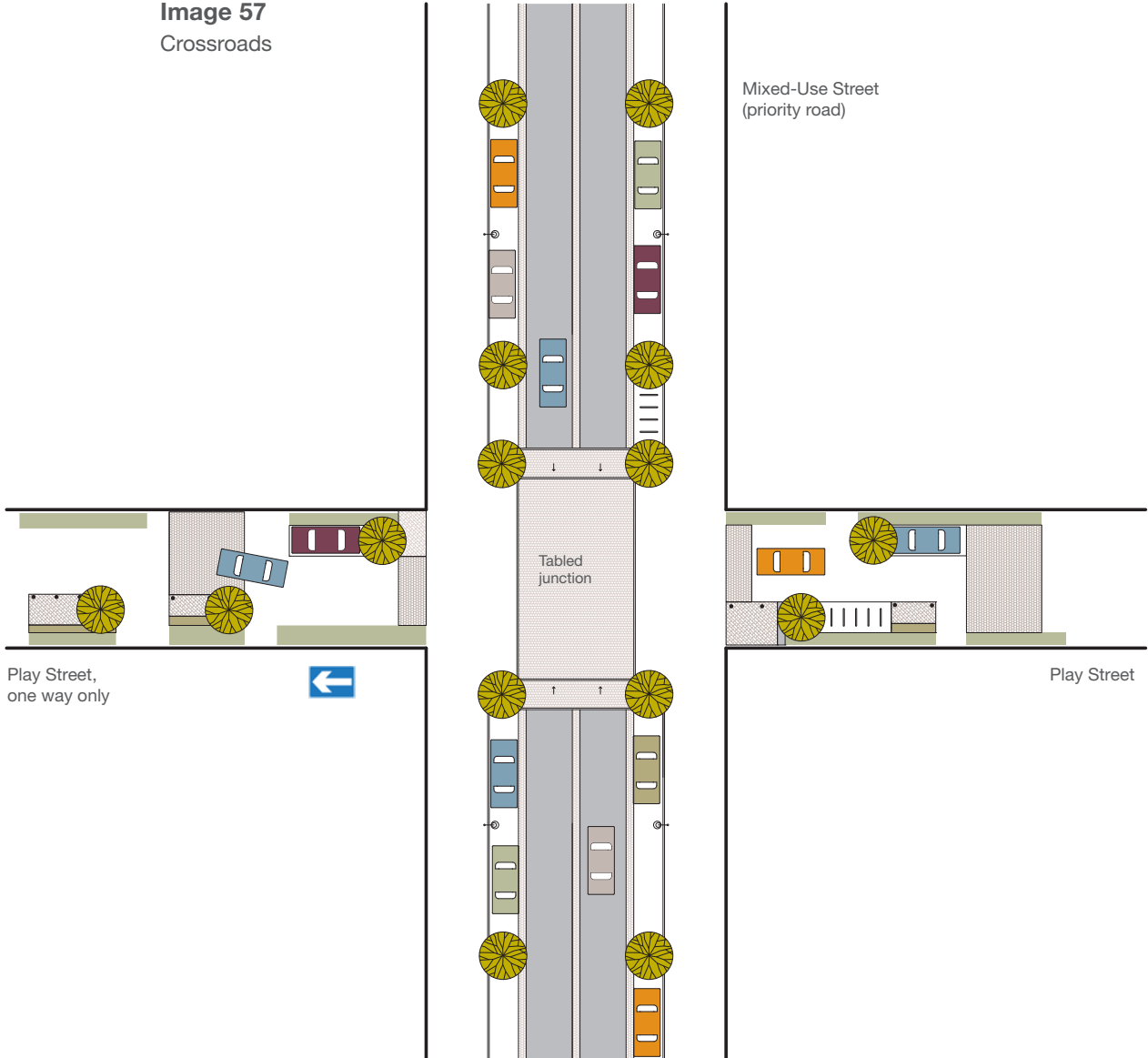
## Crossroads

Crossroads generally contribute to the permeability of the urban environment and allow pedestrians to follow their desire lines. Therefore they help to facilitate pedestrian movement. However, the design of a crossroad needs to ensure that user conflicts at the junction are avoided.

The example shows the junction of a Mixed-Use Street and a Play Street where vehicle conflicts are minimised by defining a priority road and restricting turns. Visual cues, such as different road widths, reinforce the road hierarchy. Speed is limited to 20 mph on the Mixed-Use Street and 10 mph on the Play Street and the tabled junction helps to slow drivers down. Turning movements are restricted by requiring one arm of the Play Street to be one-way only, away from the crossroads.

Further guidance is available in *Manual for Streets*. The site-specific design should be agreed with the Highway Authority.

**Image 57**  
Crossroads



## 5.7 Private Space

More compact development necessitates a change in emphasis from the provision of private amenity space to the provision of public space. Schemes within sustainable locations will look different from those beyond. One feature will be the very small number of houses with private gardens, if a scheme has any at all. Another feature will be the quality and security of communal amenity spaces and the greenness of the public realm.

Every home shall have the benefit of some individual private or communal private amenity space. Homes in larger developments will also benefit from access to a generous provision of public space that has been designed to meet the needs of a wide range of people. This guidance applies to homes of all tenures.

Private space can be provided in a variety of ways:

- Private gardens
- Communal gardens
- Roof terraces
- Balconies

**Image 58**

Walled private garden,  
Accordia, Cambridge



## Houses

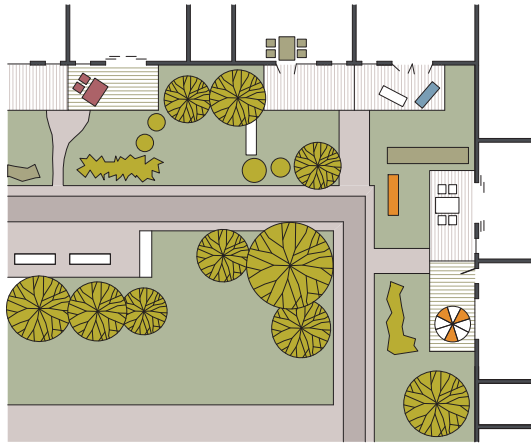
As densities rise in urban areas, fewer private gardens can be accommodated without compromising the quality and quantity of the public and communal environment. Within compact urban developments there are two options for designers.

Firstly, houses can be provided without private gardens but with direct access to high quality, private communal space from the rear. **(Image 59)**

Alternatively, houses could have very small private gardens or yards. At densities above 50 dph a garden size of about 40 sq m for a limited number of houses is possible without unduly compromising the quality of the public and communal environment. Unlike previous guidance, this supplement does not set out a range of minimum garden sizes that escalates with the provision of bedrooms. It allows for the possibility of small, walled outside yards of around 25 sq m. These private enclosed gardens would benefit from being fully designed and landscaped prior to sale/letting so that what space exists can be exploited to the full. Private gardens larger than 40 sq m may be possible where these make use of awkward site shapes and where there are privacy issues with existing development. Elsewhere however, larger gardens should be avoided.

**At densities above 50 dph an outside space of at least 25 sq m would be expected for all homes. This should primarily be provided as shared communal gardens.**

Some local authorities may have different standards and applicants should consult the relevant District Council for details of specific policies.



**Image 59**  
Communal courtyard space



**Image 60**  
Private space, facing communal courtyard

### *Apartments*

Apartments or maisonettes will comprise the larger part of any higher density development. Their tenure, size and configuration will depend upon market demand and housing need surveys undertaken as part of the Context Appraisal but all will share communal private space.

Poorly-designed areas of grass to the rear of blocks of flats will no longer be an acceptable way of providing communal gardens. These spaces are rarely private; they are often overshadowed by tall buildings and are invariably fairly unpleasant places to spend any time in. Private communal gardens therefore need to be:

- Of sufficient size to be usable and inviting
- Secure and private
- Well-designed and integral to the character of the development

**Image 61**  
Communal courtyard, Fulham Island



**Image 62**

Private terrace facing onto a communal garden



### *Design criteria for private communal space*

1. Development on sites larger than 0.1 ha should provide at least 25 sq m of private space for each home. Only space that adheres to design criteria 3, 4 and 5 will be taken into account in meeting this provision.
2. Exceptionally, apartments adjacent to and overlooking a park or other large, public space of high amenity value could be provided with a smaller amount of communal space. In this instance, apartments should also have balconies of 5 sq m floor area.
3. 60% of the private communal space should receive direct sunlight for a minimum of 4 hours a day in June.
4. The space should be enclosed by walls, railings or buildings with no public access possible.
5. The space should be designed as an extension of the built fabric and residential accommodation and contain seating and play areas with a combination of hard and soft landscape features, including trees.

These communal areas should be designed to be the social, outside living space and their quality of execution and management must be sufficient to develop a pride of communal ownership and occupancy.

In most instances private communal gardens will occupy the entire rear courtyard, employing careful design and making use of landscaping to overcome any possible concerns regarding loss of privacy. However, individual private (rather than communal) garden areas for ground floor apartments, houses and maisonettes can be provided in certain building arrangements but, where provided, should generally be left unfenced. Enclosing these areas with walls or fences creates an unattractive and dead edge to a communal area and compromises the safety and surveillance of the space. A more acceptable approach is to use low-level planting to define individual gardens (**Image 63**). Only a very limited number of enclosed private gardens that back onto communal space are likely to be acceptable in any scheme.

The provision of private roof gardens should be considered on all developments and especially where the private communal and public space standards are difficult to meet. They can be used to help mitigate for loss of greenspace arising from the building footprint and should form part of the biodiversity strategy of the site that may include the use of Green Roofs (see page 148).





**Image 63**  
Private open space: garden



**Image 64**  
Private open space: balcony

Incorporating balconies into residential accommodation is encouraged and will be expected where the private communal space provision does not equate to 25 sq m per flat. Balconies contribute to the amenity of dwellings but are not always well-designed. They need to be positioned where they are comfortable to use and of sufficient size to enable them to be used as outside living space and should all:

- Be large enough to accommodate a table and chairs to suit the occupancy of the apartment as well as some additional space for planting (**Image 64**). A gross floor area per balcony of 5 sq m should be provided for houses or apartments with more than 1 bedroom where communal or private garden size specifications cannot be met.
- Preferably have a southerly aspect but, in any case, receive direct sunlight for part of the day.
- Be positioned away from sources of noise and poor quality air that would make them unpleasant to use.

## Allotments

The establishment of new urban allotments is to be encouraged for the value they bring to health and sustainability. The circumstances of the site, available space and likely demand will determine individual decisions to incorporate allotments but it may be possible to introduce a limited amount of cultivation within private communal gardens. Ultimately, it needs to be possible for private management organisations charged with caring for the communal and public grounds within a development to respond to such a demand.

## 5.8 Accommodating the Car

Sustainability relies upon robust and thoughtful design, particularly if the activities necessary to make it function are poorly conceived or conflict with the desire to achieve a safe and attractive environment. Issues such as site management, deterring crime, car parking and waste recycling are fundamental to good design and radical changes are necessary to the way we have considered these matters in the past. Importantly, dealing with these issues as a part of the development concept and any planning proposal is now expected.

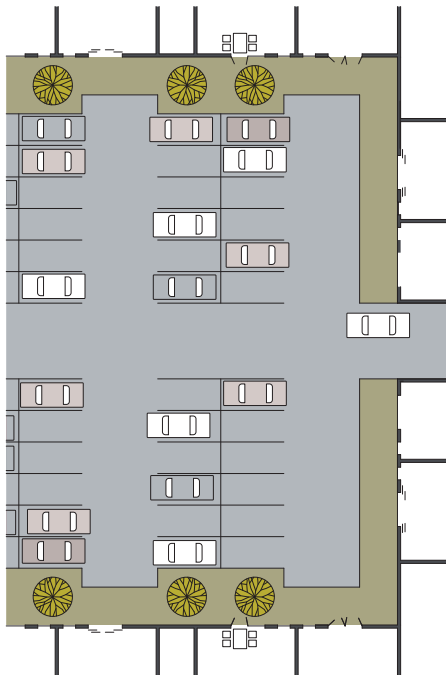
It is very difficult to provide space for car parking at ground level whilst still achieving an attractive urban living environment at housing densities greater than 50 dph. Public space is severely compromised if current parking standards for Essex are applied on schemes of greater density. If the public realm and space behind buildings is cluttered with parked cars it gives little scope for creating quality space for socialising and play. **(Image 65)**

Two design solutions are possible. Either the amount of parking has to be substantially reduced or cars need to be accommodated in a way that does not compromise the required quality and quantity of public and private space.

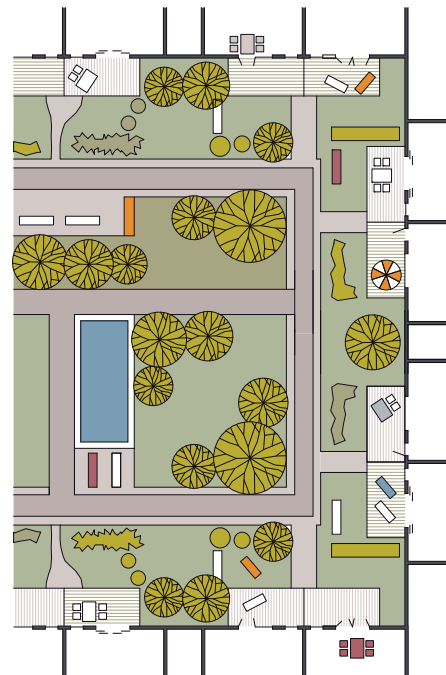
Developments that are very centrally located within urban areas clearly benefit from having the potential to allow site occupants to access jobs, services, public transport and facilities more easily. They offer the potential of a lifestyle that does not rely upon car use and this is especially important for elderly and less mobile members of the community. However, the current reality is that people use cars to get about. Many facilities and jobs are located on the urban edge or in relatively inaccessible places and public transport infrastructure in Essex is poor.

Urban renaissance and sustainable communities are dependent upon attracting families back to live in inner urban areas. The conditions required to make this possible are complex and numerous but there is currently a clear tension between nurturing this aspiration and the restriction of private car parking.

Whilst proposals for development within sustainable locations that includes car parking provision at less than 100% are encouraged, the proposal should demonstrate the means by which parking will be managed across a wider area so that parking displacement does not occur. These management proposals should be discussed with the neighbouring community, Highway Authority and Local Planning Authority as part of the Context Appraisal process.



**Image 65**  
Unsatisfactory parking arrangement



**Image 66**  
Underground or under-deck parking with landscaped private and communal outdoor space

At densities of less than 50 dph parking for residents should be provided either on-plot or in rear parking courts as described in the Essex Design Guide. Rear parking courts can have allocated or non-allocated spaces (for example, if less than 100% parking is provided non-allocated spaces should be provided). Parking areas should be surfaced in quality materials such as square block paving or dressed wearing course whilst trees with shrub planting will be required to subdivide each group of 5 spaces.

At densities above 50 dph one or more of the following car parking arrangements (together with the exceptions stated below) are generally expected:

- Underground parking
- Under-deck parking
- Multi-storey parking (either within block or 'remote')
- Under-croft parking
- Unallocated on-street parking for visitors and customers, and other short-stay parking or designated disabled parking bays
- A combination of any of the above

Exceptions to these arrangements are exclusively for:

- Schemes with a very low provision of parking (see above)
- Surface level parking in a very small area that relates directly to a small cluster of accommodation

### *Underground parking*

This can be regarded as the optimum solution as the arrangement allows for complete flexibility in the design of buildings and disposition of uses and activity at ground level. The covering of the parking below ground provides a deck for development or landscaping and surrounding buildings can face or back onto this space without constraint upon their configuration or aspect.

#### **(Image 67)**

Some sites lend themselves to underground parking more than others, either because of the value achievable for the completed property or because of site topography where natural slopes can be used to reduce site excavation costs. **(Image 68)**

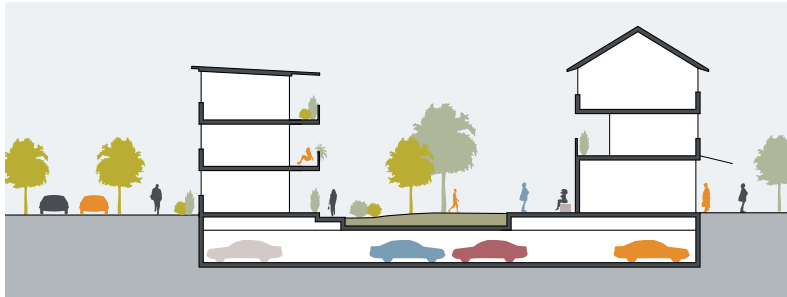


Image 67

- 67. Underground parking with communal space above
- 68. Underground parking using ground slope
- 69. Partial underground parking with raised ground floor

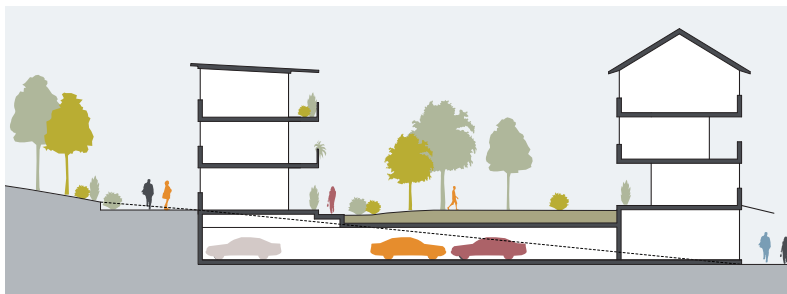


Image 68



Image 69

A variation on this arrangement is possible where the parking is not entirely underground. The depth of excavation can be reduced by raising the ground floor deck level above the surrounding site but this arrangement will only be acceptable where the parking floor is entirely enclosed by perimeter buildings. The semi-basement directly under the buildings can be used for additional accommodation either as part of the main property, as part of a live-work unit or as a separate annex or basement apartment. Short flights of steps from the street to the raised ground-floor entrances of the buildings offer the opportunity to introduce some variety in the appearance of the street scene. This design can also enhance the privacy of activity within the ground floors but limits the range of uses possible on the upper ground floor and requires alternative access arrangements for disabled people. **(Image 69)**

Vehicular entrance ramps to underground parking must be located directly off a street and should be designed to be as unobtrusive as possible. They should have a maximum gradient of 1 in 7 and ideally incorporate under-slab heating to avoid ice in cold weather. All underground car parks must incorporate a lift to a ground level entrance lobby. Security issues are paramount and underground car parking provision needs to consider the same criteria for designing out crime as under-deck parking criteria on page 85.

Whenever possible, underground car parking should be designed to be naturally ventilated.

### **Flood Risk**

With both underground and under-deck parking consideration needs to be given to potential flood risks. In areas at high risk of flooding the use of underground parking should be restricted.

### *Under-deck parking*

This arrangement requires less site excavation but imposes constraints upon building design at ground level. Ground floor uses have only a single aspect towards the street and consequently the amount of daylight penetrating the space through the depth of the building is limited. However, the ground floor in this arrangement is very suitable for commercial uses which can take advantage of the flexible depth the parking area provides to the rear. For retail uses, the Zone C space at the back of the shop would be under, and ventilated through, the deck above – see **Image 70**.

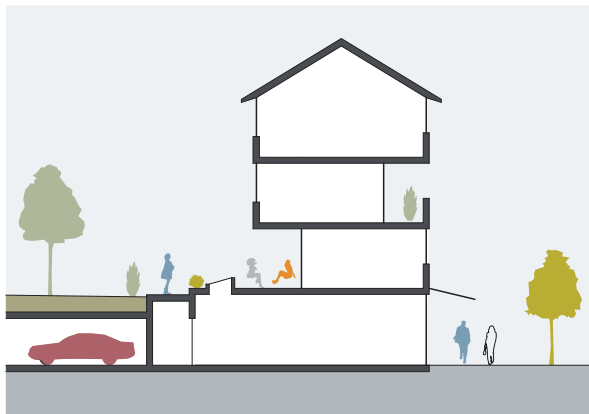
Residential and other uses within these building types must take their pedestrian access directly off the street either via individual front doors serving houses or via common entrance lobbies. Lobbies must link to the parking area to the rear. All under-deck and underground car parks must incorporate a lift to a ground level entrance lobby – see **Image 71**.

Occupiers of buildings would find it convenient for there to be an external staircase from the internal, communal courtyard to the parking area below.

A drawing of a hypothetical, development scenario that makes use of under-deck parking is illustrated on page 175.

- Entrances to underground or raised deck parking areas must:
- Be located directly off a street and should be designed to be as unobtrusive as possible. The entrance points should be located so as to avoid the possibility of queuing causing problems within higher category streets. Entrances and access ramps should be no wider than 3.5m with signal-controlled entry and exit for one-way working. A separate, pedestrian access needs to be provided to avoid people using these ramps.
  - Have a maximum gradient of 1 in 7, with a separate entrance for pedestrians. Ideally, ramps should incorporate under-slab heating to avoid ice in cold weather.
  - Incorporate electronic entrance gates or shutters to provide a secure environment that can be accessed only by residents and other occupiers of the building.

- Underground or raised deck parking areas should also:
- Incorporate lifts to ground level entrance lobbies
  - Have a clear floor to ceiling height of at least 2.5m
  - Be well-lit and finished, ideally with painted floors
  - Be naturally ventilated



**Image 70**  
Single-aspect ground floor uses with rear under-deck access



**Image 71**  
Sketch of internal lobby with through-passage from street to under-deck parking

### *Multi-storey parking*

Another acceptable method of accommodating parking is in a multi-storey facility on the site, either in conjunction with more conventional patterns of parking or as a way in which car access can be managed and limited within specific parts of a large development. This arrangement can produce substantial benefits for the quality and safety of the public realm as cars can be effectively removed from some of the spaces around buildings. Occasional access to houses and apartments is required for loading and unloading, service and emergency vehicles and for deliveries but the resultant total vehicular flow in these places should be extremely low.

A robust site management regime is needed for this to be successful. It is important to choose the right site for a multi-storey parking deck to avoid unacceptable impacts upon the development or the location. Access needs may dictate that it is sited close to a street of adequate capacity, pushing the building to a prominent edge of a site. If so positioned it will be necessary to include a 'vener' of single-aspect uses along sensitive elevations.

Good architectural design and landscaping can also ensure that these buildings do not look out of place within their setting.

### *Under-croft parking*

The provision of parking at ground level below buildings is the least satisfactory arrangement for compact urban developments as it tends to sterilise the space facing the parking. The only circumstance where under-croft parking is acceptable is:

- On small developments of 0.1 ha or less, or as a small part of a larger scheme, and
- Where it is served from private space, screened from public view, and
- Where no more than 10 under-croft car parking spaces are provided within any courtyard.

A hypothetical development scenario that makes use of under-croft parking is illustrated on page 163.





**Image 72**

Poorly designed under-croft parking creates dead fronts and divorces the building from activities on the street

### *On-street parking*

Many of our most cherished streets include the facility to park cars. Visual quality, traffic flow and pedestrian safety are only compromised when the cars overwhelm the design performance of the street type. Cars inconsiderately parked on pavements or in front of entrances are a symptom of not only inadequate street management but also of unsuitable street types for higher density developments.

This guidance is intended to resolve this issue in a combination of four ways:

- By ensuring that compact development is located in the most accessible locations, making it likely that cars would be used less often
- Through the introduction of the new approved street types that are designed to accommodate short-stay parking
- Through the requirement to place adequate levels of parking in secure, communal facilities together with making provision for short-stay, on-street parking
- Through the possible introduction of private management arrangements

It is also permissible to design new streets to accommodate some on-street parking spaces. These would be controlled by parking permits as part of a wider strategy for area management and can be provided as part of the overall parking provision for the site. Some on-street parking must be provided for visitors. This should be limited so as not to dominate the street scene and may be better clustered in small groups at convenient points.

Outside these designated spaces physical constraints and parking management should be employed to make parking elsewhere unlikely.

If the streets are to be adopted by the Highway Authority, parking restrictions shall be advised through the use of traffic signs at the entrances to the development. Yellow line markings should not be used.

Further guidance on car parking standards on all development can be found in the *Vehicle Parking Standards*, Essex Planning Officers Association (2001).

### *Car sharing*

The potential for car sharing is not necessarily directly related to the total provision of car parking on any site but it can be an attractive proposition for some people. Not everyone needs use of a car every day of the week and there are clear personal, financial benefits in spreading the cost of car ownership and travel amongst friends, colleagues or neighbours.

Car sharing schemes can be introduced into new developments as part of a package of measures (that includes safe and attractive streets, good lighting and convenient cycle storage) giving residents and employees a realistic and attractive alternative to owning a car. Ideally the car-share vehicles themselves should be low-emission, dual fuel/Bio-fuel models.

Schemes are becoming popular and assistance in establishing them is available from a number of organisations and public partnerships within the region.

Car clubs offer a pay-as-you-drive rental arrangement. This is particularly suitable within compact mixed-use developments where there is likely to be a sufficient market to make such a scheme commercially attractive.

A development of at least 100 homes is considered to be the viable economic threshold although this does not mean that they are unsuitable for smaller developments if the scheme can be extended to the surrounding area. There are various models for these types of scheme and more information can be found by following the web links in Appendix 4.

## 5.9 Cycle Facilities

Cycling is a carbon-neutral means of transportation and a good form of exercise. Increasing the use of cycles can reduce traffic congestion and pollution and all developments must be designed to encourage cycle ownership and use.

To do this, schemes should consider the needs of cyclists in regard to:

- Cycle parking facilities at destinations
- Routes between destinations
- Cycle storage that is safe, secure, covered and close to home

### *Cycle parking facilities at destinations*

There should be sufficient places to leave a cycle at popular destinations both within new development and within the surroundings. Whilst the adopted *Vehicle Parking Standards* for Essex specifies the minimum provision required for storage and visitor parking, there is an expectation that the minimum standards will be insufficient to meet the future needs of compact urban development. The requirement is therefore to include the provision of additional short-stay cycle parking wherever this may reasonably be considered to be necessary. **(Image 74)**

For instance, streets must incorporate short stay parking at frequent intervals located close to building entrances. Within a mixed-use street it will be preferable for stands to be sited in small clusters along its length, on each side of the thoroughfare. Within Play Streets, stands should be incorporated into the design for space management possibly acting as traffic calming features or sited to protect fixed play equipment.

Developers may be asked to contribute to the provision of cycle stands at important locations within the immediate area.

### *Routes between destinations*

Connections between home and destination should be as safe and practical as possible. The better and more convenient these are the more likely they will be used by cyclists and development should identify opportunities to add new or improve existing routes within the Context Appraisal. The improvement of routes to local schools and between neighbourhoods is of primary importance.

The community should also be connected to local and structural green space. Every new development needs to play its part in contributing to the fulfilment of green infrastructure plans. Well-designed and landscaped cycle routes, footpaths and other linear features can provide essential links for both people and wildlife between habitats and areas of public space. Development can make this happen by undertaking small incremental interventions and improvements as opportunities arise that enable a connected green grid to arise over time.

### Image 73

Direct and safe  
cycle routes



### *Cycle storage close to home*

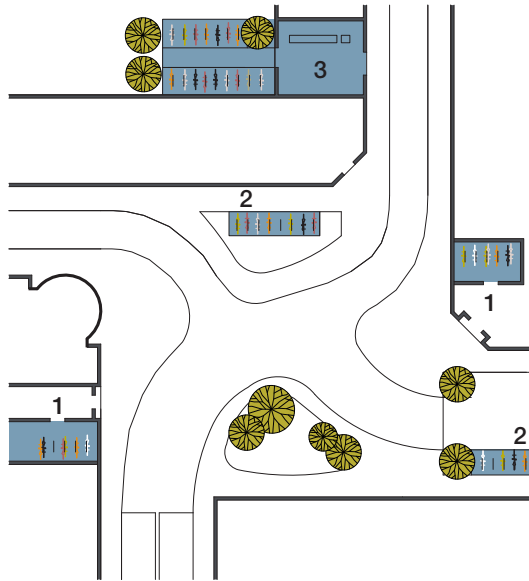
Facilities for over-night and longer stay cycle storage can be made in a variety of ways although all stands should be secure and under cover. They can share underground, under-deck or under-croft car parking areas or they can be located by a street entrance on the ground floor of a building. In the latter case, it is good practice to position these storage facilities close to the ground floor entrances to apartments in purpose-designed spaces.



Larger developments, such as Sustainable Urban Extensions, can consider the potential for more collective, managed arrangements such as cycle hire that would work well in association with a cycle repair workshop. With these alternative arrangements in place, the level of longer stay cycle storage elsewhere on the site could be reduced.

### Image 74

Cycle stand, Sweden



**Image 75**

Convenient cycle storage encourages use

1. Ground floor storage
2. On-street parking
3. Cycle hire with repair shop

## 5.10 Waste recycling

Recycling is the collection and separation of materials from waste and subsequent processing to produce marketable products. Local authorities are required to collect and manage both household and municipal waste to ensure more material is recycled. As requirements affecting each end of the waste stream change, the nature of storage and treatment will also alter. A guiding principle is to reduce the amount of waste produced and recover value from the waste entering the system. This guide recommends the implementation of a number of complementary actions for new developments in order that this principle may be supported:

- Providing facilities within homes for the segregation and temporary storage of a variety of waste products
- Providing communal storage facilities for segregated waste
- Providing communal facilities for the composting of organic waste

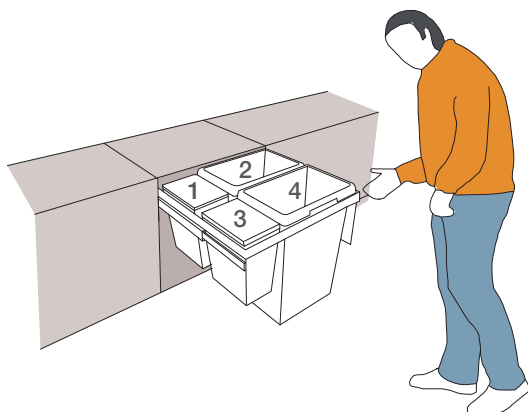
### *Facilities within homes*

Provision should be made within each home for the separation and short term storage of organic waste, dry recyclables and any residual waste.

1 bed accommodation	2+ bed accommodation
1 box of 35 litres capacity for: cans, paper, plastics	1 box of 45 litres capacity for: cans, paper, plastics
1 box of 8.5 litres capacity for: glass	1 box of 15 litres capacity for: glass
1 box of 8.5 litres capacity for: organic waste	1 box of 15 litres capacity for: organic waste
1 box of 35 litres capacity for: residual waste	1 box of 45 litres capacity for: residual waste

These facilities should be designed into the kitchen specification of each home and the boxes provided by the developer. Several proprietary systems are available that can be accommodated within a standard 600mm wide kitchen unit. The system chosen should have at least three bins to separate organic, residual and dry recyclables with capacities between 8.5 and 45 litres respectively, and each should have a lid.

Bins should be designed so that they can be carried to the communal recycling facility within the development where dry recyclables can be stored prior to collection or further separated by the householder into appropriate containers such as paper, cardboard etc. Developers should consult their local authority in order to ensure that sufficient storage is designed into the development.



### Image 76

Domestic recycled waste storage within kitchens

4 bins in total: 2 x 35 litre 2 x 8.5 litre

Total capacity: 87 litres

Ref: Hafele UK Ltd.

1. Kitchen waste
2. Dry recyclables
3. Glass
4. Residual waste

Note: All containers must be fitted with a close-fitting sealed lid.

### *Communal waste storage*

All developments should provide adequate communal facilities for the storage of domestic waste prior to collection. These can be arranged and designed in a variety of ways, such as:

- Designated communal storage areas on the ground floor of buildings
- Detached storage buildings (**Image 77**)

The design criteria for these installations are:

- They should not have an adverse visual impact on the public realm.
- Convenient access is required for both for users and collection vehicles. The maximum distance that residents should have to carry refuse to a bin store should usually be no more than 30m (excluding any vertical distance).
- The collection point should be reasonably accessible and within a distance of the highway agreed with the local collection authority.
- Pedestrian entrance doors should be activated by electronic key fobs that enable lost keys to be de-activated.
- They should have sufficient internal space to accommodate enough 360–1280-litre wheeled bins to serve that part of the development.
- Sufficient space should be allowed around the containers for moving and cleaning.
- The facility should be permanently ventilated at high and low level.
- Where contained underground, the maximum ramp gradient should not exceed 1:12 or a proprietary lifting system should be used to raise bins to street level without the need for specialised collection vehicles.
- They should contain facilities for the composting of organic waste.
- Where a bin store is proposed as a separate building, it needs to be designed with the same care and attention to detail as the rest of the development.

### *Composting of organic waste*

In order to reduce the amount of waste taken off any site, each development more than 0.1 ha in size should make provision for on-site composting. This is most satisfactorily arranged by the use of an in-vessel composter, which breaks down domestic organic waste into a soil improver or mulch which can then be used within the development. In-vessel

composting systems require a steady supply of organic waste to make the system operate successfully. Some in-vessel composting systems can serve up to 100 households, composting 700 litres per week. Smaller, manual in-vessel composting units are also available which would suit smaller developments.

The incorporation of in-vessel composters will work best where a development has its own management arrangements for common areas and public space. They can be located adjacent to the recycling points and, ideally, within detached storage buildings (**Image 78**). Current regulations (2007) require that an in-vessel composting unit treating food waste is contained within a building.

Houses with gardens should be provided with a compost bin for garden waste whilst a central communal compost facility should be provided to treat garden waste from communal landscaped areas.

### *Commercial waste recycling*

Separate facilities should be provided for the storage of commercial waste in containers up to 1280 litres. A variety of arrangements is possible but separate storage buildings or compounds within public space will not normally be permitted. Non-residential premises that form part of a scheme that has underground or under-deck parking could use an enclosed area within the car park for the location of bin storage. This could be accessed by personnel direct from the rear of the commercial space or from above, but collection would be required from the street (**Images 77–79**). Storage areas should be provided with wash-down facilities and retail units should be provided with cardboard compactors.

### *Access for collection vehicles*

Adequate arrangements must be made for the collection of waste by contractors. Refuse collectors should not have to walk more than 25m from the collection vehicle to the collection point (or as agreed with the local collection authority) and vehicle access paths must have a construction specification suitable for a gross vehicle weight of 26 tonnes. All streets must be designed and managed to allow collection vehicles to navigate easily along them. A hardstanding or lay-by must be provided adjacent to communal waste storage areas within a development with smooth paving and switched additional lighting between it and the storage access point.





**Image 77**  
Communal waste recycling centre, Malmö



**Image 78**  
Communal composter, Malmö  
A variety of models exist



**Image 79**  
Domestic waste chutes to underground storage, Malmö

## 5.11 Operational Issues

### *Management and maintenance*

The quality of the environment created by new development, no matter how well designed initially, must be sustained long after the last unit has been let or sold. To do this requires good management and maintenance which is commonly the responsibility of a variety of bodies and organisations. Their work is rarely adequately responsive, co-ordinated and funded and can easily lead to conflict, clutter, poorly executed and infrequent repairs and general neglect. Ugliness and unease can easily set in.

The degree to which this is a problem is most apparent in more compact urban areas where the competition for space can be intense. Consideration should be given to the establishment of private management and maintenance companies for new development as a way of passing on responsibilities to organisations better able to meet local expectations. A variety of models is possible:

- Private companies set up on behalf of site occupants to maintain buildings and grounds
- Resident Associations that act collectively for the interests of the development and its occupants
- Social Enterprise companies
- Commonhold Associations

Private management and maintenance company responsibilities could also include:

- Maintenance of all public space including new streets, open space, play grounds, sustainable drainage systems and external lighting
- Management of parking within communal areas and the public realm
- On-site waste recycling and composting facilities/services
- Facilities management
- Car clubs and car sharing schemes

Special arrangements need to be made regarding these responsibilities in the event of the cessation of the local company. Any agreement would be conditional upon free and unfettered access across the public realm by all members of the community in perpetuity.

Private communal and common areas will always be managed and maintained through private arrangements and these operations will also need to have responsibility for communal gardens, car parking, cycle storage, refuse storage and composting facilities in addition to sustainable energy infrastructure that will exist on larger developments. (see [www.the-edi.co.uk](http://www.the-edi.co.uk)).

### *Security and safety*

Behaviour is influenced in part by how we feel about a place. Well-designed environments that meet community needs and which are well-managed will tend to be safer than places that are not. Following the guidance within both the Essex Design Guide and this Supplement will help bring this about but, ultimately, security and safety relies upon persistent partnership working across sectors.

The *Secured by Design* initiative offers in-depth advice on physical protection of property as part of a broad approach to designing out crime ([www.securedbydesign.com](http://www.securedbydesign.com)). However, efforts to ‘add’ measures for crime reduction can be detrimental to the use and appearance of urban space. Too much rigour in implementing security measures can lead to detrimental effects both visually and socially for example:

- Excessive use of security grilles. These measures advertise the impression of danger and heighten the sense of vulnerability.
- Entrance gateways into a development can lead to a siege mentality.

- Over-reliance on the physical deterrents to criminal behaviour can lead designers to solutions that are biased toward individual security to the detriment of communal interests.

Attributes that are particularly relevant to the physical aspects of crime prevention are listed in *Safer Places – The Planning System and Crime Prevention*, ODPM (2004):

- Access and movement
- Structure
- Surveillance
- Ownership
- Physical protection
- Activity
- Management and maintenance

Well-designed public lighting increases the opportunity for surveillance at night and sends out positive messages about the management of an area. Information on street lighting is contained within the Essex Design Guide and the Essex County Council lighting policy contains standards and requirements relating to the provision of street lighting within adoptable streets and footpaths.

Much of this guidance places emphasis upon encouraging people to be outside and the new street type, the Play Street, is specifically designed as space for children to play outside their homes. This, and other features of the guidance such as the provision of open bodies of water for Sustainable Drainage Systems, creates places where young people may be exposed to some risk.

This document endorses the view of the Play Safety Forum (PSF) that children seek and benefit from exposure to managed risks and that to attempt to remove risks within the public realm has a negative effect upon their well-being.

The Forum believes that the fear of litigation is leading to a focus on minimising the risk of injury at the expense of other, more fundamental, objectives. The effect is to stop children from enjoying a healthy range of play opportunities, limiting their enjoyment and having potentially damaging consequences for their development. The Play Safety Forum's Position Statement on managing risk can be found on the Essex Design Initiative website.



**Image 80**  
Challenging environments encourage  
child development and adventure

## *Privacy and noise*

The privacy of occupation of homes is influenced by:

- overlooking into habitable rooms, and
- the impact of noise from external sources.

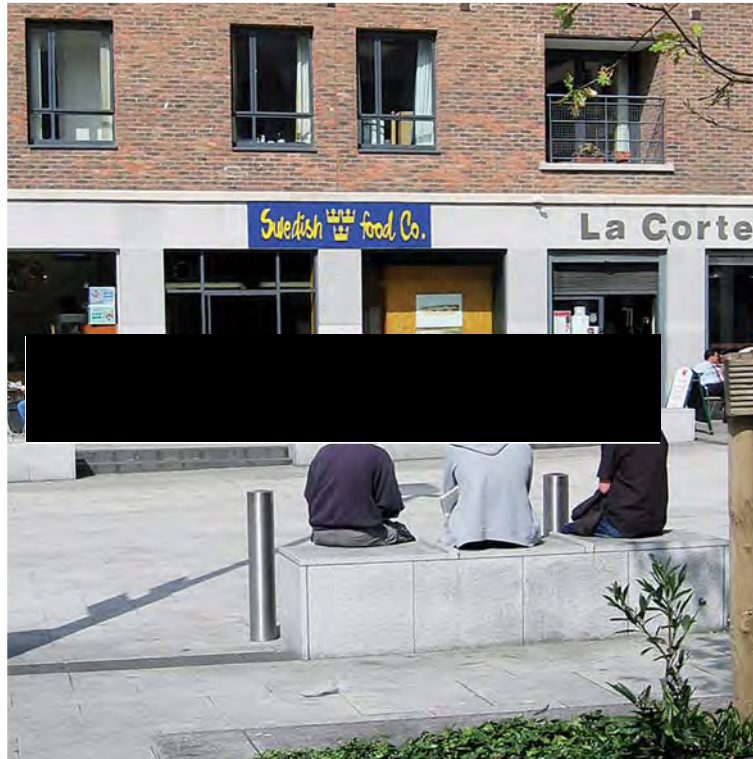
Overlooking can be minimised by the requirement of minimum 'back to back' distances between buildings and by careful design. Whereas the Essex Design Guide recommends a minimum back to back distance of 25m, this is amended to 20m for carefully designed, compact, urban development. Privacy can also be achieved through the sensitive orientation of windows, use of landscaping and screening. There are measures by which occupants can control the level of overlooking such as with blinds which can be incorporated into the design of the openings.

Noise from neighbouring properties can be a source of significant aggravation for urban dwellers and research has revealed that this is considered to be far more invasive than traffic noise and being overlooked.

Numerous noise-generating appliances are now common in most properties and the activities of the evening economy can create a noise laden environment. Sounds can be either air borne or structure borne and it is normally the poor structure of a property or poor design and detailing which is responsible for intrusive noise. Sound insulation is the main method of controlling the movement of sound within buildings and will determine how much sound is transmitted from the outside or adjoining properties or room to room. For the purpose of achieving compliance with Part E of the Building Regulations developers can use design details approved by Robust Details Ltd. ([www.robustdetails.com](http://www.robustdetails.com)). Alternatively the dwelling will require pre-completion sound testing which should help reduce the faults in construction and workmanship. Developers should however consider sound insulation specifications in excess of those detailed in the Approved Document E. The World Health Organisation suggests that bedroom noise level should not exceed 30 dBA.

Avoiding noise conflict between users should be taken into account at an early stage of the design process. PPG 24 makes a number of recommendations on how to mitigate the impact of noise but the full provisions of the UPS should be taken into account when designing out noise.

The conflicts created by noise-generating night-time activities can be reduced through design measures. For example, configuring residential units into perimeter blocks around a quiet courtyard can protect the more noise sensitive rooms from the activities of the street. Local authorities can also attach conditions to planning permissions for mixed-use. These conditions can require the introduction of physical measures to reduce transmission of sound such as acoustic lobbies, acoustic glazing and baffles around ventilation ducts.



**Image 81**

Careful design can reduce disturbance between uses

## 5.12 Buildings

A primary objective of this guidance is to encourage the development of buildings that improve urban conditions. They may simply ‘mend’ an ugly gap in the existing townscape or they may be designed to become a landmark of some significance. They may accommodate an important community use or key workers or be designed to also incorporate habitats for endangered species. Whatever their function or importance they must be well-designed, durable, well-built and visually appropriate.

Preserving the urban character of Essex, where it is derived from the continuous application of local building traditions and materials, is important. Many of our most precious historic environments are an exposition of the harmony created where change has been gradual and built form constrained by available technology and architectural taste. But these places are exceptional. Most urban areas are an amalgamation of building styles, forms and scales that do not always co-exist in elegant accord.

The nature of urban areas within the County also differs widely and can range from seaside towns to New Towns to historic Market Towns and it is their difference in origin and purpose that gives them a unique identity. In these circumstances it is clearly inappropriate to apply universal rules on aesthetic style. Instead, this guidance requires high quality building design to be informed, initially, by a 2 step process:

1. Through a comprehensive analysis of the character of the locality via a Context Appraisal (see Section 4, Urban Context), and
2. Through the application of some non-stylistic principles that will apply to all new development. These are:
  - Form and scale
  - Height and mass
  - Visual appropriateness
  - Active frontages
  - Variety and unity
  - Adaptability, durability and accessibility
  - Visual richness
  - Materials



**Image 82**

A new building fitting into the existing street scale, Murray Grove, London

### *Form and scale*

New development will need to draw on a large number of references in locations which have a strong visual identity. These need to be interpreted appropriately to reinforce the distinctiveness of place. New architecture should not mimic traditional building styles but provide a contemporary interpretation of the vernacular influences which have contributed to the character of an area (**Image 82**). If a locality has little to distinguish it or the development is a large urban extension or infill there may be few visual cues from which to draw appropriate design inspiration. There will be less to constrain the form of development in these situations although all schemes should comply with the urban design spatial principles of the Essex Design Guide and this Urban Place Supplement.

It is important to scale a building correctly. Scale is most usefully expressed in relation to anthropometrics – the human user. Those that are under-scaled for their function and importance can appear mean and inappropriate whilst those that are over-scaled in relation to their context often appear over-dominant and out of place. Slight variations can make a large difference between a correctly-scaled building and one that is not. Buildings of greater size and mass such as a large block of apartments can benefit greatly by careful attention to use of larger scale on elements such as entrances and stair-wells. Use of a normal, domestic proportion in these situations would make the building appear feeble and unbalanced.



The roof plane of a building is an important element which has a significant impact on the form and silhouette of a building. In areas which are characterised by pitched roof forms and where the roofscape can be viewed from a distance it will be important for any new proposals to generally continue this character. In those areas where existing roof form does not have a consistent and strong character there will be more scope to introduce new roofs of various design, including flat and mono-pitched. Whatever the approach, long uninterrupted ridge and eaves lines should be avoided and skyline interest added by varying the roof height and eaves line and articulating the roof planes to define spaces within buildings.

### *Height and mass*

The height and massing of buildings is usually greater towards the centre of towns and neighbourhoods, particularly along the primary routes where development tends to be more compact and there is a greater concentration of commercial and civic buildings. New development should seek to reinforce this order and maintain (or establish) the prominence of these urban places as the recognisable legible centre.

All proposals should have regard to the height and mass of adjacent buildings to limit overshadowing and ensure that the privacy of internal space is not compromised. Generally, for small infill sites with a strong visual identity the height of new development should be similar to that of existing surrounding development. It may however be possible to accommodate buildings which are one and a half times the height of surrounding buildings provided they are fulfilling a particular role in the townscape such as creating a landmark, the length of frontage is no greater than a typical plot division found on the street and building depth is similar to adjacent buildings. **(Image 82)**

There will be more opportunities to have taller buildings in Sustainable Urban Extensions and areas of Large Urban Infill. Here, the urban layout should imitate the pattern of clusters of neighbourhoods supporting an urban centre similar to the traditional town where building height and mass increase towards the centre of civic and commercial gravity.

Rarely can a building of deep plan be integrated into existing townscape without it appearing out of place. The towns of Essex are predominantly made up of buildings that have a front and a back with rooms arranged inside that correspond to this linear relationship. The most important, daytime activities took place in the front whilst the least important rooms were reserved for the rear. This organisational alignment ensured a correct and harmonious relationship between building and street, and the ability to allocate space for less attractive activities to the rear, beyond the gaze of passers by. The form resulted in buildings of relatively narrow plan and the continuity of the arrangement over many years has produced a unity that has helped to define the character of our urban areas.

Steel and concrete frame construction has made it possible to design with complete freedom and produce buildings of very deep plan. These tend to be more cost-efficient as they have a higher ratio of accommodation to external envelope. However, they can:

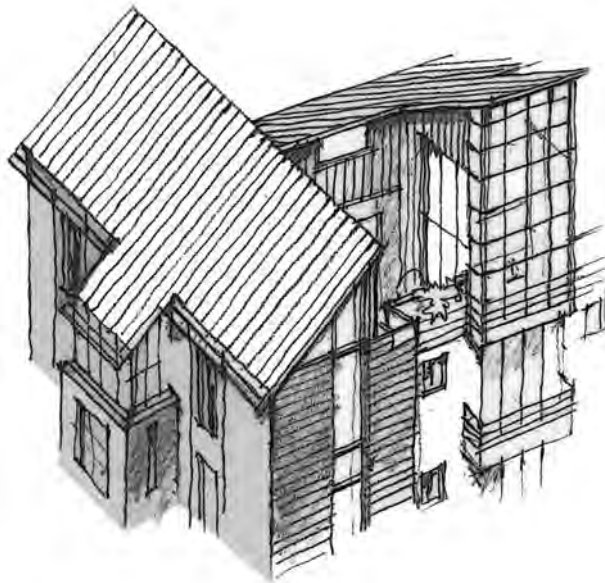
- Look bulky and inappropriate when sited close to more traditional buildings
- Limit opportunities for passive solar gain and have greater reliance on mechanical ventilation and artificial lighting
- Be less flexible than shallow plan buildings in that they are suitable for a more limited number of uses

Building plan depths above ground floor should therefore generally not exceed 12m and may need to be much shallower if they need to fit within an historic urban landscape. If the specialist function of the building requires a deeper plan this may be accommodated through modelling the form provided the mass of the building doesn't have an adverse effect on the character of the area. **(Image 84)**

Even though a few towns in Essex have quite recent origins and contain at their centre mainly deep plan buildings, new development should preferably avoid following this precedent. They should, instead, be constructed to a shallower plan yet designed so that they appear to have a mass greater than they have in order to seem consistent with the surroundings.



Image 83  
Corner building, Harlow



**Image 84**

Building form used to disguise deep-plan building



**Image 85**

Buildings that look representative of their use, Chelmsford

### *Visual appropriateness*

Buildings need to be designed so that they appear to be what they are. Offices should look like offices and homes need to look like places where people live. This is particularly important as seen from public space where visitors and users need visual cues to help them interpret the environment in order to help them find their way around. A street that is made up of a variety of uses that are accommodated within buildings that all look the same would be very confusing and difficult to interpret. It would be less legible than perhaps the traditional High Street where the variety of building styles suggests the likely use to be found within, such as the bank, the inn or the department store. **(Image 85)**

Making such buildings distinguishable from their neighbours also adds to the architectural richness and variety of the area and helps to create places of a recognisable character.

### *Active frontages*

Developments that generate pedestrian movement and activity within the public realm are likely to evolve into successful places. The objective is to channel the maximum amount of human activity onto the streets to make them safe, vibrant and interesting. This cannot be done if, for instance, the entrances to buildings are located at the back of the block. Ensuring that building access principally occurs from the front captures this movement of people for the benefit of the street and is the best way of promoting the possibility of chance encounters and street life.

Within urban and neighbourhood centres and on sites fronting major streets it is also important to ensure ground floor spaces contain active uses that contribute to the generation of pedestrian movement. Pedestrian footfall within these locations fuels the success of the commercial environment and it is important that every opportunity is taken to activate these ground floor spaces with functions that attract people to the street. Footways need to be of sufficient width to allow uses to spill out into the street so that the edge between building and public space becomes blurred.

Some ground floor uses are sufficiently active or interesting in themselves to offer a degree of 'theatre' to passers-by. It follows that unnecessary lengths of blank walling facing public space undermines these objectives.



**Image 86**  
Reduced activity at ground level



**Image 87**  
Mixed-use building with active frontage

### *Variety and unity*

Variety of form is important for any urban area as it allows a number of different uses to exist within urban areas. These uses contribute to urban life in a variety of ways and would be used by different people at various times of the day. Variety enriches the cultural and economic well-being of a community and is essential for its sustainability. **(Image 88)**

Making the correct choices in regard to scale, mass, height and legibility will result in a varied townscape, provided that it also retains a variety of buildings of different ages, quality and rents. Development can sweep away existing buildings, uses and the people that occupy them (for commercial reasons). Equally, planners can sometimes strive for 'neatness' in a bid for urban renewal. But a place that lacks the variety that these different kinds of premises provide can be sterile and economically monotonous. It is therefore advantageous in pursuit of variety to consider the social, environmental and economic value of, and potential for retaining, existing buildings and uses that occupy any development site as part of the Context Appraisal process.

If buildings exist on any site proposed for development, the Context and Site Appraisals should establish the value of both the fabric and the uses in contributing to the desirable economic and social variety of the location.

#### **(Image 89)**

Left unchecked, a highly varied urban landscape could develop into visual anarchy. A degree of unity is therefore desirable between existing and new building and with adjacent developments, to provide some coherence and sense of identity. Using a similar palette of materials and picking up the rhythm of visual form are just two devices that can enable a development to integrate comfortably with its surroundings.

However, the monotony of repetitive elevations that lack the subtle and demonstrable differences of buildings constructed by different people at different times should be strenuously avoided.



**Image 88**

Varied townscape, Dublin



**Image 89**

Existing buildings retained and re-used within redevelopment of former army barrack site, Duke of York Square, London

### *Adaptability, durability and accessibility*

To ensure the longevity and equity of our building stock, buildings should be robust and capable of being adapted to different uses or to meet the different needs of future occupants. This should be achieved in the following ways:

- By having raised ceiling heights on the ground floor spaces on development within town and neighbourhood centres on primary routes and along transport corridors. These should be a minimum of 3.5m high (3m floor to ceiling) and 4m high (3.5m floor to ceiling) for space on street corners
- By constructing homes to the Lifetime Homes standard (see below)
- By taking account of the potential for home-working
- By designing the public realm to take account of existing and possible future servicing needs of buildings, the use of which may change

Lifetime Homes is a set of design standards that adds to the comfort and convenience of the home and supports the changing needs occurring throughout a family's life-cycle. These standards generally exceed the requirements of Part M of the Building Regulations. The features of Lifetime Homes make it possible for people with special mobility needs to occupy any dwelling and improves the potential for building sustainable communities that comprise people of different ages and needs.

**All new development in Essex should be built to meet Lifetime Homes standards, with two exceptions:**

**Lifetime Home Standard 1: Parking**

It is unlikely that many homes in more compact development will have a place outside their entrance to park a car and to universally provide one would seriously harm the quality of the public realm. This aspect of the Standard is therefore not required to be met. Nevertheless, other requirements within this supplement to provide either an accessible ramp or a lift from the parking areas to the street level does ensure that mobility needs are partly met in alternative ways.

**Lifetime Home Standard 4: External Entrances**

The standard to provide a covered entrance to every home would place an unreasonable design constraint upon higher density development. This aspect of the Standard is therefore not required to be met.

Information on the standards and applying them to high density developments can be found on the Homes for Life website [www.lifetimehomes.org.uk](http://www.lifetimehomes.org.uk). Local District and Borough Council policies may already exist that may take precedent over these standards.



### *Visual richness*

Many new developments are visually monotonous (**Image 90**). The craft that was once an integral part of architecture and design is often missing and such places compare unfavourably with an historic townscape where visual richness can be experienced at every turn. On one level this can mean the way in which buildings produce an interesting or complex skyline. At a smaller scale it can mean the design of a door threshold. It should be something that exists in public space as well as buildings.

Generally, the closer the observer is to the feature or the greater the viewing time, the more important it is to ensure the urban fabric contains visual richness. People's contact with buildings is often most tactile and extensive at entrances and at ground level, so these areas especially need a close attention to detail.

A building may also be visible from some distance away and from these viewing points it is important that the building rewards the attention of the observer with a richness of form or detail appropriate to its use. Over-elaborate adornment should be avoided, although public art does have a place in enriching buildings when used intelligently.

For the public realm, this translates into a necessity to pay greater attention to patterns, materials and detail in locations that specifically are designed to attract pedestrians, such as squares and mixed-use streets.



**Image 90**

A building lacking visual richness

## *Materials*

The choice of materials in either the construction or cladding of buildings should be a direct response to the need to either complement or contrast with the surroundings. This will primarily be informed by the Context Appraisal and the UPS provisions for sustainable construction.

Making the right choice is important in creating a sense of place and a quality environment. If complementing the surroundings, materials should generally be sourced from the Essex vernacular palette. Further information can be found in the Essex Design Guide. They need not be used in a conventional way or their use may lead to passive architecture.

If contrasting with the surroundings or creating a new environment, contemporary and innovative materials and technologies may be used in conjunction with more traditional materials. The texture, colour, pattern, modular size, durability and weathering properties together with the ability to be recycled are all important considerations which will influence this choice.



Image 91  
Essex materials in a contemporary  
scheme, Abode, Harlow

## 6.0 Influences upon sustainability

### 6.1 Introduction

The purpose of this guidance is to help deliver high quality, sustainable development. It establishes a methodology for the process which identifies appropriate development densities, how places are designed and how they should respond to community needs. These requirements are set out in a series of development criteria:

- Spatial criteria
- Building and site criteria
- Community criteria

Development criteria	Sustainability objectives
Spatial criteria	Walkable neighbourhoods and good access to public transport Resource efficiency in use of land; Density Improving local services and job opportunities; Mixed-uses
Buildings and site criteria	Minimising waste Reducing pollution Sustainable construction, sustainable drainage and energy efficiency Water conservation Conserving and enhancing biodiversity
Community criteria	Mixed communities Social cohesion Neighbourly urban design Safe public places Green spaces

## 6.2 Spatial Criteria

Development opportunities should not be looked at in isolation from their ability to contribute to the potential of urban areas to support a more sustainable future.

Preserving the hierarchy of densities within them is fundamental to ensuring that urban centres, neighbourhoods and urban extensions all perform to their social, economic and environmental potential and that, elsewhere, areas not well connected to public transport and local services are not ‘over-developed’ in regard to their local context. The most compact developments should therefore occur in the most sustainable locations. The design of these compact developments is critical to their success.

Below is a summary description of generic urban places (together with a series of Development Types) that characterises and expresses their potential for sustainable development. For a description of Development Types see pages 124–126.

### *Urban Centres*

Our urban centres express an investment in their success that has occurred over generations. We have located services and employment there along with cultural facilities and transport infrastructure.

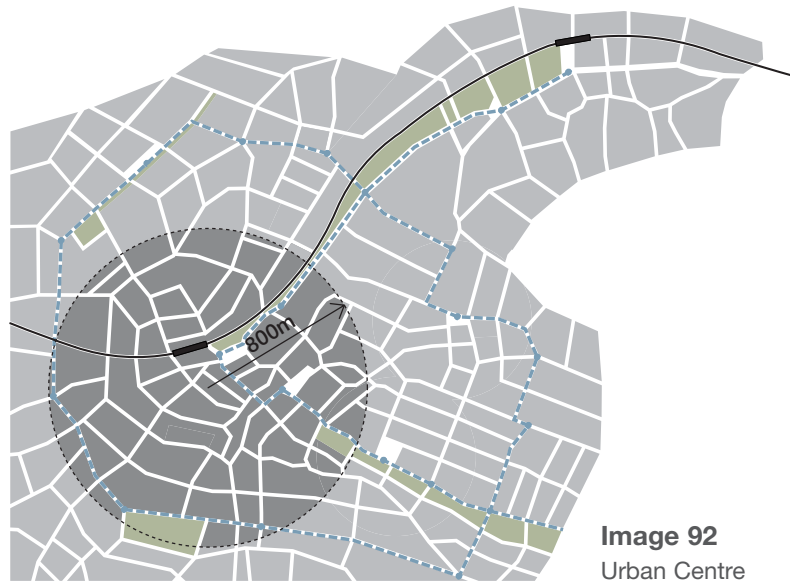
The fact that some of our urban areas are now performing less well than is desirable makes decisions on where we locate new compact development essential to their future renaissance. This guidance requires the greatest concentration of development potential in close proximity to these urban centres (see Diagram 5, page 123). For maps of each urban centre see the Essex Design Initiative website.

Within Urban Centres, only the following Development Types should apply:

**Compact Development** (see page 124)

**Robust Urban Form** (see page 125)

**Small Infill** (see page 126)



**Image 92**  
Urban Centre

### *Neighbourhoods*

Most traditional towns in Essex developed in an outward pattern along the radial, main streets. Suburbs were laid out with walking in mind and frequently combined good access to public transport with close proximity to important services, such as schools and shops, and a compact residential catchment nearby. They were, and mainly still represent, a unit of liveability that is a good model of a sustainable community.

A neighbourhood unit can be considered to be around 50 hectares within an area scribed by a circle of 400m radius which represents a 5 minute, comfortable walking distance for most able-bodied people. It should ideally contain a compact and varied housing stock, a variety of greenspace from parks to small squares, shops, health and learning facilities and sufficient choice of employment to satisfy many needs. Although the 400m and 800m radii represent a 5 minute and 10 minute walk for most people, in practice the street system is likely to make the journey from perimeter to centre longer and convoluted. Nevertheless, the use of a measured radius has the benefit of simplicity and inclusion of all land that has potential for adding to the sustainability of the location.

Neighbourhoods such as these exist in abundance in every town, although the degree to which they match the ideal model is dependent upon a number of influences such as decisions to rationalise school and service provision or the loss of a major employer. They also represent a past investment that is capable of being exploited and enhanced in preference to abandonment and re-provision elsewhere. Most neighbourhoods contain deficiencies of one sort or another and new development will provide one opportunity to help remedy this, making them more viable and sustainable in the process (see Context Appraisal Methodology on page 18).

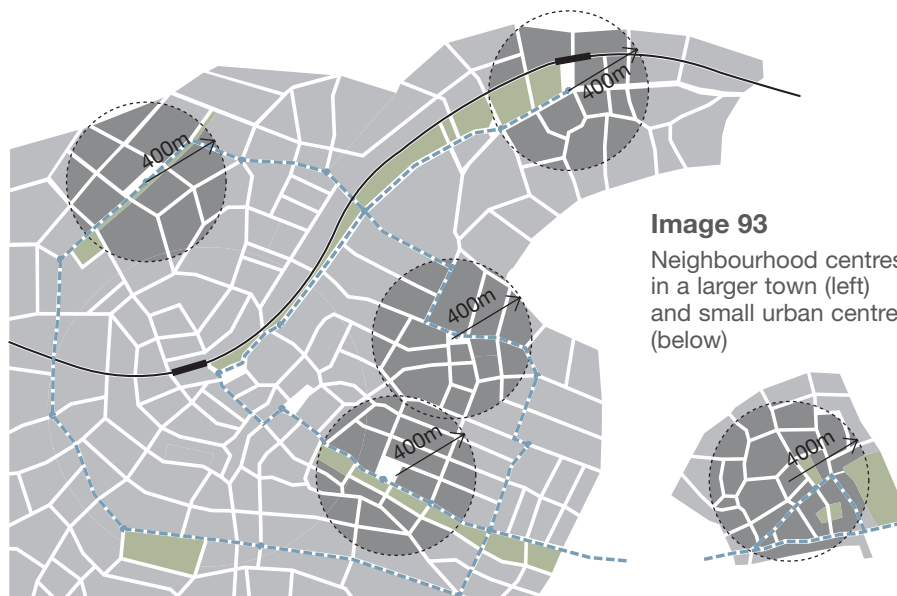
These 50 ha clusters of existing or potential urbanity are referred to as 'Units of Sustainability' within this guidance.

Within Neighbourhoods, only the following Development Types shall apply:

**Compact Development** (see page 124)

**Robust Urban Form** (see page 125)

**Small Infill** (see page 126)



**Image 93**

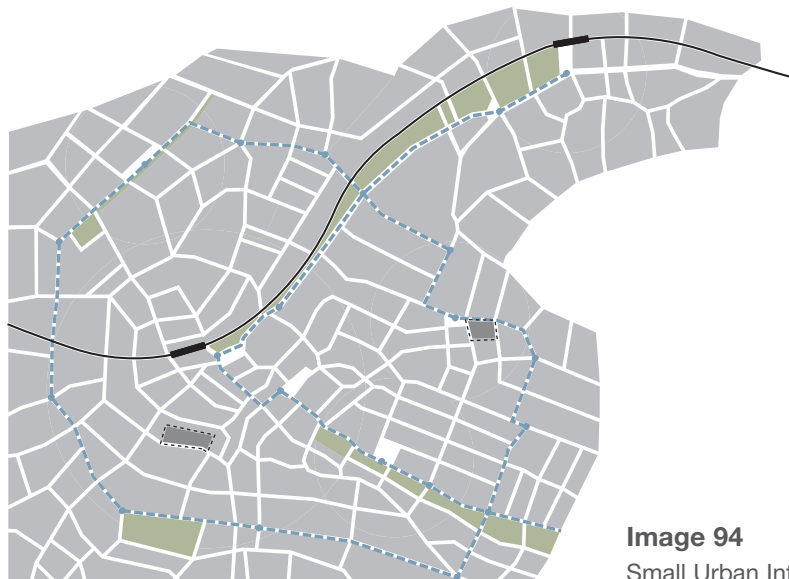
Neighbourhood centres in a larger town (left) and small urban centre (below)

### *Small Urban Infill*

Opportunities exist within every town to build within small urban gaps that are not required for other purposes. At best, such development completes the continuity of frontage of a street and removes a local eyesore. The physical limitation of available site area imposes particular challenges for the designer but the provisions of the advice contained within this guidance still apply. For instance, it is still possible for a single building to contain a non-residential use on the ground floor, to incorporate a rainwater harvesting system with underground storage, to have an excellent environmental performance and to accommodate biodiversity within the structure.

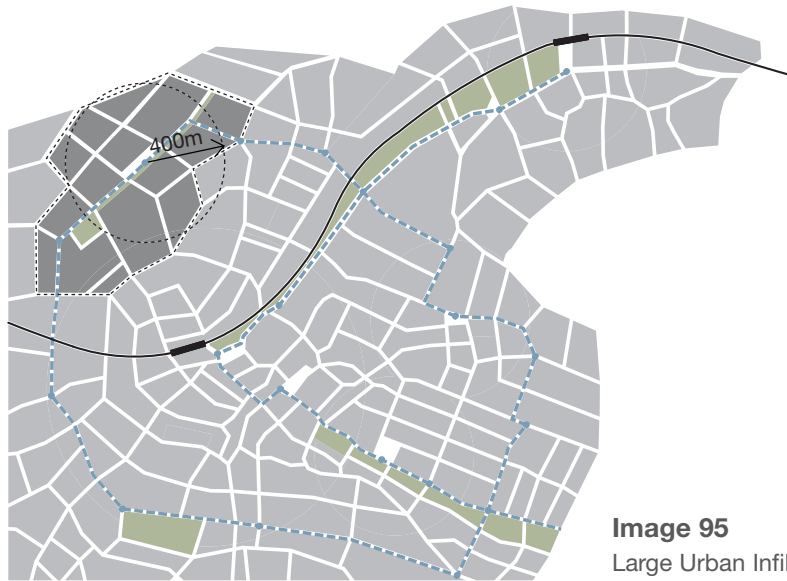
Within these situations, only the following Development Type shall apply:

**Small Infill** (see page 126)



**Image 94**  
Small Urban Infill sites





**Image 95**  
Large Urban Infill site

### *Large Urban Infill*

Occasionally, development opportunities arise on large urban sites. These may have once been in institutional use for instance and, provided these sites are at least 50 ha in size, they are capable of being developed as sustainable urban infill containing a mixed-use centre, space for employment, services and schools and a compact residential community. If a site contains buildings, their potential for retention and re-use should be examined within any Context Appraisal and there should always be a presumption for retaining the better buildings that exist.

If less than 50 ha in area, the development type will be determined by the 'fit' of the site to the other scenarios in Diagram 5 (see page 123). Like all the spatial criteria scenarios, it is essential for a large urban infill site to be capable of being adequately connected to its surroundings via a network of streets, footpaths, cycleways and green links and that its centre be well-served by public transport.

Within these situations, only the following Development Type shall apply:

**Large Sustainable Development** (see page 125)

### *Sustainable Urban Extensions*

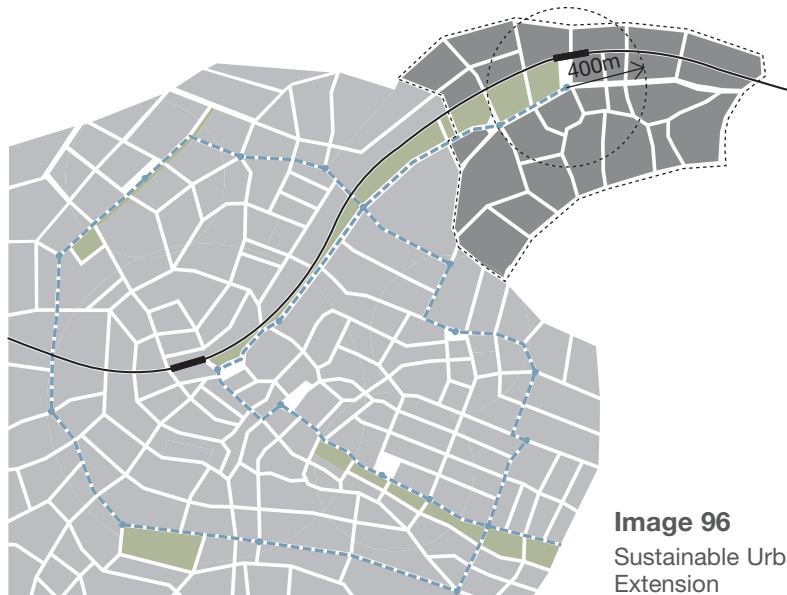
Pushing urban boundaries out into the surrounding countryside is a choice of last resort but inevitable as the supply of urban land is exhausted. In the past, these extensions often occurred on land which had been severed from the adjacent landscape by the construction of new highways. In these circumstances the extension is rarely adequately connected into the spatial grid of the town as a whole and therefore fails to capture and benefit from the flow of movement in nearby streets. Indeed, they are usually designed to avoid through traffic, thereby relegating their function to purely dormitory estates.

Alternatively, urban extensions can be planned using the walkable neighbourhood model as a unit of sustainable development. Individually, these cover an area of 50 ha and new ones must be arranged to accommodate a variety of development densities that are highest within the neighbourhood centre and least dense towards the edge of the neighbourhood.

A single 50 ha extension would have a theoretical capacity in the region of 2,000 homes and considerable scope for non-residential uses, including space for business development. New neighbourhoods can be brought together to construct an urban extension of substantial capacity using the minimum of land. Indeed, if the community within the extension is to be self-sufficient for the majority of its daily needs, supporting a secondary school, a major health clinic, substantial employment etc., an extension in the region of 6000 homes will be required. Importantly, such extensions must have high quality, sustainable infrastructure designed into them from the beginning for public transport, green space and on-site renewable energy. By locating and designing them so that they also naturally extend the spatial grid, Sustainable Urban Extensions will develop into new destinations where service providers and businesses will also wish to locate.

Building beyond the urban edge on a variety of small sites has several disadvantages:

- It can lead to an incremental outward spread of the urban area that is difficult to orchestrate in a way that does not harm both the countryside and the character of the town.
- Various small growth points are difficult to serve by public transport.
- Small extensions individually could not bring forward viable additions to important infrastructure or be self sufficient for heat and power.



**Image 96**  
Sustainable Urban  
Extension

Within these situations, only the following Development Type shall apply:

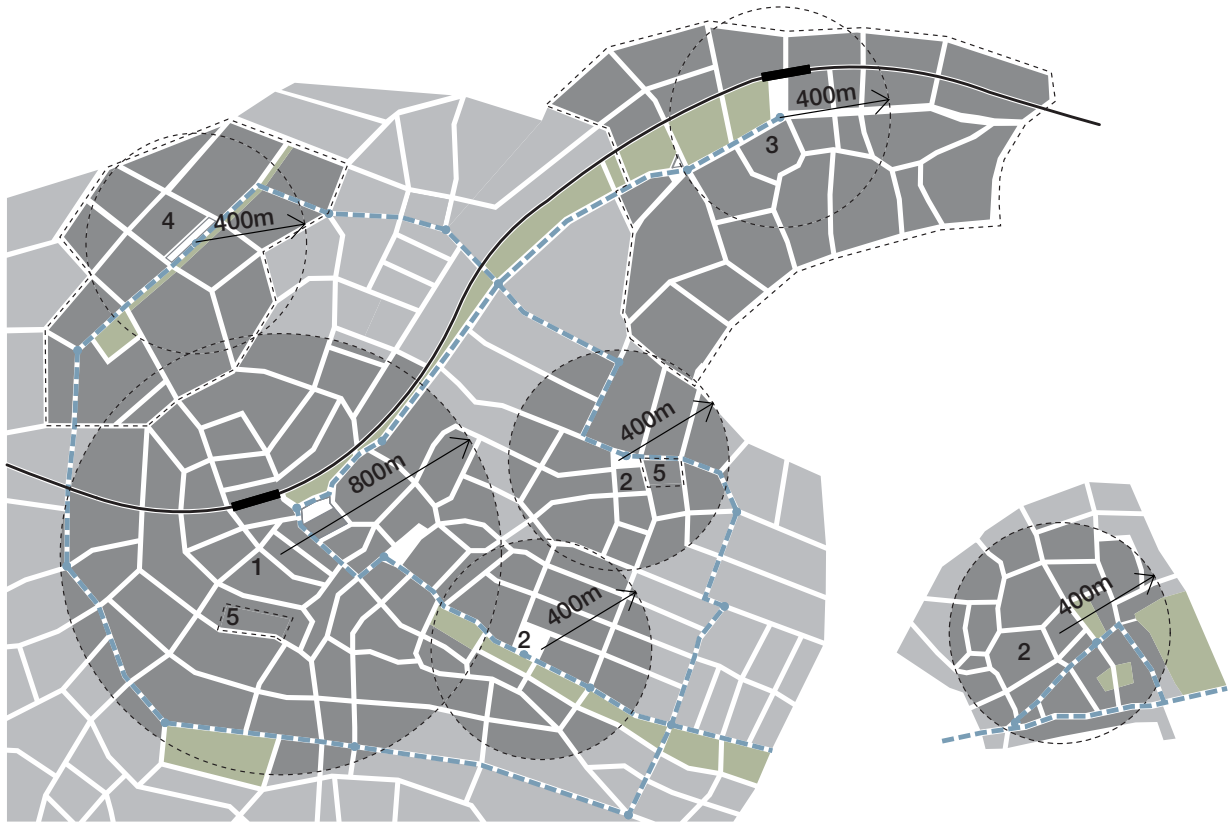
**Large Sustainable Development** (see page 125)

### *Sites beyond these locations*

It is important not to seek high density development on land that is poorly connected to other places by public transport. Doing so increases the number of unnecessary journeys made by car, adding to local traffic congestion, pollution and carbon emissions. These developments represent those parts of an urban area that are not, and have the least potential for becoming, sustainable communities. In these situations it would be expected that densities would be below 50 dph.

### Image 97

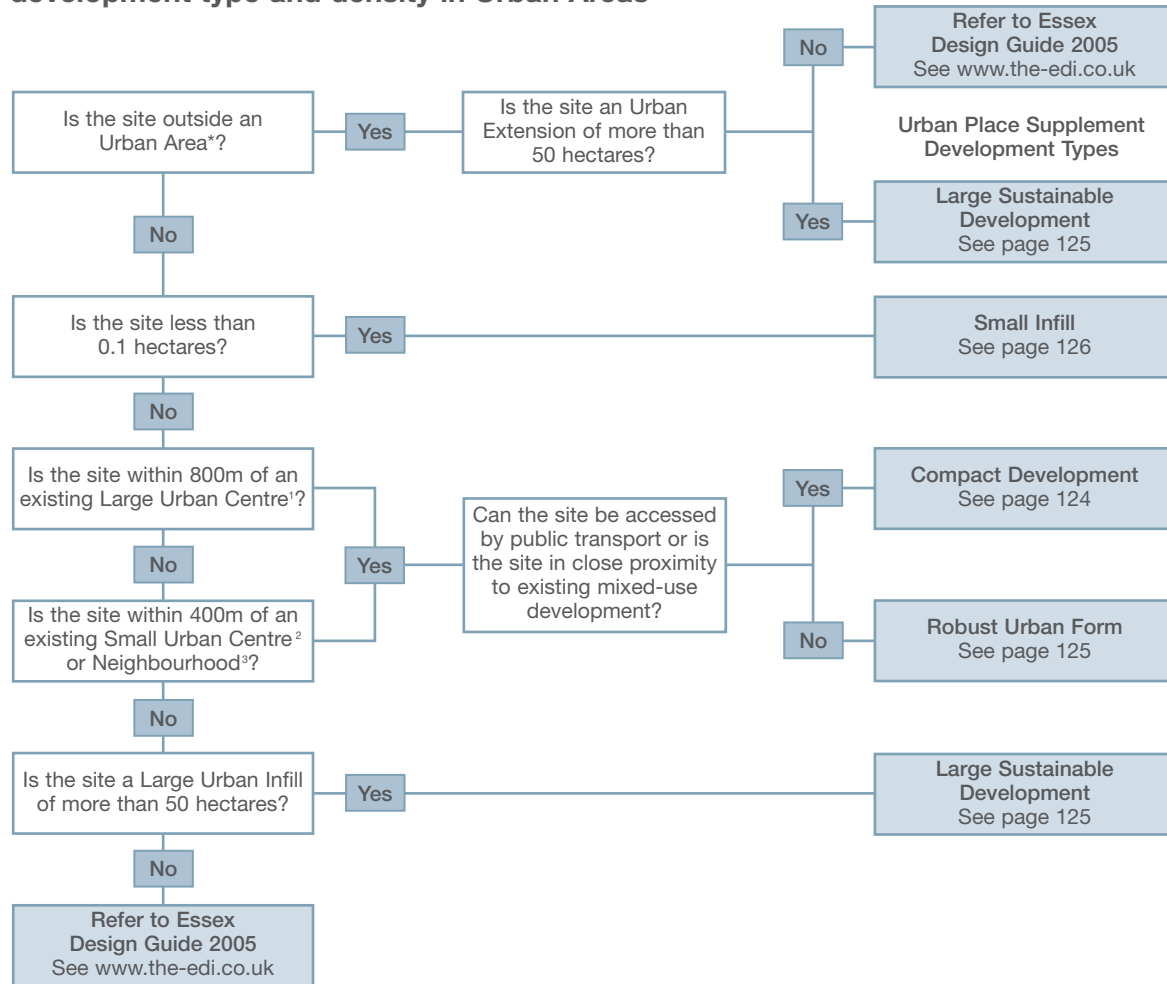
Assembled town diagram and small urban centre



1. Urban centre
2. Neighbourhood/small urban centre
3. Sustainable urban extension
4. Large urban infill
5. Small urban infill

- Railway station
- Green space
- - - Bus route

**Diagram 5: Establishing the appropriate development type and density in Urban Areas\***



\* Urban Area – defined as places with a population greater than 10,000. The threshold, taken from work carried out by the Office for National Statistics ([www.statistics.gov.uk](http://www.statistics.gov.uk)), should not, however, be used independently from the Context Appraisal which may provide evidence for lowering the threshold in certain circumstances. The factors which the Context Appraisal may highlight that could affect this threshold are likely to be related to building scale, form and use, historical development patterns and the range of existing shops and services. Existing planning and development briefs, together with individual site allocations (as set by the LDF/local plan), will always take precedence over the UPS thresholds.

1 Centre of a large urban area with a population of 35,000 or more.

2 Small Urban Centres have a population between 10,000 and 35,000.

3 Existing Neighbourhoods are likely to be located in a large urban area and include, frequent bus services, 400m/5mins walkability, building heights of occasionally greater than 3 storeys and a range of shops services and employment.

For full definitions of all the development types see pages 124–126.

### *Development types*

The nature of every development will be shaped, in part, by its adherence to the guidance contained within this Supplement. There is a collection of large and small complementary influences but fundamental to the strategy for sustainable development is the definition of the four Development Types for sites within sustainable urban areas.

These Development Types are self-selecting after having regard to:

- Local development frameworks with established criteria for densities
- Existing planning and development briefs for individual sites
- Establishing the appropriate density determined through the Context Appraisal
- A site's spatial context and therefore its potential for sustainable development
- The area of the site

A comprehensive appreciation of the characteristics for each type can only be gained by reference to the complete text, but a summary of the major components is given below.

#### **Compact Development**

- Minimum density of 75 dph.
- Schemes should be mixed-use where this is possible but, as a minimum, half the ground floor frontage facing major streets should normally be non-residential.
- The mix and proportion of uses will be determined by the Context Appraisal. The potential for home-working should be considered with reference to the advice note found on the Essex Design Initiative website.
- Buildings and space should be designed to be flexible and, as a minimum, the ground floor ceiling height of every building shall be 3.0m or 3.5m if fronting a major street.
- The public realm should be robust, enabling it to accommodate a variety of appropriate uses with design flexibility to meet future demands.
- All developments should achieve an EcoHome/BREEAM Very Good to Excellent rating (or Code for Sustainable Homes 3-star rating) up to 2012, and an EcoHome/BREEAM Excellent rating (or Code for Sustainable Homes 4-star rating) from 2012 onwards.
- Car parking will normally be underground, under-deck, under-croft or multi-storey with some short-stay, unallocated on-street spaces for visitors and customers.

### **Robust Urban Form**

- Variety of housing and apartments.
- Minimum residential density of 50 dph but should be higher if compatible with surroundings.
- Buildings and space should be designed to be flexible and, as a minimum, the ground floor ceiling height of every building shall be 3.0m or 3.5m if fronting a major street.
- The public realm should be robust, enabling it to accommodate a variety of appropriate uses with design flexibility to meet future demands.
- The mix and proportion of uses will be determined by the Context Appraisal. The potential for home-working should be considered with reference to the advice note found on the EDI website.
- All developments should achieve an EcoHome/BREEAM Very Good to Excellent rating (or Code for Sustainable Homes 3-star rating) up to 2012, and an EcoHome/BREEAM Excellent rating (or Code for Sustainable Homes 4-star rating) from 2012 onwards.
- A variety of car parking measures is possible that would normally include under-deck, under-croft and on-street parking.

### **Large Sustainable Development**

- Minimum site area 50 ha.
- Minimum average density across area 65 dph with the highest density at the centre of the extension.
- These schemes should aim to contribute substantially to the employment needs of the town and be largely self-sufficient for all primary services.
- Car parking should be arranged to be compatible with the prevailing density of each part of the extension. Multi-storey car park arrangements are particularly suitable at this scale of development.
- Projects would be generally expected to include sustainable energy and waste recycling infrastructure to meet 100% of the needs of the development.
- All developments should achieve an EcoHome/BREEAM Very Good to Excellent rating (or Code for Sustainable Homes 3-star rating) up to 2012, and an EcoHome/BREEAM Excellent rating (or Code for Sustainable Homes 4-star rating) from 2012 onwards.

### **Small Infill**

- Maximum site area 0.1 ha.
- Density to be compatible with surroundings.
- Context Appraisal not required – just site appraisal (see Diagram 3, page 17).
- Mix of uses informed by the surroundings but, where the site is in a sustainable location, a minimum of 50% ground floor frontage on a major street should normally be non-residential.
- Buildings and space should be designed to be flexible and, as a minimum, the ground floor ceiling height of every building shall be 3.0m or 3.5m if fronting a major street.
- All developments should achieve an EcoHome/BREEAM Very Good to Excellent rating (or Code for Sustainable Homes 3-star rating) up to 2012, and an EcoHome/BREEAM Excellent rating (or Code for Sustainable Homes 4-star rating) from 2012 onwards.
- Car parking arrangements will be informed by the context.

### *Densities for sustainable development*

The existence of a substantial and compact residential and business community within easy walking distance of an urban or neighbourhood centre is the principal platform for sustainable development. This catchment (at least 5000 people for a typical, sustainable neighbourhood) can support a bus and a variety of shops and services and can attract other commercial investment. It requires an average neighbourhood density of at least 65 dwellings per hectare with higher density towards the centre of the neighbourhood (or town centre, transport corridor etc.) enabling lower densities to exist towards the margins of the neighbourhood.

Of course, a large number of sites suitable for development occur within existing neighbourhoods that internally comprise a wide range of densities that may not combine to an average density of 65 dph. This will be the case for the majority of urban places in Essex.

In contrast to this, large new urban extensions can be designed to easily reach this density but applying it universally across such a development would not produce the varied environment and housing stock that is ideal. Indeed, in these situations, where there is the scope to construct new urban fabric based upon the many sustainable urban design principles contained in this guidance, density becomes a by-product of this process rather than the driving force behind it.



This guidance requires a range of minimum development densities that are applicable to the different sustainable Development Types. The most compact development is required in the most sustainable locations, with a progressively reducing minimum density beyond these locations. There is no upper density limit within these specific areas. However, the Context Appraisal will help designers and local authorities determine the appropriate density above the minimum base density prescribed in the guidance. These decisions need to be informed, in part, by the accessibility and quantity of existing local amenities (such as shops, green spaces and schools) that are so vital for higher densities to work. Some of these amenities can be established or improved over time either via the process of new development or through the management of market forces. Nevertheless, within larger developments (50 ha or more) it is essential that these amenities are in place at the beginning of the development of the new community.

Where large urban infill or sustainable urban extensions are proposed it is important to ensure that a range of development types and densities is accommodated to enable a variety of living and working environments to evolve. The spatial model of the urban centre and neighbourhood should be employed to ensure a varied urban pattern across the site. Development densities will be at their highest towards the centre of these new units of sustainability but reduce towards their boundaries, enabling space for detached houses with gardens at the fringe but still within convenient walking distance of shops, services and public transport. The target population for these developments will be 5000 people per unit of sustainability.

Describing density by habitable rooms, plot ratios or people per hectare can provide a textured picture of a development and is particularly suitable for mixed-use scenarios. However, the terms are not widely used by central government or district councils and therefore the definition of density within this document has been expressed as dwellings per hectare.

Densities are measured in relation to the net site area which includes:

- Private and communal open space
- Internal streets
- Public space intended principally for the benefit and enjoyment of occupiers of the development, and
- Non-residential uses within a mixed-use building that also contains residential accommodation

Net density excludes public open space, the streets along the boundary of the site that serve a wider area and any non-residential uses that do not have residential accommodation above or below.

As this guidance expects the attainment of minimum densities for development and the provision of mixed uses there is potentially a negative dynamic between the two by using the dwellings per hectare measurement of density. Achieving these minimum density thresholds using the density measure for residential development alone would be incompatible with encouraging a substantial provision of mixed-use and therefore the calculations need to take account of the space taken up by non-residential uses within mixed-use buildings.

To do this, an allowance of the equivalent of 1 dwelling per 75m<sup>2</sup> of non-residential use should be used.

A typical calculation would be as below. See also **Image 98**.

#### Example calculation

Apartments no. 210

Houses no. 25

Plus, non-residential space with residential use above:

Community use (150 ÷ 75m<sup>2</sup>) = 2

Commercial use (3750 ÷ 75m<sup>2</sup>) = 50

**Total 287**

Net site area = 2.5 ha

Development density = 115 dwellings per hectare

The only non-residential space that should be factored into the density calculation is that contained within a mixed-use building that includes residential.

### Image 98

Calculation of density in mixed-use area





Image 99  
A green residential environment  
Vauban, Freiburg, Germany

## 6.3 Buildings and Site Criteria

The way in which we construct and use buildings has a critical impact upon the environment. Construction alone accounts for a significant proportion of UK emissions of carbon dioxide, the main 'greenhouse' gas responsible for climate change.

Carbon saving is a primary goal in shaping the objectives of this guidance and the attainment of quality design. This is necessary not only from a global perspective but also because Essex is particularly vulnerable to climate change – from flooding and drought – and therefore must move towards a lower carbon future. It necessitates a variety of targeted actions and the achievement of a high standard of green design across Essex which exceeds the current minimum standard required by Government and funding agencies.

The Context and Site Appraisals should identify the opportunities for achieving a breadth of sustainable design on a particular site such as the potential for capturing solar gain on south-facing land or the ground conditions for Sustainable Drainage Systems (see page 143). A comprehensive approach, using the BREEAM EcoHomes and/or the Code for Sustainable Homes methodology should then identify the most appropriate combination of measures to achieve a high degree of environmental sustainability throughout all aspects of the design.

### *Sustainable construction: Materials*

Choices on the type of materials, their use and detailing and their place of origin are important influences on the total embodied energy and energy requirement of a building and therefore its overall environmental impact.

Embodied energy is the total amount of energy required to produce a product but this increases when the environmental cost of its transportation to site is taken into consideration. Preference should therefore be given to recycling materials that may already exist on site and using those that have been either locally sourced (such as aggregates and timber) or locally manufactured (such as brick and building system products) where this is compatible with other objectives such as the employment of modern methods of construction.

Advice on comparing the lifecycle impacts of different construction materials and methods of construction can be found in *The Green Building Handbook* and *Green Guide to Specification* (available from the Building Research Establishment). The guide compares the relative environmental impacts of typical alternative construction methods for each element of a building (i.e. roof, wall, floor, window frame etc.).



**Image 100**

Sustainable materials:  
Chancellor Park Primary  
School, Chelmsford

### *Modern methods of construction*

When modern methods of construction are used, they should produce attractive high-performance buildings that require a minimum amount of carbon emissions in their construction and, importantly, in their use.

Methods often used include the following:

Off-site manufacturing

- *Volumetric or Modular systems*

Pre-assembled, sometimes pre-finished, three dimensional units which can be fixed together on site. They require the least amount of site assembly but large units can be difficult to transport and are best suited to highly serviced rooms such as kitchens and bathrooms. Achieving high quality is quite straightforward.

- *Panellised systems*

Factory made elements such as walls and floors which can be delivered to site in flat packs ready for assembly. Open panels provide a skeletal structural framework whereas closed panels provide a greater degree of fabrication with integral cladding, insulation and/or finishes.

- *Hybrid systems*

A combination of the two, for example using volumetric 'pods' for kitchens and bathrooms within a panel construction system.

On-site technologies:

- Insulated concrete, cast in situ, usually in polystyrene shuttering
- Pre-cast concrete floor slabs
- Thin-joint block systems using quick setting pre-mixed mortar

Building types such as these take on a range of appearances. They can look industrialised, domestic or have an appearance that is somewhere between the two. However, the criteria for their design assessment remain the same as any other building type.

Appropriateness of fit will depend on the context. Where the context includes a broad range of styles, it may be possible to be flexible on the outward appearance of these systems.

However, modular or volumetric system built structures need to exhibit references to aesthetic cues of their surrounding urban context, i.e. materials, colour, form, texture, scale and urban composition.

The substantial benefits of carbon reduction/savings (resulting from construction speed and alternative materials) make a strong case for an increased use of these building systems over traditional methods of construction.

### *Measuring the environmental sustainability of development*

BREEAM (the Building Research Establishment Environmental Assessment Method) is a flexible tool that allows the developers, designers and occupiers of buildings to design, monitor and improve environmental performance throughout the life of any building type. There are a number of BREEAM methodologies that can be applied to different generic buildings. EcoHomes is the domestic equivalent but the other methodologies will be required in a mixed-use development. BREEAM evaluates the environmental impact of buildings against a number of key environmental indicators resulting in a rating of pass, good, very good and excellent. The environmental categories are:

- Energy
- Transport
- Pollution
- Water
- Materials
- Land Use and Ecology
- Health and Well-being
- Management (not applicable to EcoHomes)

Development that is designed in accordance with the guidance contained within the Urban Place Supplement, and where the BREEAM/Eco-Home assessment criteria are taken into consideration from the outset, is likely to score well. This necessitates the employment of competent assessors as part of the design team for the development.

### *The Code for Sustainable Homes*

The Code for Sustainable Homes builds upon the existing and widely used Building Research Establishment's (BRE) EcoHomes assessment method.

The Code for Sustainable Homes and the EcoHomes ratings have numerous similarities but differ in that the new code introduces:

- Minimum standards for energy and water efficiency at every scoring level
- A simpler method of assessment
- New areas of sustainable design, such as Lifetime Homes and composting facilities



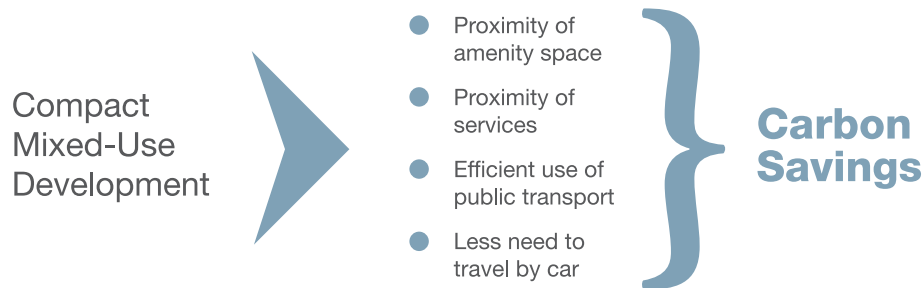
The EcoHomes standards will continue to run along side the new Code for Sustainable Homes until it is gradually phased out. Until that happens, the Urban Place Supplement expects the assessment of any development to follow the EcoHomes method (taking into account the additional requirements of the UPS) from which an energy rating under the new Code can be derived.

The expectation for the use of EcoHomes and the Code for Sustainable Homes is high. All developments should achieve a very good to excellent EcoHomes rating and a 3-star rated Code for Sustainable Homes accredited points. Water and waste management are priorities in Essex and the highest possible score should be achieved in these areas.

This requirement will be in place up to 2012, after which an Excellent EcoHomes rating and 4-star Code for Sustainable Homes will be expected.

### *Designing for reduced energy use*

Compact mixed-use development in the most spatially sustainable urban places can contribute significantly to carbon saving, for example through reducing the consumption of energy in the construction process or through reducing the necessity to travel by car in these central locations.



#### **Image 101**

Compact mixed-use development contributes to carbon savings in several ways

It is not the intention of this document to require the introduction of either carbon-neutral or experimental development. However, a variety of renewable energy and carbon-saving technologies exist that can easily reduce the carbon footprint of a scheme by more than it would be by simply being well-located. It is important that these technologies, described below, are employed as part of a thorough sustainability strategy for every site.

Improvement to the energy efficiency of buildings to reduce energy demands for either heating or cooling is largely achieved by higher standards of construction and specification such as insulation, double glazing, higher thermal mass, air management and the specification of energy-efficient appliances. This is always the starting point for reducing the post-construction energy demand.

### *Passive energy savings and natural ventilation*

Passive solar design takes advantage of natural light and heat from the sun and uses thermal air movement for ventilating buildings. South-facing glazed facades can capture heat and even small differences between external and internal temperatures can be useful when directed to elsewhere in the building. These designs are used in combination with very high standards of thermal insulation. However, achieving a good layout of development is more critical for a raft of community and safety reasons (see Community Criteria on page 156) which should take precedence in the unlikely event that there are conflicting requirements.

Non-domestic buildings should be designed to reduce their cooling requirements through passive means, avoiding the need for, or reliance upon, air conditioning. This can be achieved by:

- Controlling solar gain through the use of external shading
- Using blinds within double glazed units
- Using solar control glass
- Selecting office equipment and lighting with a reduced heat output or separating equipment with high heat loads into rooms which can be specially conditioned



Image 102  
Sun shading incorporated within architecture

In some urban environments other conditions such as noise or air quality may limit the use of natural ventilation. In these cases, mechanical ventilation with acoustic or air quality filters should be used in preference to full air conditioning.

Where full air conditioning is unavoidable, opening windows should be provided so that in future, there is the option to convert to a natural ventilation strategy.

### *Renewable energy sources*

Some renewable energy technologies can be integrated into buildings or neighbourhoods and should be considered as part of the energy strategy for all new development. All developments above a threshold of 1000 sq m or 10 dwellings should incorporate on-site infrastructure for renewable energy so as to provide at least 10% of their predicted energy requirements of the development in use.

All development sites (or combination of adjacent development sites) over 50 ha should incorporate Combined Heat and Power district heating systems in conjunction with a variety of additional renewable energy technologies across the site. These should be designed to supply 100% of the predicted energy requirements of the development in use.

Recommended systems include:

### *Solar panels*

There are two main types of solar collector – the flat plate and the evacuated tube. They both work in the same way, by absorbing radiated light (not heat). Thus, they work with reasonable efficiency even in the winter. A heat exchange fluid is pumped (usually) through the collectors which transfer the heat to, in most cases, a hot water cylinder. Flat plate collectors have the advantage that they can be integrated into the plane of a pitched roof, fitting flush with the tiles. These systems can typically provide more than 50% of a home's hot water heating requirement and can be combined with other renewable energy technologies, such as ground source heat pumps and photovoltaic panels, to produce a carbon-neutral energy system.

### *Photovoltaic panels*

Photovoltaic (PV) systems convert sunlight into electricity through semiconductor cells. These are usually arranged in rectangular panels that can be combined in multiples to produce larger arrays. More electricity is produced with more sunlight, but energy can still be produced in overcast or cloudy conditions. They can be mounted on roofs or integrated with external cladding or glazing, sometimes replacing conventional materials, which helps to off-set their high cost. Importantly, their use and location must be considered as part of the architectural design. Incorporating PV into heating, cooling and ventilating systems can usefully off-set the carbon consumption of the electricity demands of these systems from the national grid.

### *Wind*

Whilst very large wind turbines and wind farms are becoming critical to the UK Energy Strategy, micro wind turbine technology is still in its infancy. Micro-turbines in urban locations can supply some renewable power to individual users such as for homes, schools and businesses but their performance is almost entirely dependent upon the availability of sufficient wind and a position that is unsheltered by trees, higher buildings and other obstructions. In places that are built-up, it is therefore unreasonable to expect micro-turbines to be any more than a small contributor to the required renewable energy strategy for a development.

Larger wind turbines are available that can supply a useful amount of electricity for a whole development. These capture the wind more efficiently than the very small domestic turbines but need to be substantially taller installations with longer blades. Noise and visual impact are also important considerations in the location of all turbines and the suitability and scale of the technology will largely depend on the site context and space available.

### *Combined Heat and Power (CHP)*

Large development projects have both the critical mass and financial ability to procure all of their energy requirements from sustainable sources, on-site. This can be achieved from either a single heat and power system or a combination of this and supplementary renewable energy measures, described above. CHP systems have an overall efficiency of over 80% compared to 33–40% for conventional power generation and are particularly suitable for mixed-use developments that create a substantial energy demand during the day, such as supplying the needs of businesses and schools.

A CHP system uses either steam or gas to generate power. They can burn bio-mass fuels including wood chips, wood pellets or short rotation coppice to produce high pressure steam to generate electricity. Alternatively they can also burn natural gas, converting it to heat and power more efficiently than normal suppliers. Steam can be recovered after it has been used to generate power, condensed and piped as hot water to heat buildings. Gas can also be derived from the anaerobic digestion of domestic green waste or silage in conjunction with farm slurry. These systems are particularly useful on the edge of urban/rural areas, adjacent to the potential supply of raw materials. Although these systems produce carbon emissions the total amount is no more than the carbon absorption of the fuel during growth. The processes would therefore be carbon-neutral were it not for the emissions from transporting the bio-mass to the plant.

Image 103



### *Micro bio-mass heating*

Although common in most of Europe, bio-mass heating is only beginning to be used in the UK and, as a renewable fuel, bio-mass (especially wood pellets) can also be burnt in small central heating boilers to serve a single home or block of apartments.

Whilst Government strategies (Non Food Crops, Climate Change and Micro-generation) are encouraging the supply of these fuels for bio-mass heating it will be some time before the supply chain is as robust here as it is in other parts of Europe. Within urban areas, the use of wood pellets within these systems, delivered by bulk tankers and stored in semi-basements, offers the greatest future potential.

### *Heat pumps*

A heat pump, which is about the size of a small refrigerator, can take a low temperature heat and upgrade it to a higher, more useful, temperature which can be used to provide heating and domestic hot water often in conjunction with an under-floor heating system. Several different types of heat pump systems are possible including:

- Deep-bore, ground source
- Horizontal, ground source
- Air source

They all extract solar energy from either the ground or the air and can easily produce sufficient heat and domestic hot water for a well-insulated home. The pipe network for a horizontal ground source system requires a relatively large area of land and would therefore only be possible within an urban environment on large plots that contain tracts of open space, such as school playing fields. Bore holes, however, are easily installed on most sites.

This technology is not necessarily carbon-neutral as electricity is required to drive a compressor and circulation pump and also to boost the temperature of stored hot water occasionally if this is also connected to the heat pump system. However, if installed in conjunction with an appropriately-sized photovoltaic array or wind turbine, the combined system would generate zero carbon emissions in use.

### *Designing to conserve water*

Essex is located in one of the driest areas of the country and therefore the conservation of water is a high priority. This can be achieved through the production of a Water Management Strategy for every development that specifies the following:

- The performance of water appliances
- The use of rainwater harvesting
- The use of Sustainable Drainage Systems (SuDS)

### *Performance of water appliances*

Although the consumption of treated water depends a lot on the behaviour of consumers, designers should seek to place as little demand on the network as possible by employing a variety of water conservation products such as low-flush toilets, spray taps and showerhead flow regulators.

### *Rainwater harvesting*

Rainwater that is not absorbed into the ground is invariably piped either directly into a watercourse or a sewage treatment plant. In times of high rainfall this adds to the risk of local flooding. Harvesting rainwater not only captures run-off before it enters the drainage system but also reduces consumption of treated water from the main supply.

Harvesting systems are linked to the supply system of a building, providing water for landscape irrigation or the flushing of toilets. Although regulations allow for the use of harvested rainwater for all purposes other than for drinking, concerns over potential health risks mean that its use should be limited to only these purposes.

Harvesting tanks are usually installed underground (under roads or landscaped areas), although basement or under-croft car parks are also suitable, and water pumped for use when required. Systems are designed only to draw on treated (mains supply) water when rainwater is not available. The storage capacity required for domestic properties in Essex is 5% of the rainwater supply or forecast annual demand (whichever is the lower figure), calculated as part of the water conservation strategy for the proposed development. The water storage capacity for non-domestic buildings should be calculated and designed separately.



New technologies are entering the market that can clean rainwater to make it suitable for drinking and other domestic uses. These systems show great promise but their use should only be considered if the local water supply company are satisfied as to the quality and reliability of the water produced.

All buildings should incorporate a rainwater harvesting and storage system of adequate capacity either individually or communally as part of a larger development.

All development is expected to achieve a minimum of 80% BRE Eco-home/BREEAM credits for water conservation.

A water conservation strategy should be submitted, as part of any planning application for 1 house or more or any commercial development, which demonstrates how this standard is to be reached.

### *Sustainable Drainage Systems (SuDS)*

Whilst a high proportion of rainfall will be directed to on-site storage tanks, when these are full, excess rainwater will also need to be retained on site. Whereas conventional drainage arrangements are designed to remove water as quickly as possible, Sustainable Drainage Systems (previously referred to as Sustainable Urban Drainage Systems) are designed to either re-install water into the ground or to hold it and facilitate its evaporation. The principal advantages of SuDS are in regulating the flow of water in times of heavy rainfall, thus reducing the risks of flooding and river pollution, and creating an amenity for urban dwellers.

Common components of a SuDS are:

- Permeable paving, infiltration trenches and soakaways to reduce surface run-off
- Filter drains and strips to prevent and reduce pollution
- Balancing ponds, wetlands, ditches and swales for the storage of surface run-off

All development, except very small schemes on sites of less than 0.1 ha, should manage excess rainwater so that it is retained either on-site or within the immediate area via a Sustainable Drainage System.



### Image 104

SuDS: water bodies can offer opportunities for quality designed spaces  
Malmö, Sweden

The SuDS surface water storage measures should be used for enhancing the environment of both the public and private realm. Not only can open areas of water contribute to the variety of plant habitats, which encourages biodiversity, they can also enhance the quality of the living environment. Bringing the natural environment into the heart of urban areas can enrich the quality of life for everyone. **(Image 105)**

Storm-water should be led away at ground level in open channels that lead to open ponds. Water should ideally be routed through areas of ground vegetation and suitable bio-habitat. Rainwater captured along heavily trafficked streets should feed into the SuDS via oil and contamination separators.

It is essential that SuDS are well maintained to be effective. Developers and those involved in the management and maintenance of the systems are advised to refer to the *Interim Code of Practice for SuDS*, National SuDS working group, July 2004 and relevant CIRIA publications available via [www.ciria.org/suds/publications.htm](http://www.ciria.org/suds/publications.htm)

SuDS may also provide unstructured play opportunities for children but this arrangement should only exist where the water is surrounded by occupied building frontages and, ideally, a reasonable amount of pedestrian footfall. Ponds should be very shallow with gradually sloping edges to provide habitat for marginal aquatic plants.

Different areas of the county have different types of soil. This will affect the performance of SuDS and may require additional testing to determine what system is most suitable.

### *Ecology and biodiversity*

Living with nature is possible within urban places. Wildlife can contribute substantially to the health and well-being of an urban community and be an educational resource for local schools. Vegetation can reduce the risk of flooding, contribute to pollution control, provide shade and reduce the effects of wind created by streets. There are a variety of good reasons why natural habitats should form part of higher density urban developments. They can significantly increase the quality of residential and mixed-use urban areas and, from a developer's perspective, have the potential to contribute to the market value of new development.

Effective protection of the environment is one of the Government's key sustainability objectives, to be achieved simultaneously with economic growth and employment, social progress and prudent use of natural resources. It requires protection of existing species and habitats, as well as management and aftercare of areas that are to be retained, enhanced or created.

Essex has a rich variety of urban wildlife. As well as ancient woodlands, grassland and wetlands, urban sites can provide a refuge for once widespread plants and animals; industrial land, urban commons, gardens and buildings can offer unique habitats which often support uncommon species and unique assemblages of plants. Parks, cemeteries, allotments, railway sidings and derelict land all make a significant contribution to biodiversity in urban areas.

#### **Image 105**

Ecology park, Millennium Village,  
London



### *Planning for biodiversity*

In general, new developments in Essex will be expected to enhance existing biodiversity and to create new habitats together with the resources for the management of those habitats into the future.

Developments can provide many opportunities for biodiversity as part of good design and these should be maximised. Furthermore, all developments should ensure that networks of habitats are maintained to prevent fragmentation and isolation.

Biodiversity should be considered within the Context Appraisal and ecological surveys undertaken where appropriate at the earliest stage. An Ecological Strategy should be produced for each development by a professional ecologist as part of the overall design package. The Ecological Strategy should be guided by what is appropriate for biodiversity for the particular site and should include consideration of the ecological surveys.

The Ecological Strategy should inform a Scheme of Management, which should be provided to demonstrate how any habitat or vegetation is to be established and managed in the future. This would be based on information from ecological surveys and the Ecological Strategy.

The Essex Biodiversity Project (EBP) has produced guidance for planners and developers entitled *Integrating Biodiversity into Development*. The most up-to-date version can be found through the EBP website at [www.wildlifeandplanningessex.org.uk](http://www.wildlifeandplanningessex.org.uk). See also *Biodiversity by Design – A Guide for Sustainable Communities* (Town and Country Planning Association, 2004).

### *Protection of existing habitats and species*

Some areas of habitat are statutorily protected and have international or national designations for the particular animals and plants which they support. These reflect the relative importance of the sites or the species. There is a general presumption against development that may harm any site of international or national importance. In addition, non statutory areas exist which are often referred to as Local/County Wildlife Sites.

Statutorily protected plants and species need special consideration but can co-exist with development if adequate site management arrangements are in place.

In addition, the Ecological Strategy should consider habitats and species listed in the UK and Essex Biodiversity Action Plans.

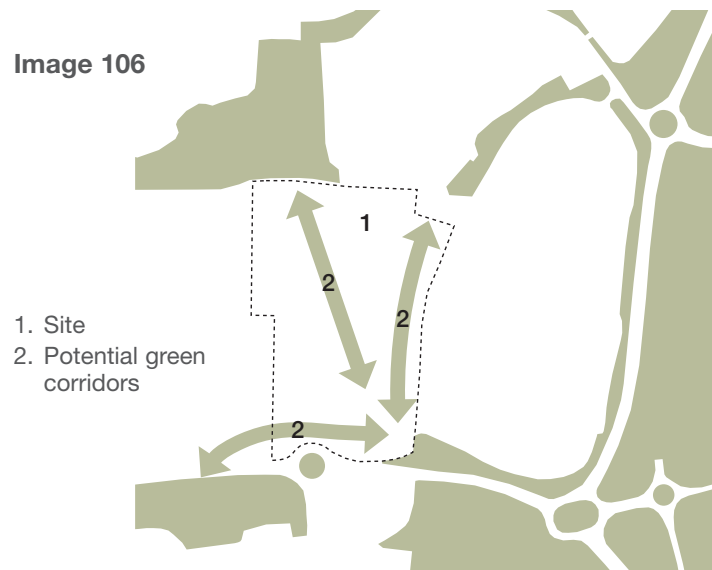
Whilst brownfield sites may be contaminated and have poor soils they can also have a high ecological value and the design of new development in these locations needs to be considered with special care. A comprehensive site de-contamination proposal, for example, is likely to destroy the special conditions that produced the habitat that has supported any flora or fauna on the site.

### *New opportunities*

In general, new development should include measures to encourage biodiversity by creating varied habitats and a rich diversity of trees and planting throughout the built environment. Preferred habitats for enhancement and creation will be those listed as of principal importance in Government Circular 06/2005 and highlighted within the UK and Essex Biodiversity Action Plan.

Within high density urban developments green public space provides one of the main opportunities to incorporate biodiversity. Water management strategies should consider opportunities for wetland habitat where possible. The Context Appraisal will assess how green spaces and habitats within the locality can be linked to provide corridors for the movement of wildlife.

**(Image 106)**



### *Buildings and biodiversity*

Various opportunities exist for buildings to support biodiversity and it is desirable that habitats be integrated into the design of buildings. Consideration should be given to the use of green roofs and planting being allowed to take hold on facades, roof terraces and balconies by providing climbing wires and planters. The popularity of the conservatory suggests that there is a desire to merge internal and external spaces where planting can be brought inside and the garden or balcony used as an outdoor living area.

Green roofs can support large and elaborate vegetation, including trees, using deep soil bases. These are referred to as 'intensive' green roofs. Alternatively, they can support mainly mosses and sedums using shallow soil layers and are referred to as 'extensive' green roofs.



**Images 107 and 108**

Examples of green roofs

Intensive green roofs are flat and usually require additional irrigation, ideally from harvested rainwater stored in on-site tanks. The deeper soil layer has structural implications for the building that needs to be designed to cope with the extra imposed weight. When mature, these roofs often have the appearance of any typical, planted garden or park. Places such as the deck above communal parking in higher density development can be designed as an intensive green roof.

Extensive green roofs can be laid on a roof pitch of up to 30 degrees and are lightweight but still provide additional thermal insulation and encourage biodiversity.

Brown roofs are flat roofs that can be used to recreate brownfield habitat. They can support rare plants and animals that can tolerate the conditions of brownfield sites, using a mix of aggregates as the substrate for natural colonisation by plants. This option would be particularly suitable where the designer wished to recreate habitat lost through redevelopment or where BAP species within a particular locality would benefit from some additional areas of this type of habitat.

Nesting boxes and other spaces for birds and bats should be provided on buildings or in communal green spaces as part of a comprehensive Ecological Strategy for the development. Specially designed bricks are available to provide roost sites for bats.

## Image 109

Greening of buildings – important in creating sustainable developments  
Vauban, Freiburg, Germany





### *Green Points system*

The Green Points system aims to assist developers in providing ways of including biodiversity and landscape benefits. Points are awarded to measures that contribute to the biodiversity within new development. This must be used together with the above guidance on biodiversity. Proposals should be in addition to protection of statutory sites and protected species. The advice of an ecologist should be sought on biodiversity and a landscape architect can advise on landscape design.

Areas to be developed should reach a Green Points score of at least 100 points per hectare. This can be achieved in different ways and the designer – with the advice of an appropriately qualified ecologist and landscape architect – can select the preferred mosaic of ecological and landscape features that contribute to the Ecological Strategy and landscape proposals for the site. The following basic table (overleaf) suggests a range of options to reach the full score, after Biodiversity Action Plan habitats and species have been considered. The type and combination of measures will depend on the individual conditions and opportunities on each site.

The Green Points system should be seen as indicative and provides the background context for devising development projects. With respect to biodiversity elements, a balanced judgement is still required by a suitably qualified and experienced ecologist taking into consideration what is appropriate for the area, including consideration of surrounding habitats, soil type and previous land use. The ecologist should interpret the Green Points system and clearly present and justify the measures they feel are appropriate for the development. Innovative designs can also be considered. Further information on the definitions can be found in Appendix 5.

Resourcing management of non-statutory sites will enable developments which do not themselves provide sufficient new habitat provision (or minimal provision) to contribute to other local biodiversity and geological conservation and enhancement, consistent with PPS9. This again would need to be lead by an appropriately qualified ecologist.

**The Green Points table must be used with the above guidance on biodiversity, not in isolation.**

The Green Points table below can be used to see if a development achieves the required point score.

SITE AREA (HA)	1
MIN POINTS REQUIRED PER HECTARE	100
TOTAL POINTS REQUIRED FOR SITE	100

Ingredient	Total area or numbers of measure achieved	Unit of measure	Points awarded per measure	Totals	Max points available per hectare
Plants with good sources of nectar, berries, seeds or nuts		Per 10 sq m	0.25	0	25
Dry habitat with plants requiring little water		Per 10 sq m	0.25	0	50
Wetland habitat – e.g. ponds, lakes, reed beds, ditches (with native marginal planting) as part of a SuDS		Per 10 sq m	0.3	0	50
Area designed to accommodate climbing plants on buildings and structures (vertical area coverage)		Per 10 sq m	0.5	0	25
Tree planting (locally native species)		Per tree	0.75	0	40
Bird boxes or other nesting provisions		Per box	0.2	0	10
Bat boxes or other roosting provisions		Per box	0.2	0	10
Green roofs		Per 10 sq m	0.5	0	100
Brown roofs		Per 10 sq m	0.5	0	100
Enhancement of BAP species/habitat		Per 50 sq m	5	0	100
Creation of BAP species/habitat		Per 50 sq m	5	0	80
<b>POINTS TOTAL</b>				<b>0</b>	

### How to use the Green Points system

1. Insert site area (ha) to calculate the numbers of points required for the site.
2. Fill in each area/number of measure achieved. Depending on the particular situation, different measures might be more appropriate than others. Some sites might be more suitable for wetland habitat, while others might be more appropriate for dry habitat. On sites that are very densely developed, provision for climbing plants and green or brown roofs help towards achieving the required point score. On sites adjacent to BAP species habitat, the creation and enhancement of BAP species habitat might be an appropriate measure.
3. Check if the required score is achieved.

An interactive digital version of the table can be found on the Essex Design Initiative website.

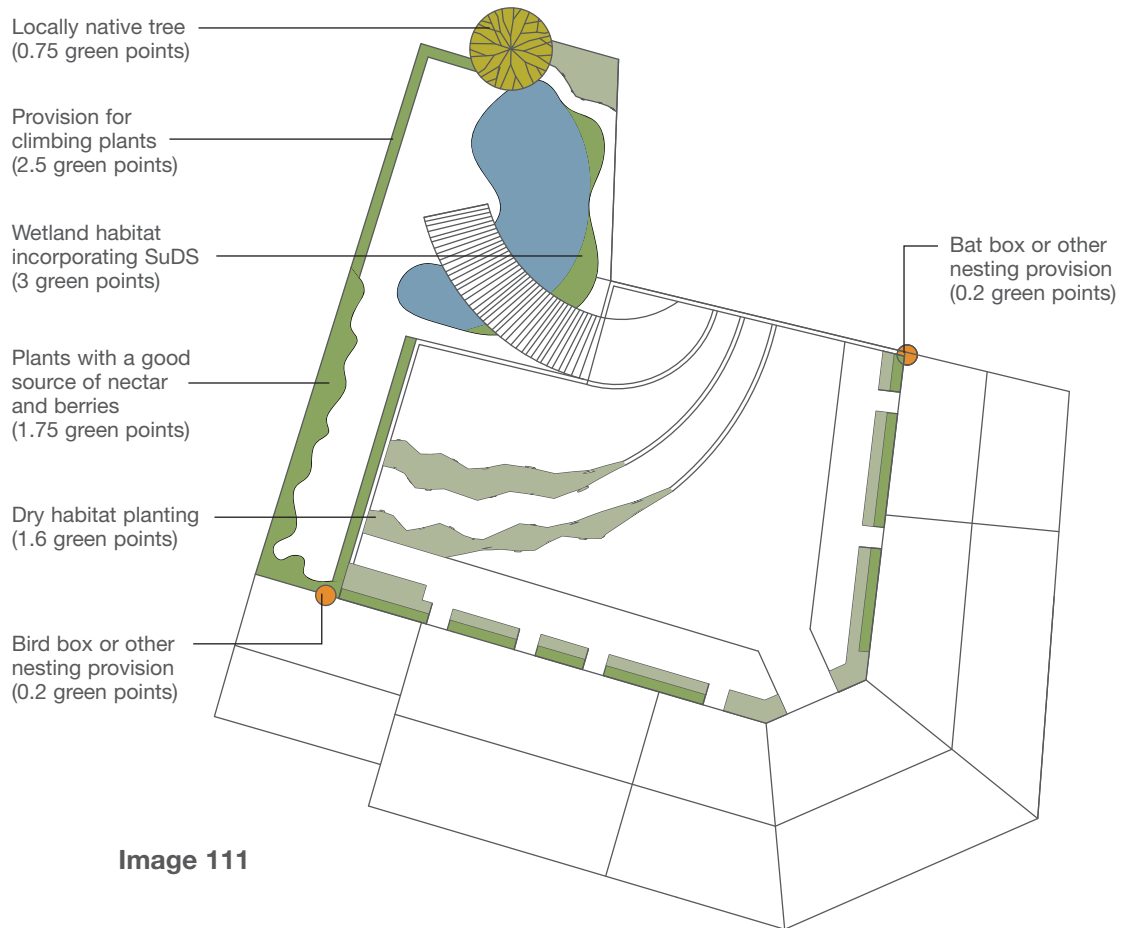
153



**Images 110**

Customisation by planting is common in urban developments

**Image 111** shows how the required Green Point score can be achieved on a particular site. The example shows a 0.1 ha development which reaches the required Green Point score of 10 through a range of green elements. The combination in the example is just one way to show how the score can be achieved. Many other combinations are possible.



**Image 111**

SITE AREA (HA)	0.1
MIN POINTS REQUIRED PER HECTARE	100
TOTAL POINTS REQUIRED FOR SITE	10

Ingredient	Total area or numbers of measure achieved	Unit of measure	Points awarded per measure	Totals	Max points available for the site
Plants with good sources of nectar, berries, seeds or nuts	35 sq m	Per 10 sq m	0.5	1.75	2.5
Dry habitat with plants requiring little water	32 sq m	Per 10 sq m	0.5	1.6	2.5
Wetland habitat – e.g. ponds, lakes, reed beds, ditches (with native marginal planting) as part of a SuDS	60 sq m	Per 10 sq m	0.5	3	5
Area designed to accommodate climbing plants on buildings and structures (vertical area coverage)	50 sq m	Per 10 sq m	0.5	2.5	2.5
Tree planting (locally native species)	1 tree	Per tree	0.75	0.75	4
Bird boxes or other nesting provisions	1 box	Per box	0.2	0.2	1
Bat boxes or other roosting provisions	1 box	Per box	0.2	0.2	1
Green roofs	-	Per 10 sq m	1	0	10
Brown roofs	-	Per 10 sq m	1	0	10
Enhancement of BAP species/habitat	-	Per 50 sq m	5	0	10
Creation of BAP species/habitat	-	Per 50 sq m	5	0	8
<b>POINTS TOTAL</b>				<b>10</b>	

### Example calculation

35 sq m (of plants) ÷ 10 sq m (unit of measure) x 0.5 (points per measure) = 1.75 green points

## 6.4 Community Criteria

Careful planning and sensitive design of new development can make a significant contribution to the quality of life for existing places and future occupiers. It can be a catalyst for improvement and urban renaissance.

This guidance promotes ways in which sustainable communities can emerge by both addressing existing weaknesses in urban areas and by ensuring new development is designed for a better balance of housing tenure and a finer grain of economic mix from the outset. Concentrated pockets of deprivation may require broader actions to resolve, but it is crucial to begin to match local need on housing, employment and services through the opportunities provided from private investment.

Creating places that are adaptable is crucial for long-term robustness. Urban fabric is expensive to alter and it therefore makes sense to ensure that buildings and public spaces are capable of adapting to the various needs and unknown changing demands of the people that occupy these spaces. Such flexibility will, for example, allow people to stay within their own homes if their circumstances change or their workspace as an enterprise grows ([www.the-edi.co.uk](http://www.the-edi.co.uk)).

Through the Context Appraisal process, communities will be able to refine a vision for their future that is inclusive and sustainable and captures the opportunities arising from new development as a force for improvement.

### *Neighbourly urban design*

This guidance aims to change the way urban places are designed, maintained and managed; the purpose of which is to improve quality of life through sustainable measures. Existing and new communities are at the heart of these requirements and, as future users and clients, need to be involved at all stages from Context Appraisal to implementation and hand-over.

The aspiration for good urban design has been expressed throughout this document and, in addition to the big things, it is often the attention to detail which is most noticeable and appreciated – the meeting place in a sheltered corner with a bench positioned to face a nice view or the street light thoughtfully located opposite a building entrance and the raft of other design features that contribute to a neighbourly environment. A document that prescribed all these things would be very large and pointless. Every neighbourhood, street and community is different and every designer an individual. The aim of the Supplement is to assess and celebrate the

individuality of different places and respond with design solutions that are appropriate to this context.

Ultimately, it will be the responsibility of everyone to ask ‘How neighbourly is this design?’ and ‘Would I like to live there?’

### *Safe public places*

Being and feeling safe is a basic need that everyone has, yet many urban environments are not designed with safety in mind. Critically, they contain places where buildings have not been regarded as the backdrop for street life. They may face the wrong way or be set too far back or even hide behind walls and fences. All these configurations make places less safe than they could be.

Only by recognising the primacy of the street can progress be made. This principle has existed as planning policy guidance in Essex for the past 30 years and it requires constant attention. It provides the rationale for fronts and backs, for active frontages, for mixed-uses and for traffic calming. It dictates the position of building entrances, requires the avoidance of blank, windowless elevations and generally necessitates the delivery of design quality – for this space is of importance not only to the individual but to the town as a whole.

In many respects, the provisions within this Supplement to the Essex Design Guide all help to create a safe public realm. By re-balancing design effort and capital investment in favour of public space as opposed to private amenity the guidance aims to make all development outward-focused.

Well-designed, well-managed streets that are occupied by people are inherently safe places to be and every new development in Essex is required to demonstrate how it will contribute to this ambition.



**Image 112**

Well-supervised public open space, Freiburg

## 7.0 Applying the guidance: Development scenarios

### 7.1 Introduction

These drawn examples of possible developments relate to actual sites in Essex and their design has therefore been influenced by a local context. They are intended to demonstrate most of the provisions of the Urban Place Supplement and, of course, each scenario illustrates just one possible solution for any site. They have not been subject to a full Context Appraisal process and no implication is intended that these schemes would be acceptable to either stakeholders or the local planning authority.

#### *Building for Life*

Making an objective assessment of the design quality of development projects can be difficult and is often inconsistent. The Commission for Architecture and the Built Environment has produced a tool for designers, the community and others to help them assess schemes against a number of criteria. This is called Building for Life and is the nationally recognised benchmark awarded to new housing projects that demonstrate a commitment to high design standards and good place-making.

Whilst a few of the assessed qualities can only be determined for a project that has been built, each of the development scenarios within the Urban Place Supplement can be set against the remainder as a guide to the intended character, environmental standard and functionality of the development.



## 7.2 Town Centre

### *75+ dwellings per hectare*

This substantial site is located less than 800m distance from a major town centre. Its short side is adjacent to a busy street and bus route and the site is within a mixed-use environment.

Several interesting industrial buildings exist on the site and these have been retained and re-used for commercial, leisure and residential purposes. New buildings are either houses or apartments of between 2 and 4 storeys. Car parking is either placed under-deck with landscaping above, on-street within a communal multi-storey car park or, in a few cases, integral to the homes.

The block structure produces a fine-grained series of hard and soft public spaces and streets that improves the permeability of the surroundings, complemented by opportunities for children's play.

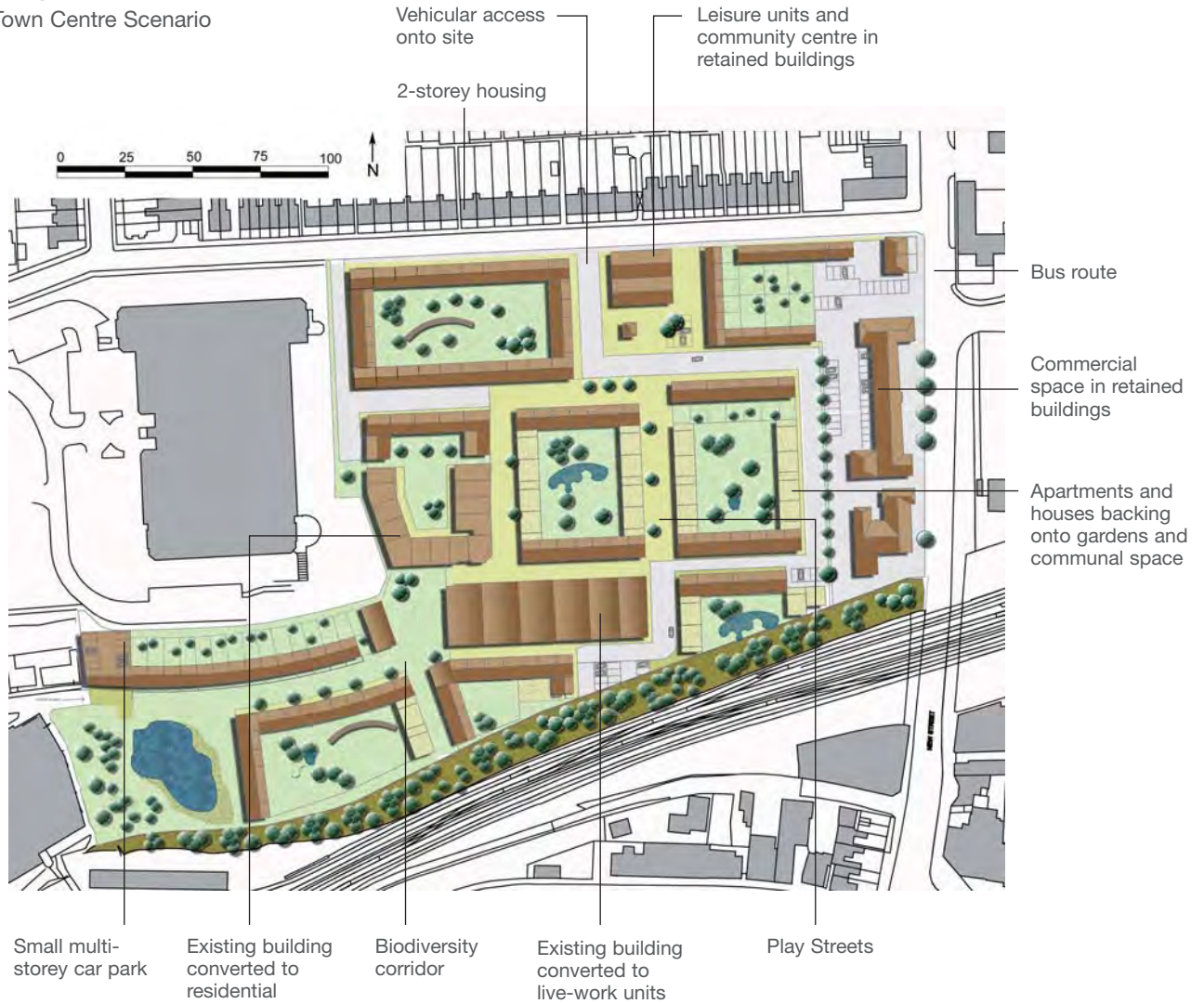
Retail and business uses will exist within the historic buildings along the main street frontage and a small community centre provides facilities for people living nearby. The street design here has been altered to cater for tree planting and on-street parking. Live-work units have been proposed within another retained factory building.

**Site area: 4 ha**

**Net density: 92 dph, inc. open space**

### Image 113

#### Town Centre Scenario





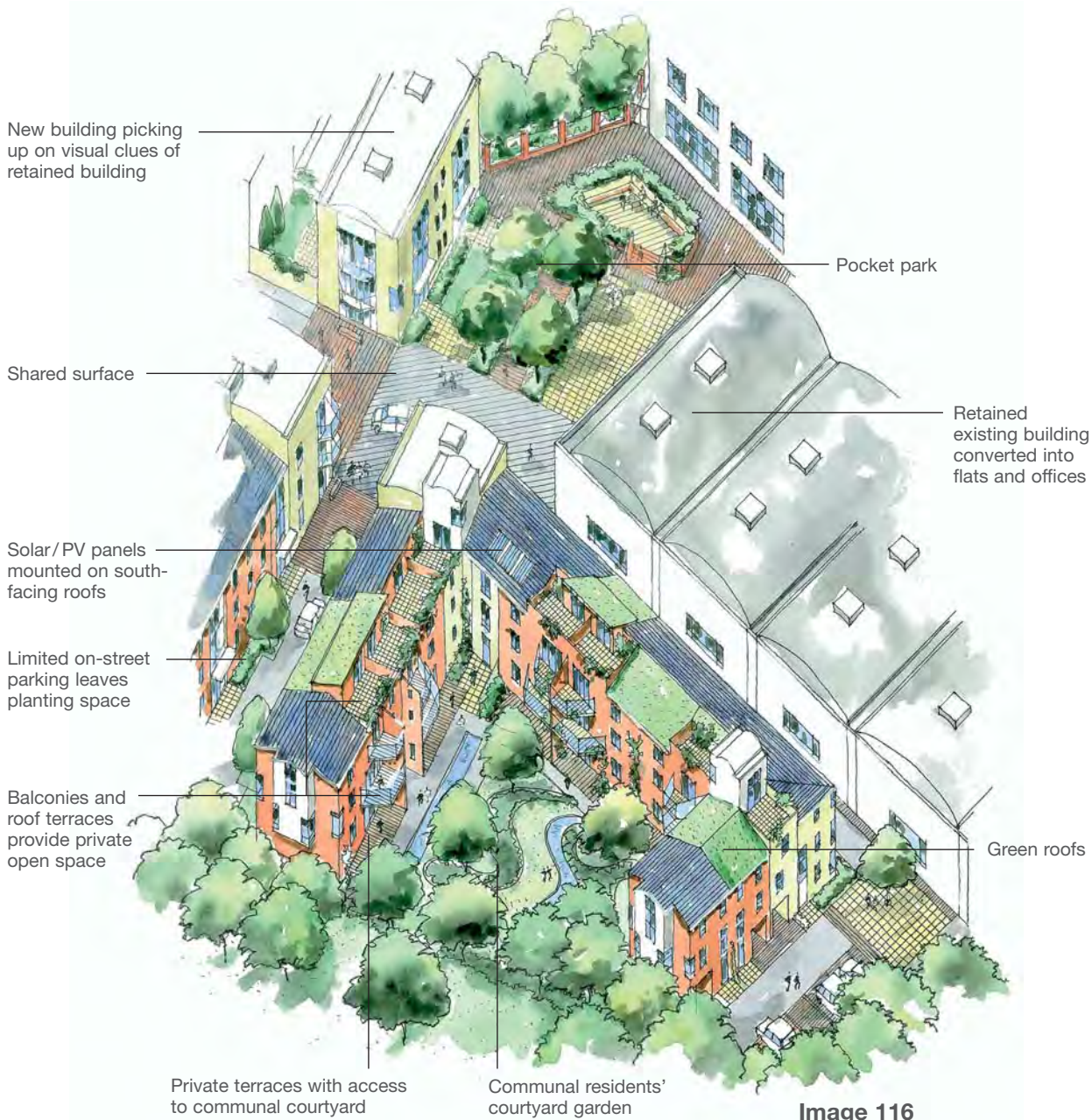
**Image 114**

Access to the new development from the main street



**Image 115**

Public open space showing converted water tower  
with new residential buildings



**Image 116**  
Detail of block including retained buildings and pocket park

## Building for Life

### Assessment of UPS development scenarios – Town Centre

The questions in the table below are derived from the Building for Life methodology and have been used to assess the scheme informally.

Character	
Are streets defined by a coherent and well-structured layout?	The public space network within the site has been designed to create a legible and straightforward environment. All routes lead somewhere or are designed to be extended into adjacent sites should this land be developed in the future.
Do buildings and layout make it easy to find your way around?	Buildings frame the streets and provide unambiguous signals to the pedestrian and driver of the way through the site. Streets and routes form a logical, deformed grid that is finer grained than the surroundings but necessary to achieve better connectivity.
Does the scheme exploit existing buildings, landscape or topography?	Several historic buildings and important trees exist on the site and these have been retained.
Roads, parking and pedestrianisation	
Does the building layout take priority over the roads and car parking so that highways do not dominate?	The layout of the buildings responds to the site opportunities and constraints and the adopted planning brief produced by the local council. Access through the site and public space is channelled along routes of varying degrees of enclosure, shape and length thereby reinforcing the designed priority of the place as a backdrop to pedestrian activity.
Are the streets pedestrian, cycle and vehicle friendly?	The design speed for traffic is less than 20 mph. A play street has been incorporated that gives the highest priority of use to pedestrians and cyclists.
Is car parking well integrated so that it supports the street scene?	Car parking is arranged in a variety of ways to suit site conditions and accommodation type. Some parking spaces are placed under decks that have gardens above whilst others occur on-street beneath trees or in rear parking courts. Clusters of parking spaces for visitors to commercial units exist as well as a hydraulic multi-storey car park for 36 vehicles. This flexible arrangement provides ample space for parking without allowing the car to dominate the street.
Does the scheme integrate with existing roads, paths and surrounding development?	Several points of access have been provided around the perimeter of the site although the railway line and the large office site form effective barriers to movement in these directions.
Are public spaces and pedestrian routes overlooked (in order that they may feel safe)?	All are overlooked by the active frontages of buildings.

<b>Design and construction</b>	
Is the design specific to the scheme?	The scheme has been design specifically for this site.
Is public space well designed and does it have suitable management arrangements in place?	The public space network on the site is designed to comprise soft and hard landscaping, a small urban park, squares and streets that encourage a degree of play and socialising. These assets combine to present a cohesive and attractive living environment that will be managed by the residents and business occupiers who each financially contribute to their own social enterprise company.
Do buildings or spaces outperform statutory minima, such as Building Regulations?	All buildings will achieve an Eco-Home/BREEAM Very Good – Excellent rating, as required by the UPS.
Do internal spaces and the layout allow for adaptation, conversion or extension?	All homes are built to a Lifetime Homes standard. Few homes could be extended, save for conservatories to the rear of the townhouses.
<b>Environment and community</b>	
Does the development have easy access to public transport?	The site is within a 2 minute walk of a bus stop on a route with a 15 min. frequency.
Does the development have any features that reduce its environmental impact?	<p>High Eco-Home/BREEAM rating (as above).</p> <p>Around 20% of the energy needs of the development is met from on-site generation of hot water and power from the use of solar heaters, wind turbines, photovoltaic panels and ground-source heat pumps.</p> <p>The scheme has scored 100 Green Points per hectare in its incorporation of biodiversity habitat.</p> <p>Water harvesting tanks are provided underground for irrigating the landscaping, washing cars, flushing toilets etc.</p> <p>The scheme incorporates a Sustainable Drainage System, reducing the likelihood of local flooding.</p>
Is there a mix of accommodation that reflects the needs and aspirations of the local community?	The needs and aspirations of the local community would be identified in a Context Appraisal, although this was not undertaken for this design exercise.
Does the development provide (or is it close to) community facilities, such as a school, park, play areas, shops, pubs or cafés?	This is a town centre site and is close to all major facilities. Anglia Ruskin University and the mainline railway station are 5 minutes distant on foot.

## 7.3 Neighbourhood

### *75+ dwellings per hectare*

Located on a busy street corner, the site lies within the centre of an established neighbourhood. Taking advantage of a gently sloping site, some private car parking has been placed under courtyard decks that have communal gardens above.

Spaces throughout the development have been designed with walking in mind and traffic behaviour is controlled by the design of the Play Street and the frequent change of direction traffic must take.

A variety of houses, apartments, business units and shops combine to create a development of mixed tenure, type, value and use. The 'intensive' green roofs above the parking decks can be used for socialising, playing or simply sitting outside. Other properties have private enclosed gardens.

In this scheme a small urban park has been created in the centre of the site with a pond that receives water as part of the Sustainable Drainage arrangements. Here, children can play, supervised by the residents in the homes that surround the park.

Communal waste recycling facilities are located at key points that allow easy access for collection vehicles.

**Site area: 1.5 ha**

**Net density: 88 dph, inc. open space**



Houses with private gardens

Communal garden above under-deck parking

Urban park

Site access for vehicles

Green roofs

Existing 2-storey housing

Future development site

Bus stop

Play Street

Houses with private gardens

0 15 30 45 60



Existing shopping street

**Image 117**  
Neighbourhood Scenario



Image 118

- 118. A shared surface street and a new residential building link the new development with the existing street
- 119. Residential buildings facing the urban park



Image 119



**Image 120**  
Neighbourhood

## Building for Life

### Assessment of UPS development scenarios – Neighbourhood

The questions in the table below are derived from the Building for Life methodology and have been used to assess the scheme informally.

<b>Character</b>	
Are streets defined by a coherent and well-structured layout?	The public space network within the site has been designed to create a legible and straightforward environment. All routes lead somewhere or are designed to be extended into adjacent sites should this land be developed in the future.
Do buildings and layout make it easy to find your way around?	Buildings frame the streets and provide unambiguous signals to the pedestrian and driver of the way through the site. Streets and routes form a logical deformed grid that is similar to the surrounding urban character.
Does the scheme exploit existing buildings, landscape or topography?	The gently-sloping site has been exploited to allow for partial underground car parking.
<b>Roads, parking and pedestrianisation</b>	
Does the building layout take priority over the roads and car parking so that highways do not dominate?	The layout of the buildings responds to the site opportunities and constraints. They either wrap around existing buildings to resolve existing exposed backs or they come together to form clusters or blocks that segregate public from private space.
Are the streets pedestrian, cycle and vehicle friendly?	The design speed for traffic is between 5 and 20 mph and a Play Street has been incorporated that gives the highest priority of use to pedestrians and cyclists.
Is car parking well integrated so that it supports the street scene?	Car parking is arranged in a variety of ways to suit site conditions and accommodation type. Some parking spaces are placed under decks that have gardens above whilst others occur on-street beneath trees or in rear parking courts. This flexible arrangement provides ample space for parking without allowing the car to dominate the street.
Does the scheme integrate with existing roads, paths and surrounding development?	Several points of access have been provided around the perimeter of the site some of which can be extended onto adjacent land in the future.
Are public spaces and pedestrian routes overlooked (in order that they may feel safe)?	All are overlooked, although pedestrians pass the side wall of a private garden on a footpath at the southern side of the site.

<b>Design and construction</b>	
Is the design specific to the scheme?	The scheme has been design specifically for this site.
Is public space well designed and does it have suitable management arrangements in place?	The public space network on the site is designed to comprise soft and hard landscaping, a small urban park and streets that encourage play and socialising. These assets combine to present a cohesive and attractive living environment that will be managed by the residents themselves who each financially contribute to their own social enterprise company.
Do buildings or spaces outperform statutory minima, such as Building Regulations?	All buildings will achieve an Eco-Home/BREEAM Very Good – Excellent rating, as required by the UPS.
Do internal spaces and the layout allow for adaptation, conversion or extension?	The scheme has been designed to allow for later extension onto adjacent sites should these become available for development. All homes are built to a Lifetime Homes standard.
<b>Environment and community</b>	
Does the development have easy access to public transport?	The site is within a 2 minute walk of a bus stop on a route with a 15 min. frequency.
Does the development have any features that reduce its environmental impact?	<p>High Eco-Home/BREEAM rating (as above).</p> <p>Around 20% of the energy needs of the development are met from on-site generation of hot water and power from the use of solar heaters, wind turbines, photovoltaic panels and ground-source heat pumps.</p> <p>Water harvesting tanks are provided underground for irrigating the landscaping, washing cars, flushing toilets etc. Excess rainwater is channelled into a holding pond within the small urban park.</p> <p>The scheme incorporates a Sustainable Drainage System, reducing the likelihood of local flooding.</p>
Is there a mix of accommodation that reflects the needs and aspirations of the local community?	Accommodation comprises of 33 duplex apartments, 53 apartments, 7 town houses with separate apartment or studio, 16 town houses and 6 commercial units. The needs of the local community have been identified in a Context Appraisal undertaken for this site.
Does the development provide (or is it close to) community facilities, such as a school, park, play areas, shops, pubs or cafés?	The site is very close to a wide range of community facilities including schools, shops, pubs, an adult learning centre, places of worship etc. A community centre is a 10 minute walk away.

## 7.4 Small Infill

### *70+ dwellings per hectare*

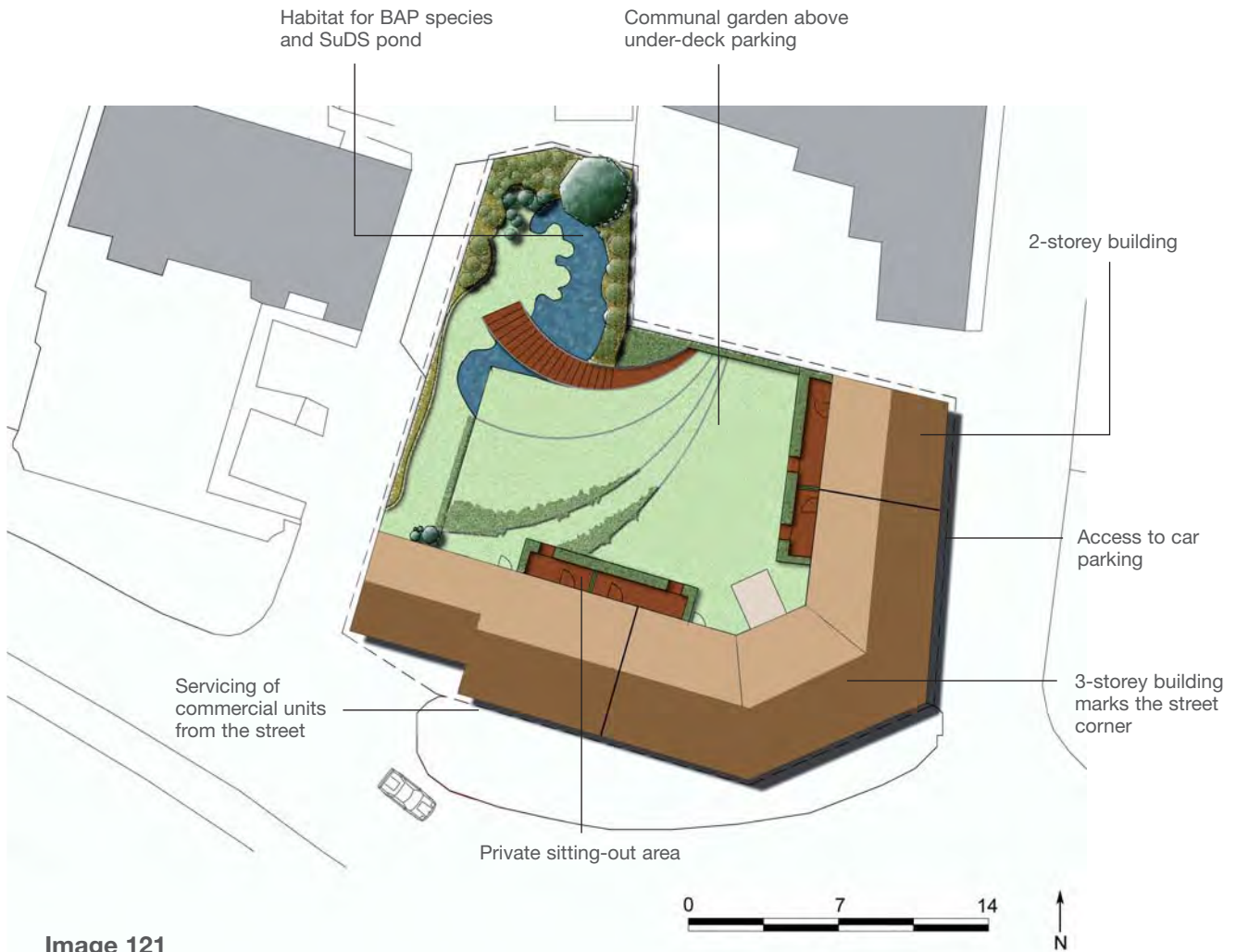
This site is located within less than 5 minute walking distance of the town's centre and its main railway station. The development is 2–3 storeys high and picks up the largely domestic scale of the surrounding context whilst still providing the higher density suitable for such a central location.

Situated on a street corner the site has a prominent position and marks one of the street entrances to the centre of the small market town. To take advantage of its central location, the development incorporates some commercial space at ground floor level.

On the first and second floor the development provides 10 dwellings of different sizes and tenure. Parking spaces are provided under a deck including provision for recycling bins and cycle parking. The car parking ratio is 1 space per dwelling. Above, the deck is used as private and communal open space for tenants. Part of the site has been left undeveloped and is used as 'natural space' and a pond for sustainable urban drainage that will help enhance local biodiversity.

**Site area: 0.1 ha**

**Net density: 100 dph, inc. open space**



**Image 121**  
Small Infill Scenario



**Image 122**

The small infill scenario shown  
in context with its surroundings





**Image 123**  
Small Infill

Communal  
open space

Wetland habitat

Climbing  
plants

Cut-away  
showing parking  
under communal  
open space

Lower building  
provides transition  
to existing  
buildings

Controlled access to  
under-deck resident parking

## *Building for Life*

### *Assessment of UPS development scenarios – Small Infill*

The questions in the table below are derived from the Building for Life methodology and have been used to assess the scheme informally.

<b>Character</b>	
Are streets defined by a coherent and well-structured layout?	No new streets are constructed in this development.
Do buildings and layout make it easy to find your way around?	Infilling a gap in the existing built frontage makes it easier to navigate around the town.
Does the scheme exploit existing buildings, landscape or topography?	The site is a flat, cleared area devoid of landscape.
<b>Roads, parking and pedestrianisation</b>	
Does the building layout take priority over the roads and car parking so that highways do not dominate?	Car parking is tucked away under a deck that is accessed from the side street.
Are the streets pedestrian, cycle and vehicle friendly?	n/a.
Is car parking well integrated so that it supports the street scene?	See above.
Does the scheme integrate with existing roads, paths and surrounding development?	See above.
Are public spaces and pedestrian routes overlooked (in order that they may feel safe)?	The scheme replicates the historic urban pattern of the town in that the fronts of buildings face public space and the street.
<b>Design and construction</b>	
Is the design specific to the scheme?	The scheme has been design specifically for this site.
Is public space well designed and does it have suitable management arrangements in place?	This scheme does not contain any additional public space.

## Design and construction *continued*

Do buildings or spaces outperform statutory minima, such as Building Regulations?	The development is intended to achieve an Eco-Home/ BREEAM Very Good – Excellent rating, as required by the UPS.
Do internal spaces and the layout allow for adaptation, conversion or extension?	The scheme has been designed to allow for later extension onto adjacent sites should these become available for development. Retail and office units on the ground floor can change their use and their internal partitions can alter according to tenant needs. All homes are built to a Lifetime Homes standard.
<b>Environment and community</b>	
Does the development have easy access to public transport?	The site is within a 5 minute walking distance of the main public transport node.
Does the development have any features that reduce its environmental impact?	<p>High Eco-Home/BREEAM rating (as above).</p> <p>10% of the energy needs of the development is met from on-site generation of hot water and power from the use of solar heaters, photovoltaic panels and a ground-source heat pump.</p> <p>The scheme has scored 100 Green Points per hectare in its incorporation of bio-diversity habitat. Part of the biodiversity strategy for the site has been the inclusion of an area of natural habitat.</p> <p>A water harvesting tank is provided within the semi-basement for irrigating the landscaping, washing cars, flushing toilets etc.</p>
Is there a mix of accommodation that reflects the needs and aspirations of the local community?	The apartments above the non-residential ground floor vary in size and have either 1 or 2 bedrooms. The needs and aspirations of the local community would be identified in the Context Appraisal, although this was not undertaken for this design exercise.
Does the development provide (or is it close to) community facilities, such as a school, park, play areas, shops, pubs or cafés?	The ground floor units are capable of accommodating uses that are considered to be needed and economically-viable. Community and professional opinion on this potential would be examined within the Context Appraisal.

## 8.0 Appendices

**Appendix 1** – Glossary

**Appendix 2** – Planning Context

**Appendix 3** – Context Checklist

**Appendix 4** – Context Appraisal Data Links

**Appendix 5** – Ecology and Biodiversity

## Appendix 1 – Glossary

Term	Description
ANGSt	Accessible Natural Greenspace Standards (ANGSt)
Adaptability or ‘Robustness’	The ability of places, spaces and buildings to accommodate either permanent or temporary change.
Active frontages	Street elevations that are enlivened by visible activity either within or outside the building. Source: Responsive Environments (Bentley et al)
BAP	Biodiversity Action Plan, see Integrating Biodiversity into Development page 146
Biodiversity	‘Biodiversity’ is short for ‘biological diversity’ and is the term used to describe the variety of all living things and the assemblages of plants, animals, geology and natural materials we call habitats. This includes the processes that occur in these natural systems. Source: Essex Biodiversity Project <a href="http://www.essexbiodiversity.org.uk">www.essexbiodiversity.org.uk</a>
BRE	Building Research Establishment
BREEAM	BRE’s Environmental Assessment Method BRE’s Environmental Assessment Method is used to assess the sustainability of buildings with respect to management, energy use, health and well-being, pollution, transport, land-use, ecology, materials and water. See <a href="http://www.breeam.org">www.breeam.org</a>
Code for Sustainable Homes	A new national standard for sustainable design and construction of new homes. See <a href="http://www.communities.gov.uk">www.communities.gov.uk</a>

Term	Description
Communal gardens	Shared private amenity space.
Community	Community is a very general term referring to the people living in a locality or to the locality itself.
Connectivity	See permeability below.
dph	Dwellings per hectare
EDI	Essex Design Initiative. An Essex County Council-led initiative to improve the quality of design.
Frequent local bus service	Bus service at 15 minute intervals in each direction.
Intensity	The degree to which a place is used by people. An essential component of successful streets and squares but a by-product of other factors.
Legibility	The ease with which the parts of a town can be recognised and organised into a coherent pattern.
Live-work units	Buildings that are specifically designed and used for a combination of living and working with dedicated spaces for each. Each function has direct access from public or semi-private space. An alternative term is 'work-homes'. See <a href="http://www.the-edi.co.uk">www.the-edi.co.uk</a>
Local Authority (LA)	Local Authority (LA) is a generic term for any level of local government in the UK.
Local bus routes	Routes serving local needs with typically lower frequency connecting into the existing bus network with a high frequency of stops.

Term	Description
Major Street	Principal thoroughfare for pedestrians, cyclists and vehicles within urban areas that link neighbourhoods, districts and towns together.
Neighbourhood Centre	A neighbourhood unit can be considered to be around 50 hectares within an area scribed by a circle of 400m radius which represents a 5 minute, comfortable walking distance for most able-bodied people. It should ideally contain a compact and varied housing stock, a variety of green spaces from parks to small squares, shops, health and learning facilities and sufficient choice of employment to satisfy many needs.
Permeability (visual and physical)	A measure of (visual and physical) accessibility into and within an area or space. Degrees of permeability may, in practice, differ between the person with local knowledge and the casual visitor. (NB there is some tension here between the desirability of legible layouts and obvious permeability and variety, where some connections may be slightly hidden or discreet.)
Play Street	A residential street that is designed for outdoor play and socializing, where the needs of the car are of secondary importance.
Private Space	Space that is designed for exclusive use of occupier(s) of a building, normally hidden from view and/or inaccessible from the public realm.
Public Space	Space that is designed for use by the community and where access is open to all. This includes streets, squares and parks.

Term	Description
Robust	Functions well in a wide range of, often unanticipated, future scenarios by being able to accommodate modification and adaption.
Spatial Context	The relationships or interactions that exist between uses, services and facilities within a specified area.
Space Syntax model	Space Syntax is a set of techniques for the analysis of spatial configurations of all kinds. See <a href="http://www.spacesyntax.org">www.spacesyntax.org</a>
Strategic Public Transport Route	Main transport corridor: 15 minute bus frequency in each direction.
Sustainable Development	Development that is located, designed, constructed and used in a manner that minimises energy consumption and waste whilst maximising biodiversity gain. Source: Rio Earth Summit definition
Sustainable Drainage Systems (SuDS)	Collective term for a variety of urban drainage structures that replicate the capacity of undeveloped ground to infiltrate, store or attenuate the flow of large quantities of water, while taking into account water quality and amenity value.
Unit of Sustainability	50 ha clusters of existing or potential urbanity is referred to as 'Units of Sustainability' within this guidance.
Urban Area	Places with a population greater than 10,000. This threshold, taken from work carried out by the Office for National Statistics ( <a href="http://www.statistics.gov.uk">www.statistics.gov.uk</a> ), should not, however, be used independently from the Context Appraisal



Term	Description
	<p>which may provide evidence for lowering the threshold in certain circumstances. The factors which the Context Appraisal may highlight that could affect this threshold are likely to be related to the range of existing shops and services.</p>
Urban Capacity	<p>The capacity of sites or areas to accommodate new buildings and activities. Usually expressed numerically, but taking into account the potential for mixed-use.</p>
Urban Grain	<p>The pattern of the arrangement and size of buildings and their plots in a settlement. An area's streets, blocks and pattern of junctions define its urban grain.</p>
Visual richness	<p>The degree to which surface interest and detail is either designed specifically for the benefit of the viewer or is incidentally derived.</p>
Walkability	<p><i>The Dictionary of Urbanism</i> (Cowan, 2005) defines walkability as the ease with which it is possible to walk around an area, from one point to another, or from housing to local facilities. Factors reducing walkability include distance, roads that are difficult to cross, and large street blocks with no routes through them. A distance of 400m can normally be walked in 5 mins; 800m take 10 mins to walk.</p>
Zone C	<p>Zones are often used in determining a shop's rateable value, Zone C being the least valuable part of a shop's potential trading area at the rear of a unit. Its floorspace is typically a quarter of the value of floorspace in Zone A which is nearest to the principal customer entrance.</p>

## Appendix 2 – Planning Context

The Regional Spatial Strategy (East of England Plan) identifies broad areas of growth within Essex and provides a strategy for sustainable development. Its policies provide a framework that will support the protection and enhancement of the built and natural environment; minimising the use of resources and environmental impact of travel; delivery of integrated patterns of land use and movement; sustaining vitality and viability of town centres; making use of previously developed land.

Local plans and local development frameworks and plans identify sites and locations appropriate for regeneration and development. These contain policies that require development to be well-designed and fit in with their surroundings and which meet the objectives of the RSS and Government advice contained in planning policy statements /guidance.

Planning Policy Guidance (PPG) and Planning Policy Statements (PPS) set out the Government's land use policies and are material to consideration of planning applications.

**PPS 1 Delivering Sustainable Development** recognises that good design is a key element in achieving sustainable development. Design should improve the character and quality of an area and be appropriate to its context. It recognises that factors that contribute to achieving high quality environments are the visual appearance of buildings and well planned spaces. It promotes efficient use of resources, energy efficiency and mixed-use developments

**PPS 1 Planning and Climate Change** is supplemental guidance which sets out how planning, in providing for the new homes, jobs and infrastructure needed by communities, should help shape places with lower carbon emissions and resilient to the climate change.

**PPS 3 Housing** sets out the national planning policies for housing, which regional planning bodies and local authorities should take into account in developing regional spatial strategies and local development frameworks. It introduces an approach to identification of housing land based on principles of sustainability. It encourages environmentally and socially sustaining communities, promotes mixed-use development and tenure, links greater intensity of development to sustainable locations and access to public transport, emphasises the importance of urban design in achieving high quality environments, recognises the legitimacy of contextual considerations and the needs of pedestrians and the role of landscaping in new development.

**PPS 9 Biodiversity and Geological Conservation** covers the protection of biodiversity and geological conservation through the planning system. These policies complement, but do not replace or override, other national planning policies and should be read in conjunction with other relevant statements of national planning policy.

**PPG13 Transport** aims to integrate planning and transport. Development should be located in places which are accessible and sustainable to reduce reliance on the car. It recommends that mixed-use developments are located in town and district centres, near major public transport and provide local facilities in locations near their clients.

**PPG15 Planning and the Historic Environment** sets out Government policies for the identification and protection of historic buildings, conservation areas and other elements of the historic environment. It explains the role of the planning system in their protection.

**PPG16 Planning and Archaeology** deals with archaeological remains and how they should be preserved or recorded both in an urban setting and in the countryside. It gives advice on the handling of archaeological remains and discoveries through the development plan and development control systems, including the weight to be given to them in planning decisions and planning conditions.

**PPG17 Planning for Open Space, Sport and Recreation:** covers open spaces, sport and recreation and how these aspects underpin people's quality of life. Well-designed and implemented planning policies for open space, sport and recreation are therefore fundamental to delivering broader Government objectives. These include:

- Supporting an urban renaissance
- Promotion of social inclusion and community cohesion
- Health and well-being
- Promoting more sustainable development

**PPS 25 Flood Risk** replaces the Planning Policy Guidance Note 25 (PPG25): Development and Flood Risk published in July 2001. The aim of the revision is to focus on national planning policy and to provide clarity on what is required at regional and local levels to ensure that decisions are made at the most appropriate level and in a timely fashion to deliver sustainable planning for development and flood risk. The statement makes the Environment Agency a statutory consultee for certain types of development at flood risk.

## Appendix 3 – Context Checklist

*Essex Design Guide, Urban Place Supplement*  
*Information required to inform Context Appraisals:*

Data	Value	Source of information
<b>Spatial context</b>		
proximity to town centre	within 800m	ECC website
proximity to neighbourhood centre	within 400m	Survey
proximity to public transport corridor	within 400m	Survey
<b>Built form context</b>		
urban form	pattern of streets and spaces pattern of plots and blocks existing buildings on site analysis of town growth materials building heights styles and identity skylines and roofscapes landmarks	Survey Local Authority Essex County Council Civic Societies
<b>Functional context</b>		
existing pattern of uses	type floorspace	Survey LA records
economic development initiatives	skills training start-up units business support	Learning and Skills Council Local Authority Essex Development & Regeneration Agency (ExDRA)
doctor surgeries		Primary Care Trust
healthy living centre/clinic		Primary Care Trust
secondary school		Essex County Council
primary school		Essex County Council
pre-school nursery		Local Authority

Data	Value	Source of information
community centres		
library		
public art	installations and strategies	Local Authority Essex County Council
green space	global structure	Survey Local Authority
sports fields	global provision	Survey Local Authority
play space	diversity of provision	Survey Local Authority
biodiversity structure	global structure local incidents and gaps BAP targets sites of international, national and local importance.	Survey English Nature Local Authority Essex County Council Essex Wildlife Trust & local groups
landscape character	topography landform soils ecology geology hydrology land-use, including recreation landscape access regeneration micro-climate	Survey Local Authority Essex County Council English Heritage Geological Survey Natural England
areas liable to flood		Environment Agency
historic environment	the Historic Environment Record listed buildings conservation areas	Essex County Council Local Authority Civic Societies English Heritage
<b>Operational context</b>		
car parking management	parking and servicing restrictions resident parking schemes enforcement	Local Authority

Data	Value	Source of information
public space management and maintenance	programmes and events quality of maintenance delivery mechanism	Local Authority Essex County Council
school place availability		Essex County Council
pre-school places		Operators
community centre availability		Operators
capacity of GP surgeries		Surgery Primary Care Trust
employment space availability		Agents Local Authority ExDRA
Community context		
community aspirations	additional meeting space recreation space youth facilities environmental improvements etc.	LA (inc. Community Assessments) Local councillors Partnerships
employment and business space demands		Local Authority ExDRA
housing need		Local Authority Registered Social Landlords
housing demand		Agents
education investment proposals		Essex County Council Local Authority
PCT delivery priorities and investment proposals		Primary Care Trust

## Appendix 4 – Context Appraisal Data Links

### **ECC Planning Data:**

<http://www.essexcc.gov.uk/>

### **Urban Centre maps with 800m plots:**

[REDACTED]

### **ECC Nurseries Project:**

<http://www.essexcc.gov.uk/>

### **Libraries**

<http://os.essexcc.gov.uk/libraries/library/>

### **Local Authority Arts Development Officers**

<http://www.essexcc.gov.uk>

### **The Historic Environment Record**

<http://unlockingessex.essexcc.gov.uk>

### **Local Authority Sports Officers**

<http://www.essexcc.gov.uk>

### **Children’s Nurseries**

<http://www.childcarelink.gov.uk>

### **Schools**

[www.essexcc.gov.uk/](http://www.essexcc.gov.uk/)

### **Primary Care Trusts**

[REDACTED]

### **Local Strategic Partnership: Community Strategies**

<http://www.goeast.gov.uk>

### **Flood Risk Maps**

<http://www.environment-agency.gov.uk/>

### **Homes for Life**

[REDACTED]

### **Car Sharing**

[REDACTED]

## Appendix 5 – Ecology and Biodiversity

### **Green Points system**

Biodiversity Action Plans (BAPs) contain Habitat Action Plans and Species Action Plans. There is a UK BAP, an Essex BAP and there are often BAPs for the relevant district. See web links for further information

or

### **Enhancement of existing BAP habitat**

Managing existing BAP habitat in order to maintain and improve its condition. This should be identified in the Ecological Strategy by the ecologist and management should be set out in the agreed scheme of management.

### **Creation of BAP species/habitat**

New BAP habitats can be established on sites where appropriate. These should be identified in the ecological strategy by the ecologist and management should be set out in the agreed scheme of management.

### **Provision of effective habitat linkages within and beyond the development to other habitats**

An effective habitat linkage between habitats aids and encourages the movement of species and helps to prevent isolation of species and habitats. This can be achieved by a number of ways and should be directed by the project ecologist.

### **Plants with good source of nectar, berries, seeds or nuts**

Greatest emphasis should be given to native species in accordance with BAP targets.

### **Dry habitat – with plants requiring little water**

Dry habitats with plants requiring little or no water are to be encouraged. The greatest emphasis should be on the conservation, enhancement and creation of BAP habitats and habitats for BAP species.

### **Wetland habitat**

e.g. ponds, lakes, reed beds, ditches (with native marginal planting) as part of Sustainable Drainage Systems (SuDS).

The greatest emphasis should be on the conservation, enhancement and creation of BAP habitats and habitats for BAP species.



### **Designed/potential area for climbing plants on buildings and structures (vertical area coverage)**

Greatest emphasis should be given where native species are proposed in accordance with BAP targets.

### **Loss of mature trees**

These may be homes for various species, such as bats. There should be no loss of veteran trees or ancient woodland under any circumstances.

### **Tree planting of locally native species**

Trees should be appropriate to the location of the development. Ideally stock should be of local provenance.

### **Bird boxes or other nesting provisions**

Nest boxes must be situated in appropriate locations. They must be at the right height and aspect, as well as ensuring that other needs of the birds can be met locally (e.g. sufficient food source). Other provisions, such as creating or leaving gaps or holes within the roof or walls of buildings can also be considered. For examples of how to provide homes for swifts see [www.londons-swifts.org.uk](http://www.londons-swifts.org.uk)

### **Green and brown roofs**

For further information see pages 148–149.

### **Integrating Biodiversity into Development**

See [www.wildlifeandplanninginessex.org.uk](http://www.wildlifeandplanninginessex.org.uk)

## Credits

The main body of the UPS text was written by officers of Essex County Council, Urban Design Team:

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**John Twitchen,** Sauce Consultancy – waste and recycling

**David Balcombe,** The Green Edge – sustainability and energy

This document has been endorsed by the Environment Agency.

The Commission for Architecture and the Built Environment (CABE) fully supports the aspirations of the Urban Place Supplement.

The UPS has been informed by study visits within the UK and to other parts of Europe between 2004 and 2006 and other events including 3 workshops attended by a large number of individuals from numerous organisations that were organised on the themes of:

*Quality is no Accident* – February 2005, Harlow

*Development in Context* – March 2005, Colchester

*Sustainable Development* – April 2005, Basildon

A summary brochure of these workshop findings is available along with transcripts from each event at [www.the-edi.co.uk](http://www.the-edi.co.uk)

The UPS was reviewed post-public consultation in line with Planning Regulation 18 with colleagues from ECC and Essex local authorities, which included:

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