



EPOA

Essex Planning
Officers Association



Essex County Council

Foreword

Essex Design Guide Urban Place Supplement

Work started on the production of this draft document in the winter of 2004. It arose from a concern of officers and Members of both the County Council and district councils that recent, compact urban developments in Essex were not very satisfactory. It was thought that often, new developments were seen as a threat to the liveability and infrastructure of local places, were out of context with their surroundings and were poorly designed. They also seem to have in common an unsatisfactory public realm.

Some of these completed schemes have proven to be unpopular both for the people that inhabit the buildings and for the community that adjoins them. This draft guidance aims to deal with these defects

The first period of consultation (technical consultation phase) on the Draft Urban Place Supplement began in November 2005 and resulted in numerous changes being made. This is the 2nd consultation draft and is the document that has been subject to a Strategic Environmental Assessment, as required by European Directive 2001/42/EC (EC, 2001). Following public consultation and further amendment as necessary, it is expected that the Urban Place Supplement will be adopted by local planning authorities as a Supplementary Planning Document and as such, should be used as a design tool by landowners and developers, thereafter helping to shape the delivery of sustainable communities in Essex.

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1. 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, 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 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, 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.

2. 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 adopted by local planning authorities. Nevertheless, the Essex Design Guide 1997 has been revised to take account of the requirements of Planning Policy Guidance 3: Housing on minimum housing density, and the opportunity has been taken to also refresh a limited number of sections. The revised document will be known as the Essex Design Guide (2005).

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.

The aim of the Supplement is to offer guidance for the design and assessment of compact urban development in Essex. 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 3 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 reducing the space allocated for car parking at ground level. It is therefore important to regard the guidance as a complete work rather than 'cherry pick' individual components which may be difficult to apply in isolation.

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.

Not all of the provisions are able to be adopted as supplementary planning guidance at the present time. The requirement for a very high standard of environmental performance may need the co-operation and agreement of the Department for Communities and Local Government for it to have the same weight as other elements of this guide. This is currently under review.

Each district has different timescales for bringing forward their Local Development Framework. However, it has been agreed that this document can be adopted under transitional arrangements as a Supplementary Planning Document and it is hoped that the majority of Essex districts will be able to add this supplementary design guidance to the range of planning tools and advisory notes that are presently available that set out to improve the quality of our towns.

3. 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 necessitates the determination of the spatial context of the site itself.

The location of a potential development dictates its minimum or maximum density and some aspects of its form. For instance, development opportunities that are close to either a town 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 page 10) are provided to help decide where in a conurbation a site is placed and Diagram 3 (see page 13) can then be used to determine which of 6 possible development forms is most applicable to any given situation.

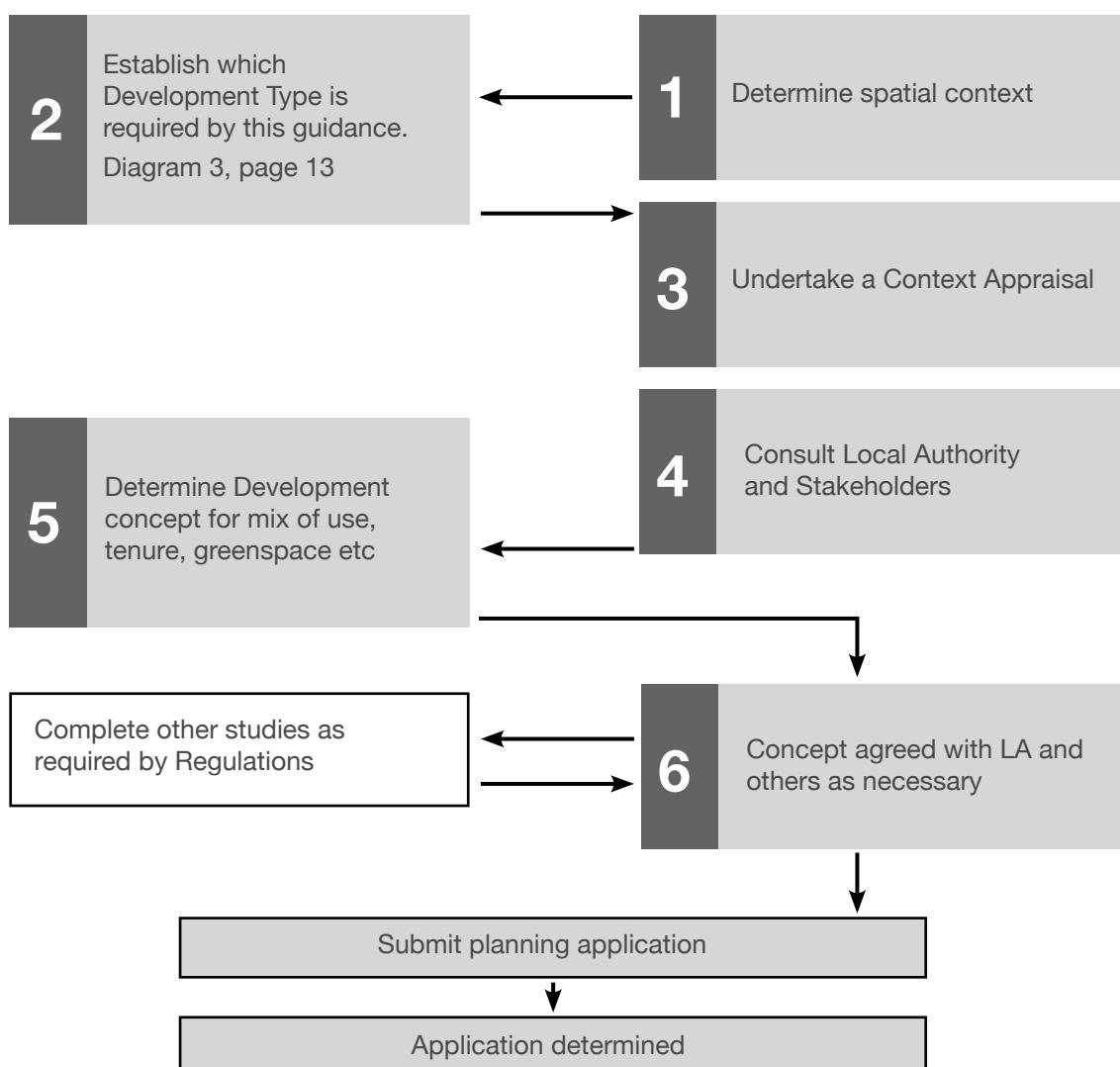
The next stage is to undertake a Context Appraisal, which should be a collaborative process undertaken in co-operation with the local authority and a variety of agencies. Section 4 (Urban context, page 7) sets out the requirements for this work.

The result of this analysis and discussion will be the determination of an appropriate development concept that responds to the specific context of the site location. The concept 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.

Importantly, this work (Context appraisal) should be ‘signed-off’ by the local planning authority, other agencies and the community prior to the submission of any planning application.

Following this process is required for either Outline or Full planning applications and is also recommended for the production of site development briefs, development frameworks and area masterplans.

Diagram 1: establishing the development form



4. Urban context

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'?

Conversely, 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 also able to capture the nature and extent of these demands.

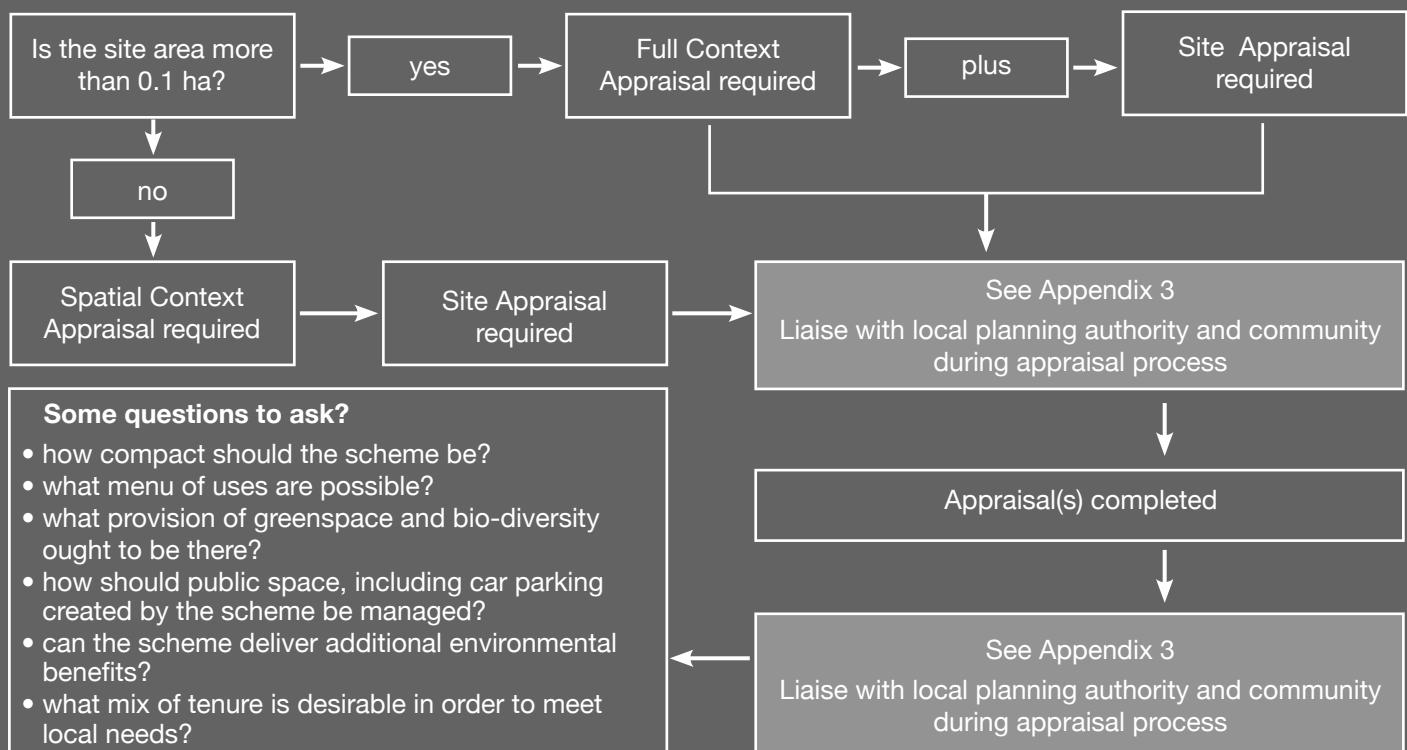
Higher density development above all needs to be in the right location. There is little point promoting compact development in places that are remote from local jobs, services and public transport. Indeed, it is positively harmful to the sustainability of the environment to do so. Therefore conversely, 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, a raft of additional reasons why this makes sense and these are explained in Section 6 Influences upon sustainability (page 61). This Guide therefore establishes rules 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 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 masterplan 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, health providers and although rarely has it been presented as a complete picture of local context. The requirement for a full Context Appraisal applies to 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 Spatial Context Appraisal will be necessary for sites in urban areas of 0.1 hectare or less (see Diagram 2 below).

Diagram 2: establishing the requirement for a context appraisal



Context Appraisal Methodology

(see Appendix 3 – Context Checklist)

Factors that need to be considered in this step-by-step, appraisal process are:

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 ECC website (see Appendix 4). Information on how to identify other spatial scenarios can be found on page 13.
- Proximity to urban centre (within 800m of centre point)
- Proximity to neighbourhood centre (within 400m of centre point)
- Proximity to public transport corridor (400m of bus route)
- Sustainable urban extension
- Large urban infill
- Small urban infill
- None of the above: refer to the Essex Design Guide

Now go to Appendix 5 for a summary of specific design requirements for each spatial scenario.

Step 2

Built-form context:

- Undertake a physical and desktop survey of the ‘unit of sustainability’ the site falls within. For urban centres, the Context Appraisal will cover a wide area as 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
 - Landmarks (of varying significance)

Step 3

Functional context:

- Identifying opportunities for diversification location and arrangement of different uses and assets within the area
- A comprehensive audit of urban diversity will be used in identifying 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 and these 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 ECC web site.

Step 4

Operational context:

- Management and stewardship of 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 both current arrangements and capacity and 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 are likely to be raised by them at the next stage.

Step 5

Community context:

Needs and aspirations

- The final step is to 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 can be built into the design of the scheme, such as accommodating a new children's centre, a GP surgery or a community meeting space.

Built Form Context: Images 9a-9c are examples of analytical studies following a site survey



Image 9a: Current Condition

1. Tower pulls one away from Town Centre direction
2. Development Site-Low density central view-should increase density to reduce dominance of car parking; create focal point leading towards town centre
3. Town centre hidden from view
- 4: Dark roof line and finishes provide datum to whole composition
5. Too dominant car park view



Image 9b: 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 roof datum level
5. Bank of trees complement roof/skyline



Image 9c: Current condition and development potential

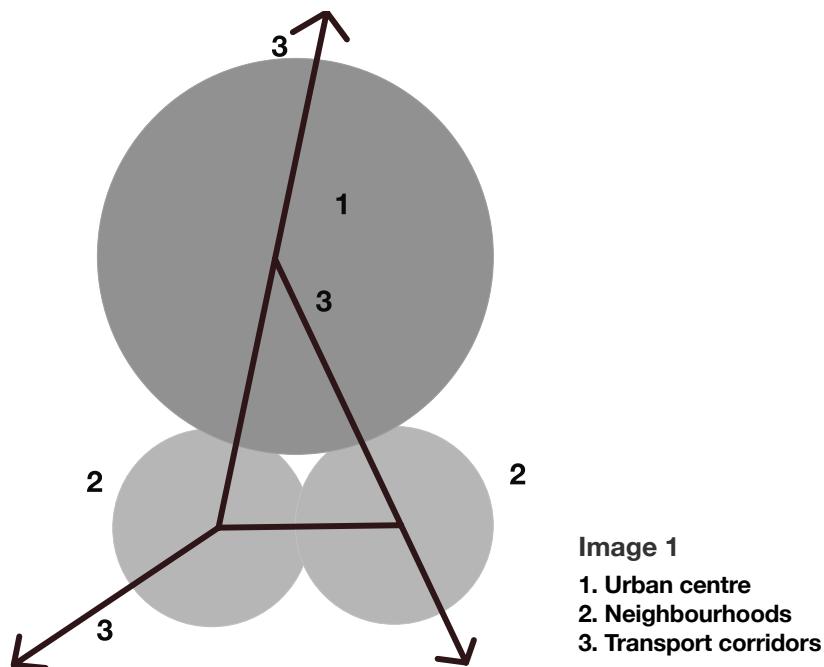
1. Offices fronting sheet
2. Vertical emphasis-chimneys
3. Brick water tower-retain historic building
4. Existing buildings-retain to create a sense of place
5. Ad-hoc industrial buildings suggest variety of materials
6. Roof skyline of recent development
7. Shop front buildings along street. Motorbike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

Spatial Context

Urban areas are invariably most compact, intensive and tall at their centre. This 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 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 urbanity that increases in density towards the centre of each neighbourhood. Preserving and reinforcing this hierarchy of density is the fundamental bedrock of the supplement.



Elsewhere, the relative compactness or dispersal of a town depends upon many factors but locations beyond these centres will almost certainly be recognisably less ‘central’ than the centre itself. Newly imposed, high densities in these areas would invariably be out of context with their surroundings. Therefore within the hinterland beyond the centres there will be a presumption against high densities unless a site is very well served by public transport. In these situations the site must be within 400m of a strategic bus route, with services of no less than 15 minutes apart (image 2)

In using this Guide the definition of the Spatial Context for compact, urban development can be summarised as:

Existing Urban Centre which is likely to have the following characteristics:

- Transport interchange
- Walkability 800m (10 mins) for large centre, 400m for small centre (see appendix 1 glossary) (town with population less than 35,000)
- Transport interchange and traffic management
- Range of shops
- Range of services
- Range of employment opportunities
- Building heights occasionally greater than 4–5 storeys

Existing Neighbourhood which is likely to have the following characteristics:

- Strategic transport route- bus route including 400m bus stops.
- Walkability 400m (5 mins)
- Range of shops
- Some services
- Some employment
- Building heights rarely more than 3–4 storeys

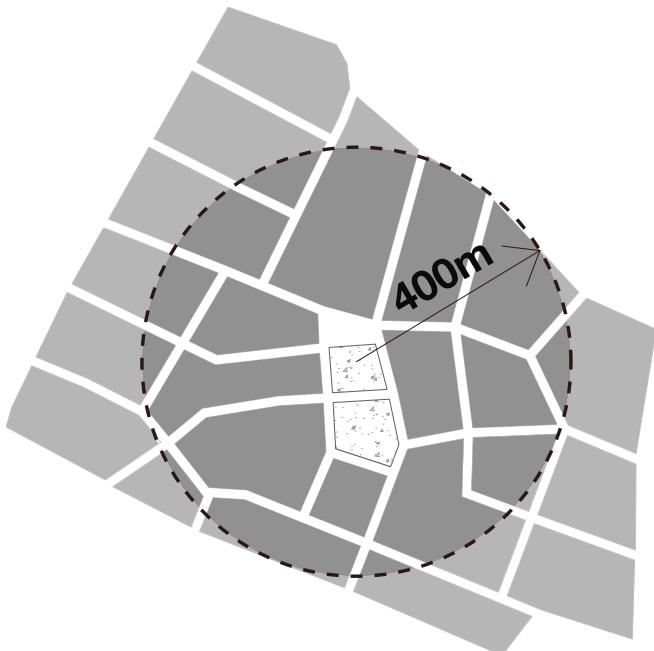


Image 2
Neighbourhood
(400m radius/5 minutes walking distance)

11

Existing Regeneration Area which is likely to have the following characteristics:

- Policy recognition within Local Development Framework (LDF)
- Brownfield land/buildings in need of repair
- High percentage of non-residential buildings but may include some residential
- Loss of some services/facilities
- Higher levels of community deprivation
- Neglected environment/contamination
- Complex, commercial economy

Sustainable Urban Extensions (at least 50 hectares) which is currently likely to have the following characteristics:

- Greenfield and occasionally, brownfield
- Adjacent to suburbia/urban edge
- Lack of strong urban character
- Landscape-dominant
- Poorly served by public transport
- Few urban facilities
- Inaccessible/remote

It is possible that an urban extension of 50ha. could contain around 2,000 homes, green space, community uses and 100,000sq m commercial space all within a fabric no higher than 4 storeys

Large Urban Infill (at least 50ha)

- 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 public transport routes

Small Urban Infill (0.1ha or less)

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

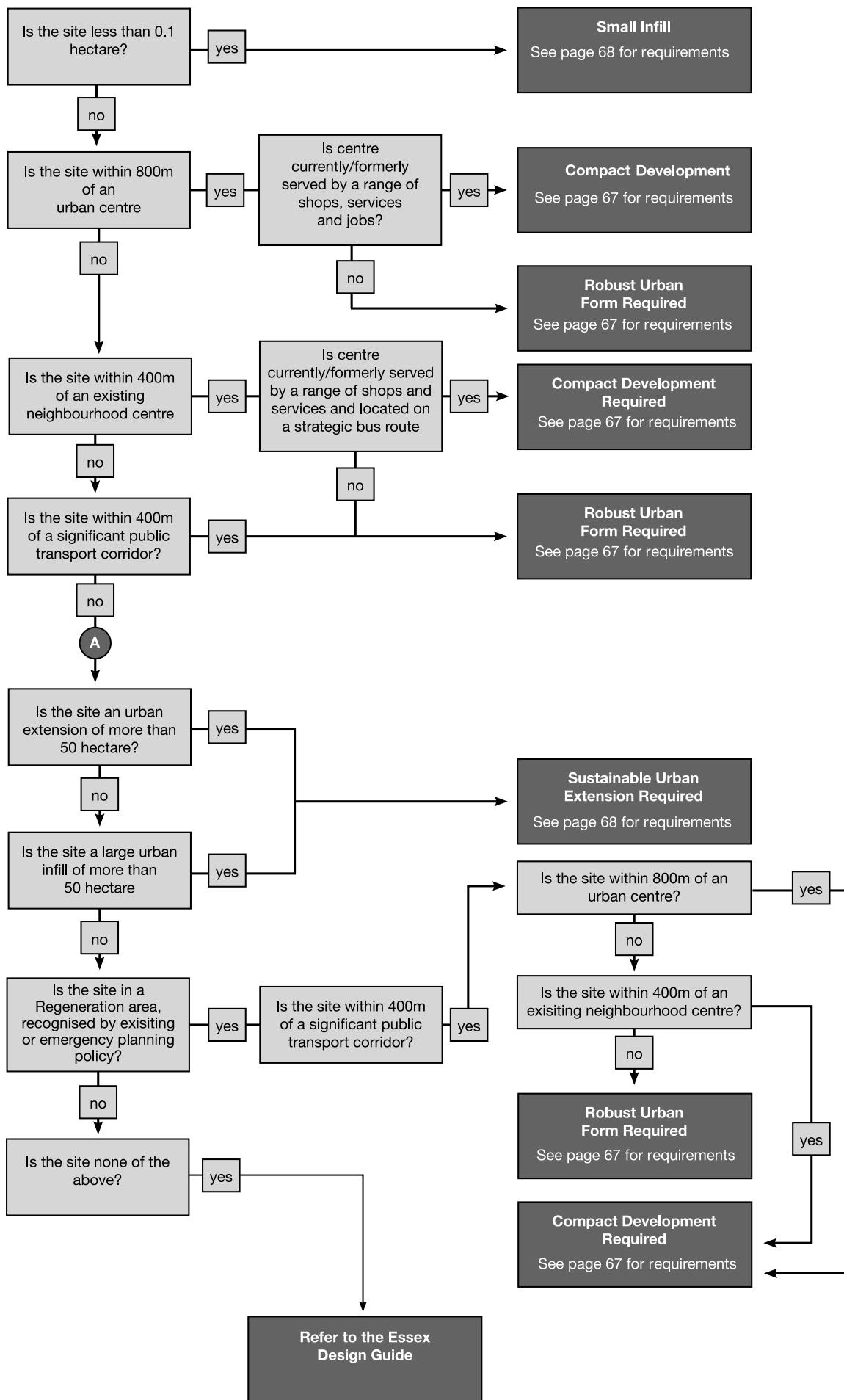


Image 4

- 1. urban centre
- 2. neighbourhoods
- 3. regeneration area
- 4. sustainable urban extension
- 5. large urban infill
- 6. small urban infill
- 7. railway station
- 8. green space
- 9. strategic bus route

Before proceeding, these definitions of spatial context need to be compared against a site proposed for development and the applicability of this definition agreed in writing with the local planning authority at the start of the Context Appraisal process. This is important as the permitted minimum density and development characteristics are established by this method.

Diagram 3: establishing the development type



Built Form Context

The Essex Design Guide (2005) 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 our 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.

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.

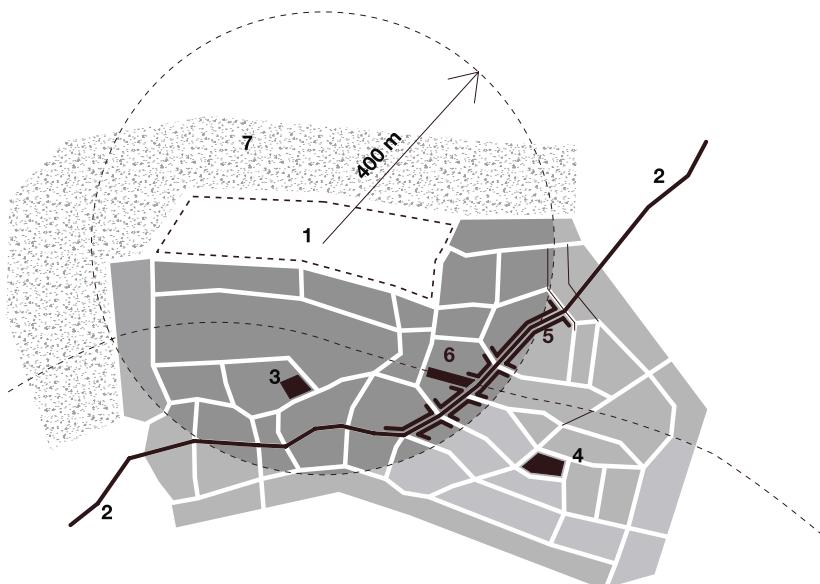


Image 5

Example of a site and its context

- 1. site**
- 2. strategic bus route**
- 3. creche**
- 4. school**
- 5. local shops**
- 6. railway station**
- 7. public open space**

Of course, the vast majority of urban areas have been subject to change over time. They often comprise of a mix of building style, form, height and materials. In very historic centres, these differences may be quite subtle but highly unified urban areas are rare and most are generally 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 (and 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. (Image 6)

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.

MICHAEL A ASHCROFT BUILDING



Image 6

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

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 Essex towns has evolved markedly and continues to do so.

This guide requires 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 previous damage done. 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.



Image 7

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 its 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 (T&C 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 study 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.

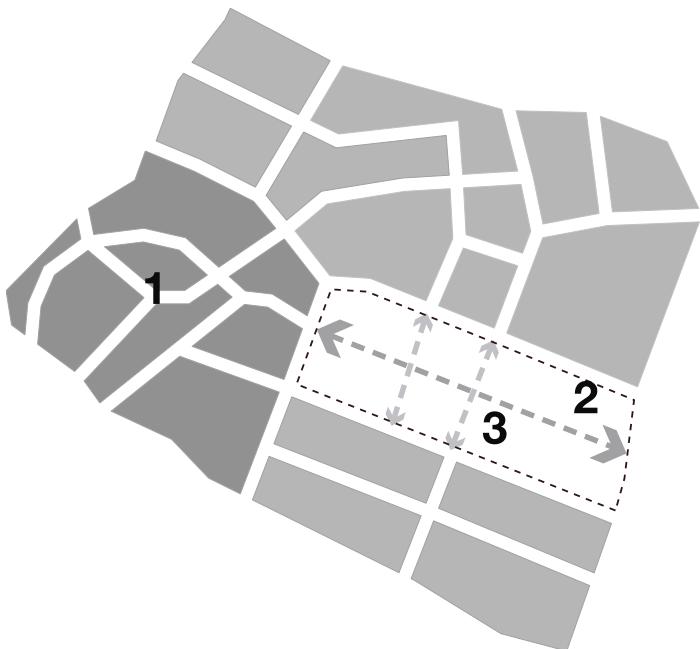


Image 8

Commercial centres of gravity/uses/movement

- 1. commercial centre**
- 2. main link with potential for commercial uses**
- 3. internal connections**

Additional information that is required from this spatial mapping includes areas vulnerable to flooding, bio-diversity structure of the area (an ecological survey of greater detail will be required as part of the Site Appraisal), location of health facilities and the present location and intensity of the movement network. A complete list of required data is contained in Appendix 2, page 107.

Although not essential, developers may also find it useful to broadly map property and rental values expressed per square foot or metre.

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 captures 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 floor space and the capacity of GP surgeries.

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 that reasonable and realisable needs and demands for space exists and to associate these demands with the known existence of 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 playspace 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.

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. They will work best through their transfer 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. They 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.

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 required 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. 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 web site (www.the-edi.co.uk).



Image 9

New schools as part of sustainable development infrastructure: Chancellor Park Primary School, Chelmsford

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, agreed by the stakeholders.

Mitigation of the impact of development may fall outside of these initial decisions but 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.

Essex County Council are shortly to launch on behalf of the Essex Planning Officers Association, a consultation draft on S106/planning gain as it relates to functions and services that are the responsibility of ECC and the results of this work will help inform future Context Appraisals.

5. Influences upon quality

Introduction

In describing the very best urban environments it is impossible to disassociate the quality of architecture with 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 that gives them a lasting quality that we often admire. Conversely, neglect, abandonment and renewal is 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 (2005) 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.

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 a more 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 shall be planned and designed by professional architects working alongside 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.

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. Re-development 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 10 –10a). 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 thus, 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 11)

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

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 will not be permitted.

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-grain, 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).

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 more choice.

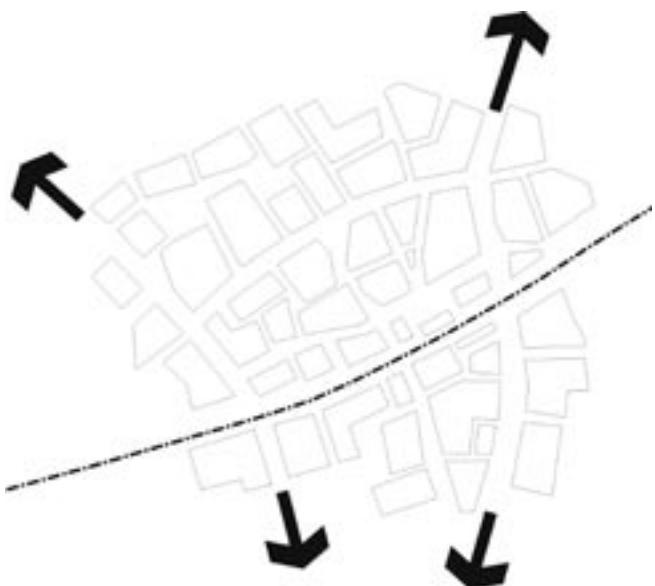


Image 10

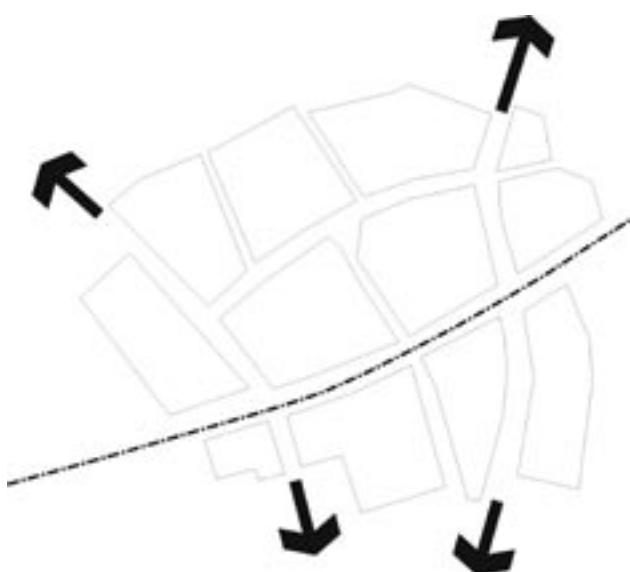


Image 10a

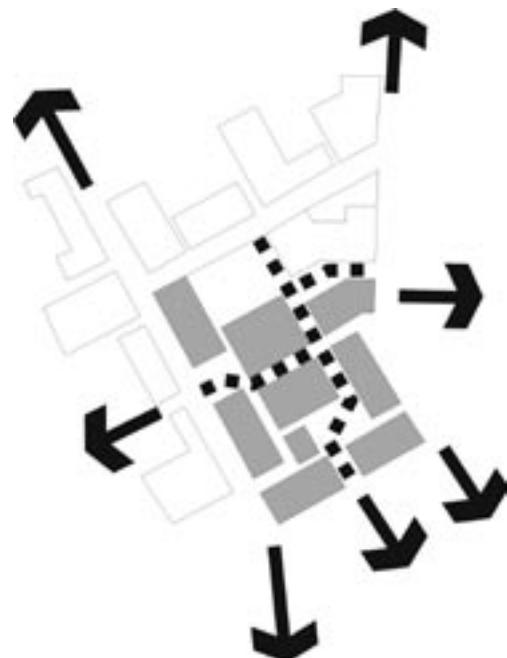


Image 11

- 10. Fine-grain street pattern
- 10a. Coarse-grain street pattern
- 11. 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, appendix 1) making it possible to design the alignment and shape of the public realm to ensure maximum flows are captured along preferred routes. (See Appendix 4)

Off-street footways must be designed to maximise personal safety with adequate lighting together with surveillance from surrounding buildings. The proposed movement network should not include the use of subways, unless surrounding conditions or site constraints determine. Otherwise surface level crossings and bridges are the only acceptable design alternatives.

Uses

Urban development must enable mixed-use to take hold and to flourish if the circumstances are right. Much depends upon detailed design but location on an accessible street network is 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 and leisure and cultural opportunities as well as services to the local area. New higher density developments located either close to existing services and facilities or on a public transport corridor are required to contain a mix of uses within the building and street blocks.

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 13

**Retail units, restaurant and offices make the Fulham Island Scheme a successful mixed-use development:
See case studies**

Mixed use along Major Streets

Notwithstanding the above, at least 50% of the ground floor frontage of development facing main streets should be allocated for non-residential uses other than vehicle parking.

The type of uses and block design will need careful consideration to minimise the possibility of conflict between uses with satisfactory access arrangements, noise generation and safety issues addressed (see pages 52 and 54).

All new development within a Town-centre, Neighbourhood centre, a Regeneration Area, a Large Urban Infill or a Sustainable Urban Extension will be required to 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 for specific sites and its proximity to a major street, as defined above.

Public Space

The success and popularity of urban environments relies strongly upon the design and quality of public space. 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. It 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 79.

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, illustrated and built, for example:

Streets – comprise highway space, meeting space, commercial space, green space, routes for utility and recycling infrastructure and play space. They can also be managed and maintained by a wide variety of organisations.

Green Space – comprise places for sport, socialising, exercise, playing, nature, water management, cultural activities and entertainment.

Invariably, the public space network, and the movement and activities they enable, 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.**

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. The result can be an ‘oversupply’ of green areas that are grossly underused that places 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 meet the design criteria below:

Essential criteria for all public spaces

- Part of a wider network, connected internally and to its surroundings
- Overlooked by building frontages
- Well-maintained (see page 51, management and maintenance)
- Accessible to all
- Biologically diverse
- Varied character and functionality, to meet identified needs

Every development is required to make a positive contribution to the public space system through the provision of quality streets, green space or both tested against the criteria overleaf. Local authorities are required to produce Green Space Strategies and these 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.

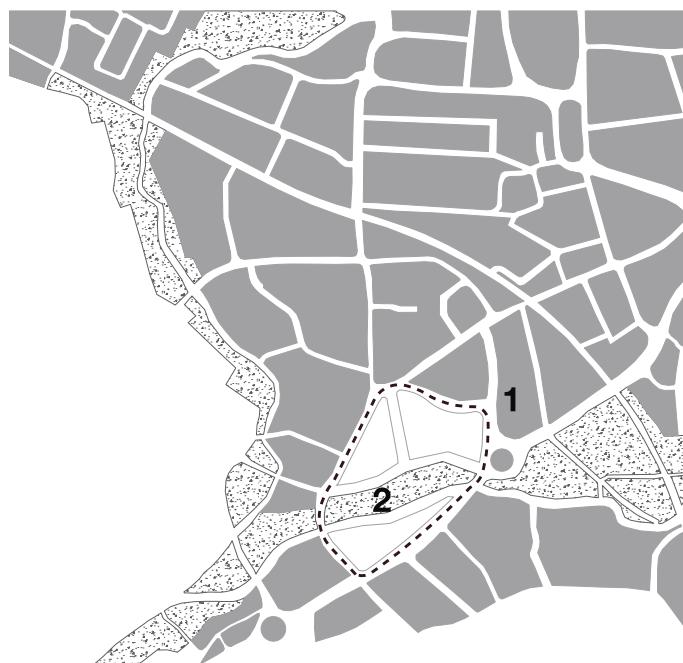


Image 16

1. the site

2. connecting the green space network

Components of urban public space

Streets – the space enclosed by the fronts of buildings.

Paths - neither streets or footways; under used but 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 – informal recreation. Landscape dominant.

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 local public space system will need to 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 will provide or contribute to public space and bio-diversity and most will incorporate green space as well, linked as best it can 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.



Image 19

A Pocket Park incorporating play space, USA

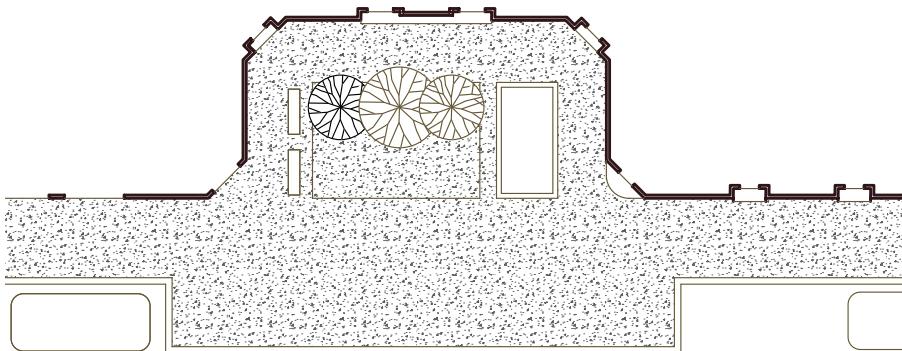


Image 21
Example of a pocket park

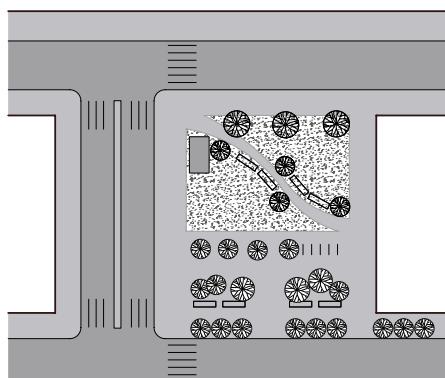


Image 22
Square

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 (Image 23).

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

- Scale
- Access
- Detailing
- Workmanship
- Adoption, management and maintenance
- Public art
- Enclosure
- Materials
- Continuity
- Microclimate
- Security and safety (see page 52)

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 must be designed to be accessible. Schemes which rely upon segregated provision for less mobile members of the community will not be acceptable (Image 24).

Designing new spaces within a development provides a special opportunity to combine a consideration of these elements with a close attention to detail. Pages 45-58 of the Essex Design Guide 2005 offer 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, street types for Essex (see page 36).

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.

These new street types are illustrated and described in Appendix 6.



Image 23

Public space with high standard of design, materials and maintenance



Image 24

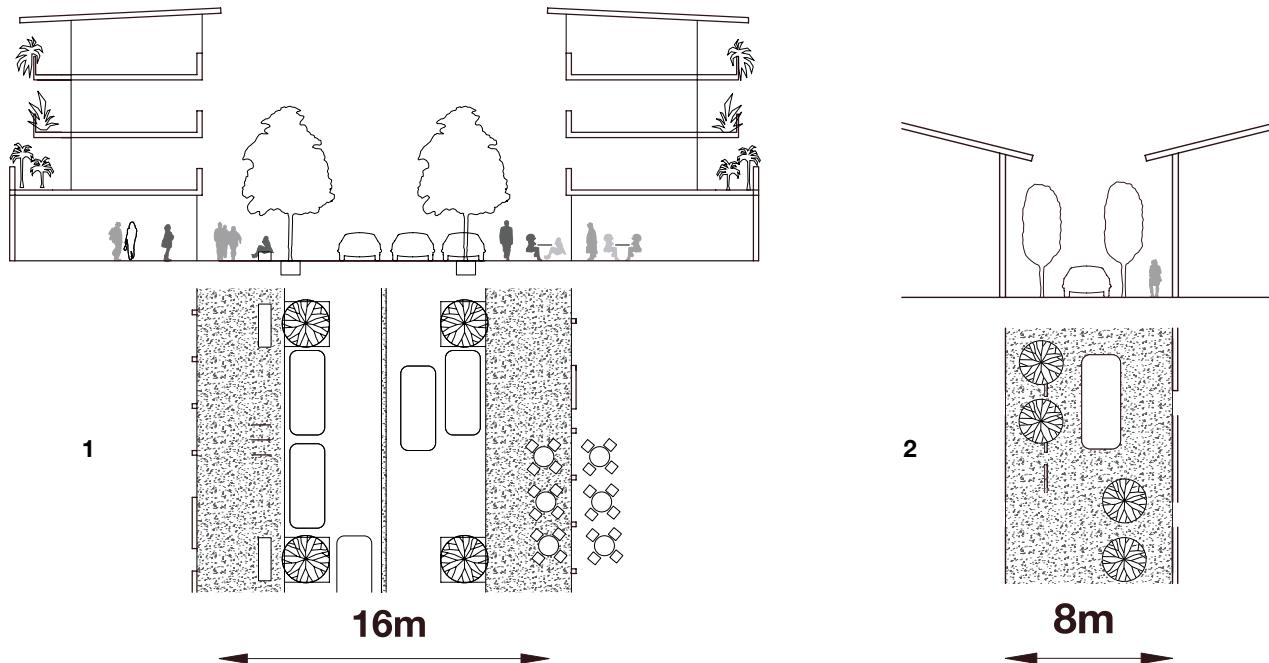
Wheelchair and pushchair ramp incorporated with steps, Birmingham

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 25)

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



Enclosure

The pedestrian scaled environment described in the Essex Design Guide 2005 relies upon achieving, in part, a degree of spatial enclosure that feels comfortable. It suggests that a relationship of where the width is equal to or less than the height of the enclosing buildings is ideal. In practice, this is difficult to achieve for lower density development but is relatively straightforward as density and building height increases. 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 (page 36) and car parking (page 44) 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 the need for fire engine access.

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, reliable, have good weathering properties and easily maintained but imaginatively applied to make places attractive, and detailed so that the surfaces are not easily damaged or discoloured. Within footways, surface materials and their method of laying need to be assessed for their suitability for occasional vehicle traffic. 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. (Image 38a)

Generally, the highest quality materials 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.



Image 27

High quality materials and design mark important public spaces

Paving hierarchy

| Context | Use | Units | Materials |
|---|---------------------------|-----------------|---|
| Road Type 1 Local Distributor | Kerbs | | Concrete |
| | Footways | | Asphalt |
| | Carriageway | | |
| Road Type 2 Link Road | Kerbs | | Concrete |
| | Footways | | Asphalt |
| Road Type 2a Mixed-Use street + squares off + side streets to first junction) | Footways | Flags | Stone or concrete |
| | Parking Roadside | Blocks /Setts | Clay /Stone |
| | | | Bound gravel |
| | Tree pits | | Steel and iron |
| | Kerbs | | Granite |
| | Carriageway | | Asphalt with stone or clay detailing |
| Road Type 3 Feeder Road | Kerbs | | Concrete |
| | Footways Carriageway | | Dressed asphalt |
| Road Types 4, 5, 6, 7 and 8 | Footways | Blocks Setts | Concrete or clay |
| | Kerbs | | Dressed asphalt |
| | Carriageway | | |
| Play Street | Shared surface Play areas | Blocks Setts | Clay Concrete Stone Resin bound gravel |

Note: All road types are detailed further in the 2005 edition of the Essex Design Guide

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 thinking about:

- 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



Image 28

Quality materials and design help to create pedestrian friendly environments



Image 29

Mixed use street junction demarcation with street trees. Note the continuous footway across the junction Copenhagen

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 30a

Poor finishing: concrete filled recessed manhole covers



Image 30b

Careful construction: cut paving fills recessed covers. An alternative would be to use cast iron

Where legal adoption boundaries need to be marked on the ground only the use of small, metal studs will be acceptable. These studs can be of any non-ferrous metal fixed at 1m centres secured firmly to the surrounding surface. The maintenance of these boundary indicators will be the responsibility of the developer, landowner or management company. Note: paving must be continuous between building front, garden and kerb.

Studs are also the preferred method of introducing a tactile surface in areas of footway with a paving flag finish. In all situations, tactile studs, blocks or paving should be laid out to avoid the introduction of random and ugly patterns.



Image 30c
Crude utility meter casing on footway



Image 31
Carefully detailed ground fixings

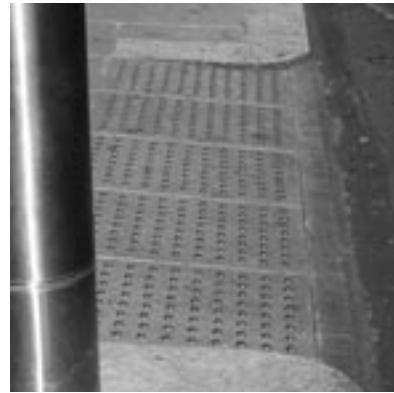


Image 32
Metal studs in place of precast concrete blister units



Image 33
Precast concrete blister units create patchwork footways



Image 34
Benches and other street furniture designed into the scheme



Image 35
Appropriate, well designed drainage gullies



Image 36
Thoughtful detailing helps to integrate existing features



Image 37
Trees can have a high impact in the street



Image 38
Custom designed street furniture could include artist commissions

Continuity

On large sites or in regeneration areas streets may continue through schemes constructed by different developers. In these circumstances it is essential for there to be continuity in design and the use of materials. One way this can be achieved is 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. (Image 38a)



Image 38a

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

Workmanship

It is vital that good workmanship is carried out through all stages of the project; that is, in the documentation, implementation, site supervision and in the maintenance regime. Also if it is to be finally evident it must be supported by the proper allocation of resources such as the skilled labour, adequate time and a sufficient budget. The care and commitment of all contractors in achieving the highest standards is essential: there is little point establishing a standard of workmanship unless it can be supported by all involved in the process of delivery.

Street Trees

Trees have a vital 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 to suggest trees suitable for specific locations (See www.the-edi.co.uk). These species are generally associated with surviving 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. Street trees must have either a suitable root barrier or alternatively, be planted in Amsterdam soil with root deflectors to protect against damage to services, cables and pipes.

Barriers are constructed before planting and can incorporate single trees or protect entire tree lined streets. Barriers for single trees are most suitable for planting in existing streets whereas the more flexible system is better suited for new roads and footways (www.the-edi.co.uk).

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.

Choosing the right tree is vital, advice must be sought before specifying species of trees. Suggested species, consideration must be given to height/spread/maintenance)

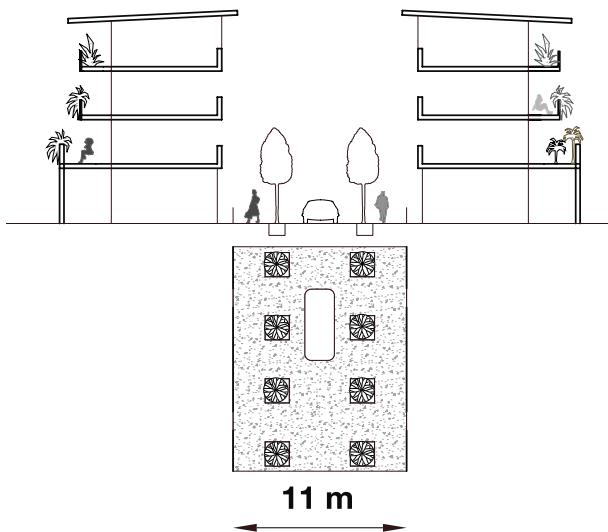


Image 39a

Narrow street/footway: Maple, Birch, Hawthorn, Alder, Pear

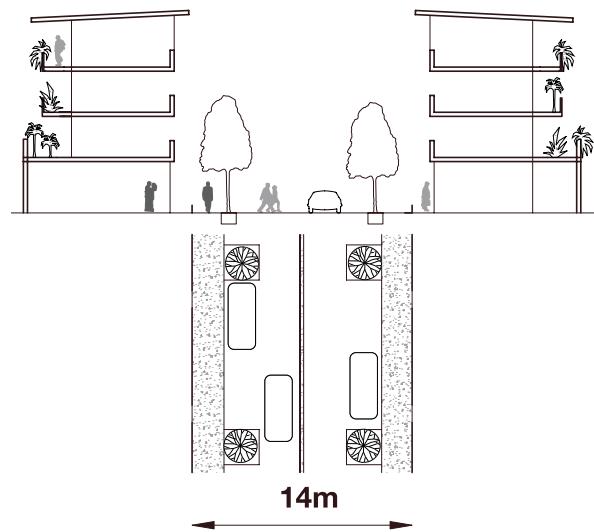


Image 39b

Wide street/footway: Oak, London Plane, Rowan, Hornbeam, Dawn Redwood, Ash

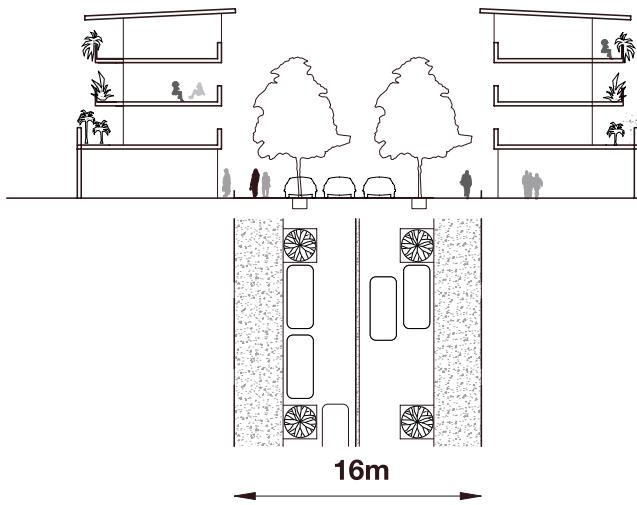


Image 39c

Between street parking bays: Maple, Hornbeam, Alder, London Plane

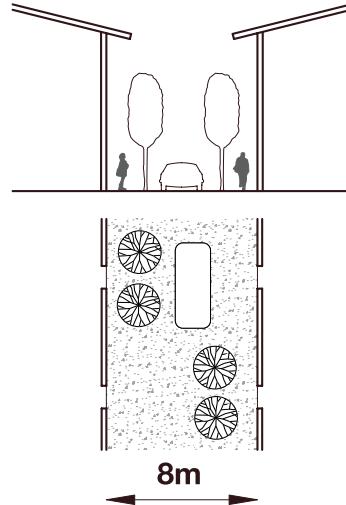


Image 39d

Within close proximity to a building: Maple, Birch, Hawthorn, Alder, Pear

Microclimates

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



Image 41

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

Adoption, management and maintenance

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 that allows area management to be more responsive to local expectations.

These arrangements are to be encouraged and 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.

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 (but see new, adopted Street Types page 36)
- 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 was 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 (APC) would be required or an exemption issued. (See www.the-edi.co.uk)

If the Highway Authority agrees 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 adoption and maintenance is provided on page 51.

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 measures including structural fabric and infrastructure design, landscape and environment management, education and community development.



Image 42
'Famine', Eamonn O'Doherty



Image 43
**Liverpool Theatre, photograph
by Len Grant**



Image 44
Design for new bridge, Walter Jack

The benefit 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, opportunities, community collaboration, site appraisals, contributing to design teams, masterplans and other development partnerships.

In every development project on sites over 0.1ha or 10 dwellings the inclusion of artists and artworks will be required. 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. (See EDI website for further information)

Street types

Streets are the principle 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, 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 cafe 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 – Type 2A

This street type 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 strategic 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.

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.

A carriageway at least 6.5m in width with two footways at least 3.0m in width is required. Between the footway and the carriageway on either side a zone of maximum width of 2.0m should be incorporated to accommodate short stay car parking, loading bays, bicycle parking or local widening of the footway. Street trees, lighting columns, parking ticket machines and bus shelters should be incorporated within this zone as integrated features of the street design, taking sight line constraints into consideration. Rows of street trees should generally be spaced at a maximum of 14m centres, which would allow two 6m long car parking bays or one short 12m loading bay between them. Trees should be set back a minimum of 1.0m from the kerb line of the carriageway.

The design speed is 30kph (20mph). This is to be achieved by raised tables at street junctions, cushions, mini-roundabouts or bends. 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, such as speed cushions, 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.

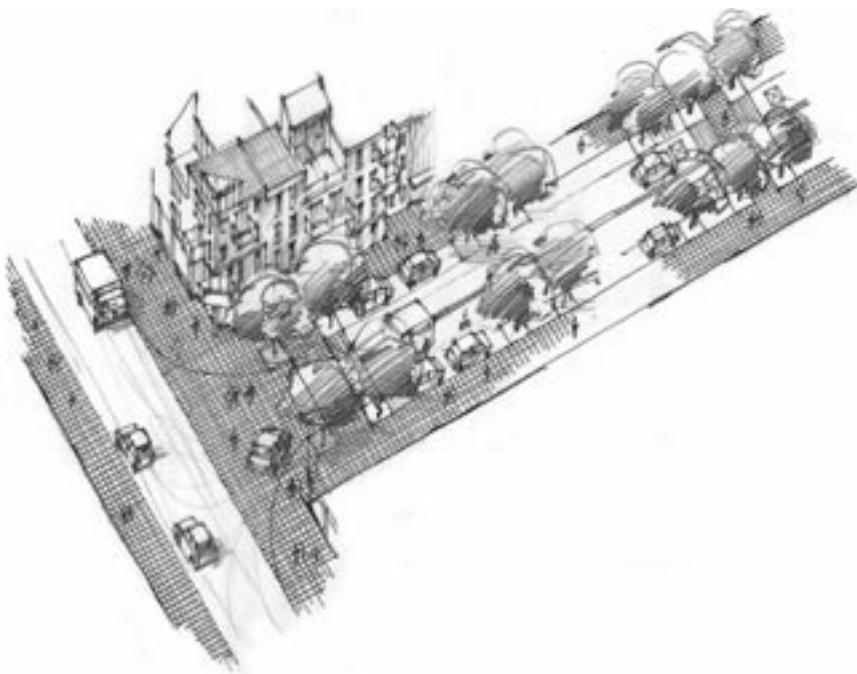


Image 26a
T Junction – mixed-use street into local distributor

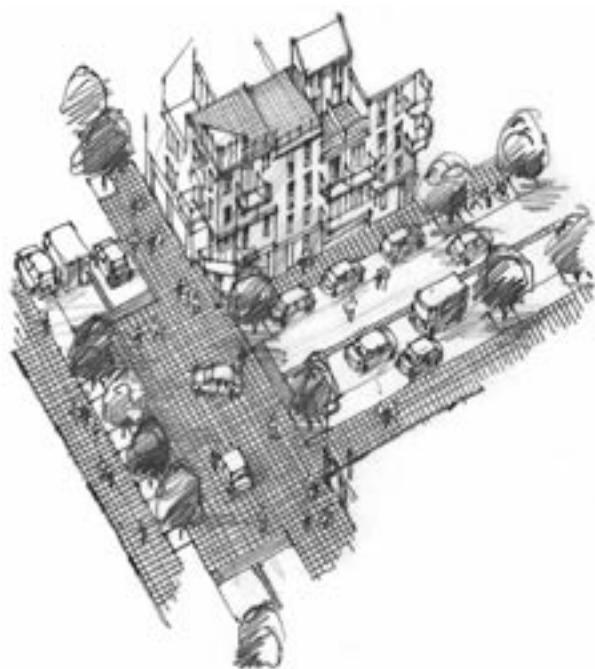


Image 26b
T Junction – mixed-use street into mixed



Image 26c
Cross roads – mixed-use streets

Sight lines at junctions need to have a X distance of 2.4m and a Y distance as follows:

Type 1: with a design speed of 30mph: Y distance required is 90m

Type 2: with a design speed of 30mph: Y distance required is 60m

Other streets with a design speed of 20mph: Y distance is 20m.

Play Street

These are principally, residential streets in which the road space is equally shared between motor vehicles and other street users. Special regard is paid to the needs of residents (including people who walk, sit and cycle, and children) (Image 49).

Play Streets are appropriate in all types of residential area 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. Uses that require servicing from vehicles heavier than 7.5t should not be located on a Play Street.

Traffic flow should be low, with no more than 100 vehicles in peak hours. Although through traffic should be discouraged, the permeability and connectivity of street layouts should be maintained for pedestrians, cyclists and local traffic.

The layout of the Play Street must be such that motorists are compelled to drive very slowly, at 10 mph or less, with speed restricted by physical means such as alignment, public art, play equipment, cycle stands, bollards,

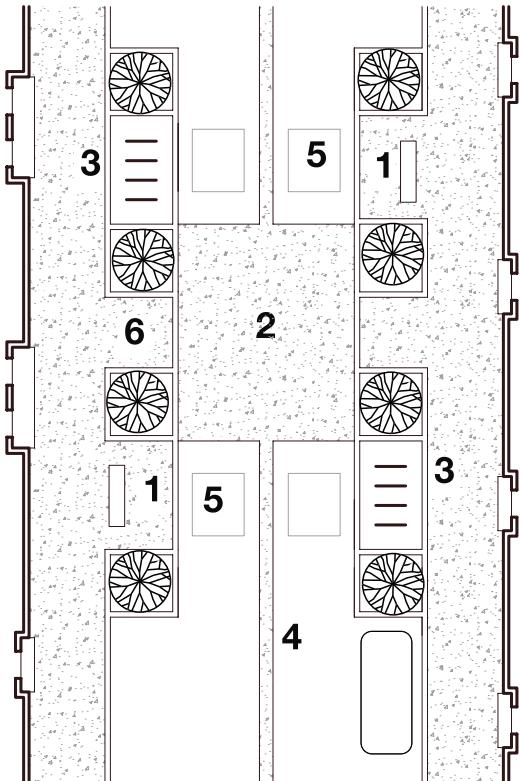


Image 48

Mixed-use street with pedestrian crossing, on-street parking, bus stops, street trees and traffic speed cushions (see also Appendix 6)

1. Bus stop
2. Pedestrian crossing point in the same material as central reservation
3. Bicycle/motorcycle parking
4. 500mm central reservation
5. Traffic calming cushions
6. Pavement drops to road level

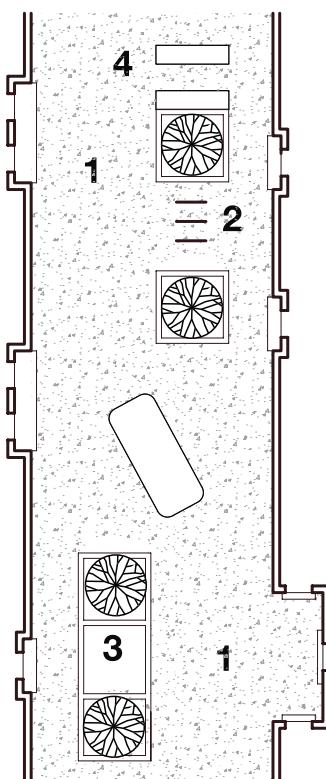


Image 49

Play Street as developed from scenarios

1. Shared surface for cars, pedestrians and cyclists
2. Bicycle parking
3. Sand pit
4. Sitting area

Trees and planters must be part of a fully integrated design. These features should not be located so as to cause vehicles to pass closer than 1m 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 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 it will be a requirement to involve the existing community 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 will need to 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 50a).

The route for vehicles to pass through a Play Street should be as narrow as is practically possible, with a minimum of 3.1m over a short length. On two-way streets, some sections can be narrowed for one-way 'shuttle' use; however the track should be widened to 4.5m at least every 40m to enable two vehicles to pass. Cul-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 Home Zones 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 a X distance of 2m and a Y distance of 12m.

T-Junctions and staggered junctions will be the principal types of junction between Play Streets and a priority should not be indicated. For junctions with 20mph roads the X distance will have to increase to 2.4m and the Y to 22m.

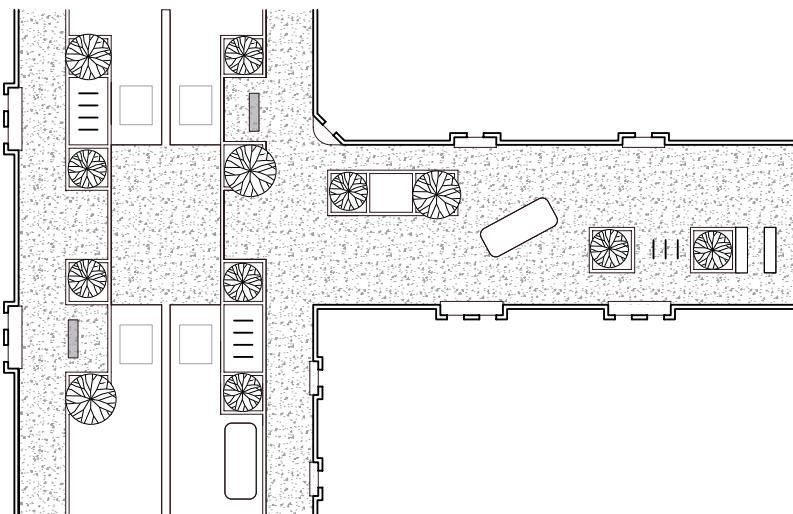


Image 50
Entrance point into Play Street



Image 50a

Illustration of typical Play Street. Vehicle access is possible but deliberately made unclear and confusing

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 spatially-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

Design Criteria

Within compact, urban developments the following design criteria will apply:

Houses

As densities rise, fewer private gardens can be accommodated without compromising the quality and quantity of the public and communal environment. 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 51)

Secondly, houses could have very small private gardens or yards. At densities above 50dph a garden size of about 40sq 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 dictate a range of garden sizes that escalates with the provision of bedrooms. It allows for the possibility of small, walled outside yards of around 25sq m or private gardens larger than 40sq m that make use of awkward site shapes (if this coincides with the location of housing). However elsewhere, larger gardens should be avoided.

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

For the time being, some Local Authorities may have different standards and applicants should consult the relevant District Council for details of their specific policy.

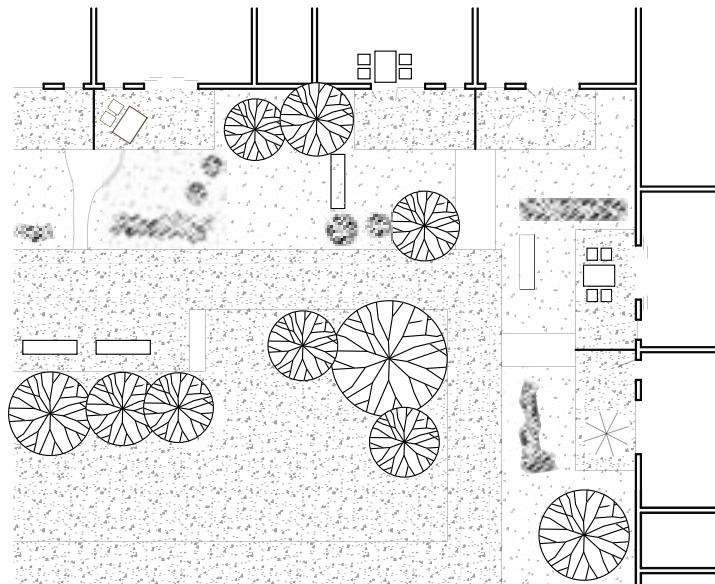


Image 51
Communal courtyard space



Image 51a
Ground floor 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 52

Ground floor private space, facing communal courtyard

Design criteria for private communal space:

1. development on sites larger than 0.1 ha are required to provide at least 25sq 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 must also have balconies of 5sq 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. must be enclosed by walls or buildings with no public access possible
5. must 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. Only a very limited number of enclosed private gardens that back onto communal space will be acceptable in any scheme. (Image 53)

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 bio-diversity strategy of the site that may include the use of Green Roofs (see page 81). (Image 54)



Image 53
Private open space: garden



Image 54
Private open space: balcony

Incorporating balconies into residential accommodation is encouraged and will be required where the private, communal space provision does not equate to 25sq 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. A gross floor area per balcony of 5sq m is required 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.

Activity

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 a requirement.

Car parking

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 50dph. 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 56) 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.

Low car parking provision

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 must 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 and Highway Authority as part of the Context Appraisal process.

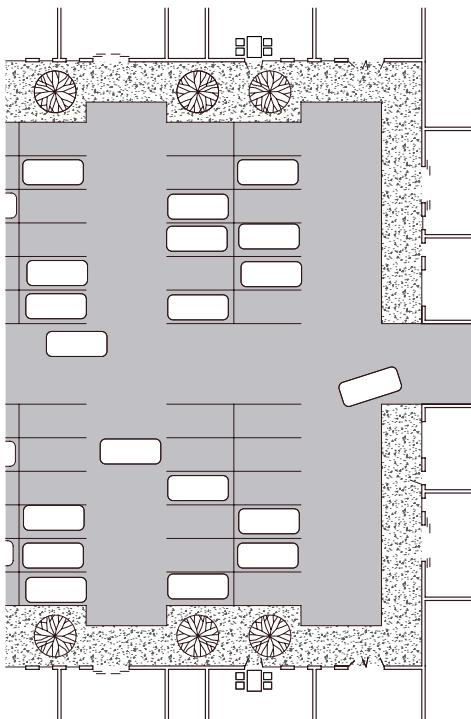


Image 56
Unsatisfactory parking arrangement

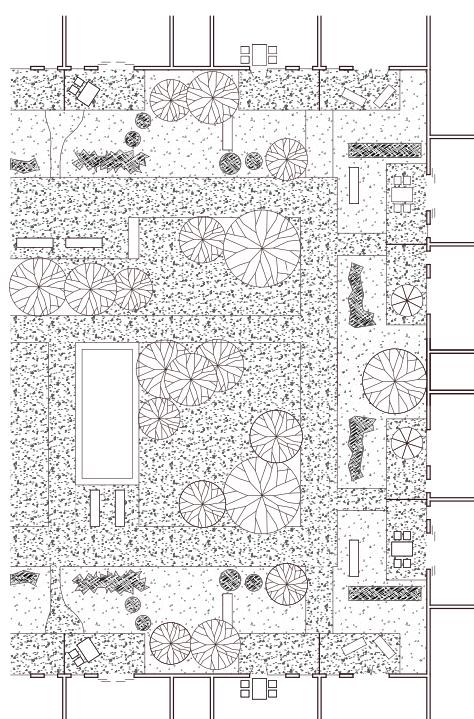


Image 57
**Underground or underdeck parking
with landscaped private and communal
outdoor space**

Accommodating the car

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

At densities **above 50dph** only the following car parking arrangements (together with the exceptions stated below) will be acceptable:

- underground parking
- under deck parking
- multi-storey parking (either within block or 'remote')
- under-croft parking
- or a combination of any of the above.

Exceptions to these arrangements are exclusively for:

- schemes with a very low provision of parking (see above)
- on-street visitor, customer and other short-stay parking or for allocated, disabled drivers
- surface level parking in a very small area that relates directly with 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 58**)

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 59**)

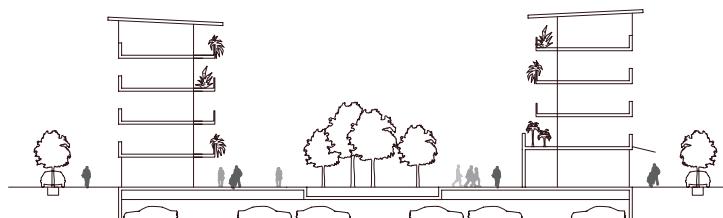


Image 58
Underground parking option

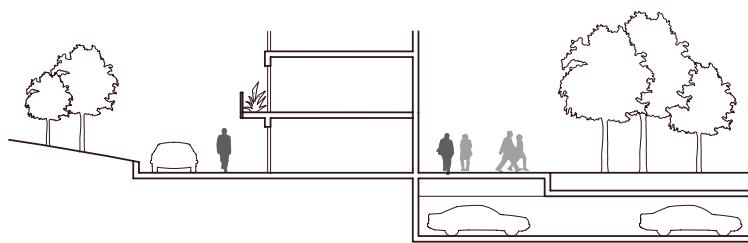


Image 59
Underground parking using ground slope

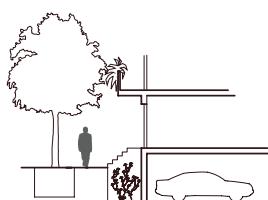


Image 60
Partial underground parking with raised ground floor

A variation on this arrangement is possible where the parking is not entirely underground. The depth of excavation can be reduced by raising the deck level above the surrounding site but will only be acceptable in situations where the parking floor is entirely enclosed by buildings. 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 and requires alternative access arrangements for disabled people. 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.

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 3 space at the back of the shop would be under and ventilated through the deck above—see image 61.

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 62.

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 96.

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. Entrances and access ramps should be no wider than 3.5m with signal-controlled entry and exit for one-way working.
- have a maximum gradient of 1 in 7 and ideally, incorporate under-slab heating to avoid ice in cold weather.
- incorporate electronic entrance gates or shutters that can be activated only by residents/occupiers

Underground or raised deck parking areas must 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

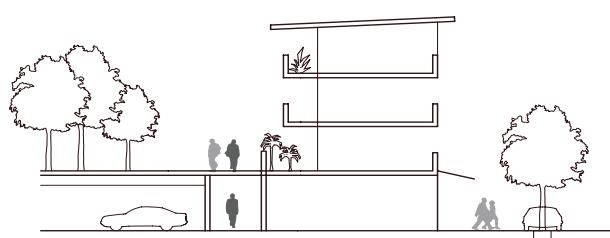


Image 61
Single-aspect ground floor uses with rear, under deck access

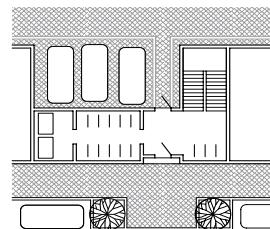


Image 62
Sketch of internal lobby with through passage from street to under deck parking

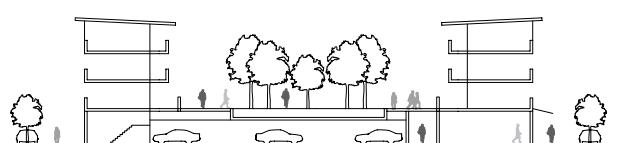


Image 63
Under deck parking with communal space above

Multi-storey parking

Another acceptable method of accommodating parking is in a multi-storey facility on the site. 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 total vehicular flow in these places will 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 design capacity pushing the building to a prominent edge of a site. If so positioned it will be necessary to include a 'veneer' 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 0.1ha 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 drawing of a hypothetical, development scenario that makes use of under-croft parking is illustrated on page 90.



Image 62

Under-croft parking creates dead fronts/backs and divorces the building from the activities in the communal area

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 by making provision for short-stay, on-street parking
- through the introduction of private management arrangements for all urban developments

It is also permissible to design new streets to accommodate on-street parking spaces for building occupiers. 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.

A minimum of 5% of the total capacity of all parking areas should be designed and allocated for use by disabled people.

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 by Essex Planning Officers Association.

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/LPG 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 sufficient a 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.

Cycle parking

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:

- parking facilities at destinations
- routes between destinations
- parking 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 considered to be necessary. (Image 66a)

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 must 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 also need to be connected to local and structural green space. Development can make this happen by undertaking small, incremental interventions and improvements as opportunities arise that enables a connected, green grid to arise over time.

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 must be secure and under cover. It can share underground, under deck or undercroft car parking areas or it can be located from 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 rather than at the foot of the stair lobby.

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 66a
Cycle stand, Sweden

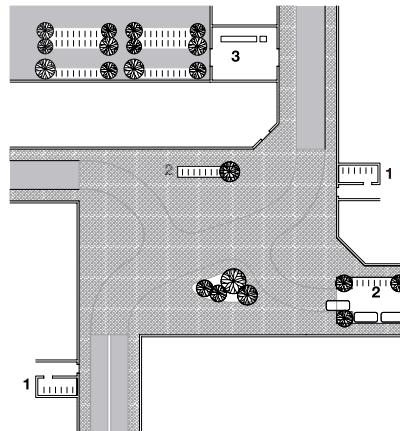


Image 66b
Convenient cycle storage encourages use
1. Ground floor storage
2. On-street parking
3. Cycle hire with repair shop

Waste recycling

Recycling is the collection and separation of materials from waste and subsequent processing to produce marketable products. Local authorities are required to manage the waste stream to ensure more material is recycled. Although local arrangements vary, selected waste is collected from individual premises and sent for recycling. 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 entering the system. This requires the implementation of a number of complementary actions which, for this guidance includes:

- providing facilities within homes for the selection and temporary storage of a variety of waste products
- providing communal storage facilities for selected waste
- providing communal facilities for the composting of green 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: green waste | 1 box of 15 litres capacity for: green waste |
| 1 box of 35 litres capacity for: residual waste | 1 box of 45 litres capacity for: residual waste |

These facilities must 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 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, specifically, can be further separated by the householder into appropriate containers such as paper, cardboard etc..

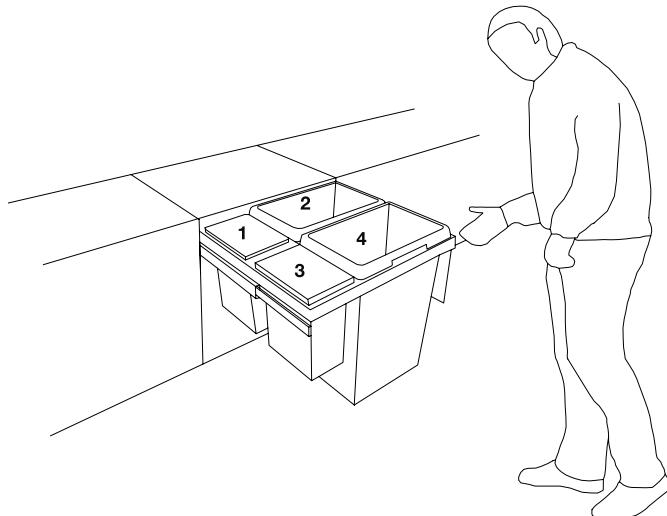


Image 67

Domestic recycled waste storage within kitchens

**4 bins in total: 2x35 litre
2x8.5 litre**

Total capacity: 87 litres

Ref: Hafele UK Ltd

- 1. Kitchen waste**
- 2. Dry Recyclables**
- 3. Glass**
- 4. Residual Waste**

Communal waste storage

All developments must 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
- chutes into under-ground or under-deck storage facilities (Image 68)
- detached, storage buildings (Image 69)

The design criteria for these installations is:

- 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 be no more than 100m
- storage must be within 10m of the nearest place that the collection vehicle can gain access.
- 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 –1100 litre wheeled bins to serve that part of the development
- sufficient space should be allowed around the containers for moving and cleaning around them
- 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 green 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 green 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 green waste into an inert fertiliser which can then be used within the development or sold on as a commercial product (see page 51 Management and maintenance).

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, where these are within detached, storage buildings. (Image 70)

Commercial waste recycling

Separate facilities must be provided for the storage of commercial waste in containers up to 1100 litres. A variety of arrangements are possible but separate storage buildings or compounds within public space will

not 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 68-70). Storage areas must 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 vehicles should not have to reverse more than 25m and 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 with smooth paving and switched, additional lighting between it and the storage access point.

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



Image 68
Domestic waste chutes to underground storage, Malmö



Image 69
Communal waste recycling centre, Malmö



Image 70
Communal composter, Malmö

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

The transfer of responsibilities need not be limited to the more usual areas of activity and could include:

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

Special arrangements need to be made with the local Highway Authority before this could occur to enable it to take over responsibility in the event of the cessation of the local company (see www.the-edi.co.uk). 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.

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) 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 (2005) 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 house. This, and other features of the guidance such as the provision of open bodies of water for Sustainable Urban Drainage, creates places where young people may be exposed to some risk.

Essex Council 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 EDI website.



Image 71

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 standard is amended to 20m for compact, urban development. Privacy can also be achieved by design which can include the orientation of windows, landscaping and screening and 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 is 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 overlooking.

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 or 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 30dBA.

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 generated night time activities can be reduced through design measures. 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 72

**Careful design can reduce disturbance between uses,
Dublin**

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 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 which are:

- form and scale
- visual appropriateness
- variety and unity
- visual richness
- height and mass
- active frontages
- adaptability, durability and accessibility
- materials



Image 73

Fitting into the existing street scale, Murray Grove, London

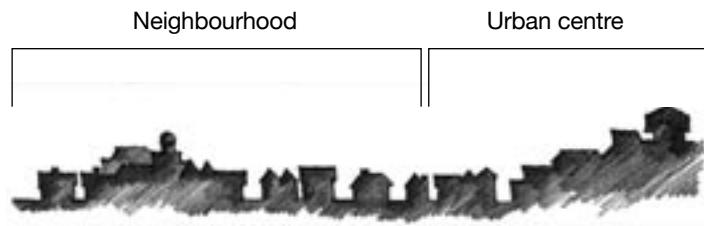


Image 74

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 73). 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 must comply with the urban design spatial principles of the Essex Design Guide and this Urban Place Supplement.

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. (Image 74)

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 73)

There will be more opportunities to have taller buildings in Sustainable Urban Extensions, Large Urban Infill and Regeneration Areas. Here, the urban layout should imitate the pattern of clusters of neighbourhoods supporting an urban centre similar to the traditional town and 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 10m 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.

Even though a few towns in Essex have quite recent origins and contain at their centre mainly deep plan



Image 77

Building form used to disguise deep-plan building



Image 78

Buildings that look representative of their use, Chelmsford

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.

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 78)

By 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 produce pedestrian movement and activity within the public realm are likely to evolve into successful places. The objective is to channel as much human activity onto the street 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 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 be laid out so that they offer a degree of ‘theatre’ to passers by.

Any lengths of ‘blind’ walling facing public space undermines the objectives of creating safe and attractive streets and must be avoided wherever possible. (Images 80a and 80b)



Image 80a

Mixed use building with active frontage



Image 80b

Reduced activity at ground level

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 81).

Making the correct choices in regard to scale, mass, height and legibility will result in a varied urban townscape provided also that it 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.

Left unchecked, a highly varied urban landscape could develop into visual anarchy. A degree of unity is therefore desirable between existing and new and other 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 their 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 82).



58

Image 81

BO 01 Malmö



Image 81a

Re-use of older buildings adds variety to urban places



Image 82

Monotonous building forms contribute little

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 (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, and
- by constructing homes to the Lifetime Homes standard (see below), and
- by taking account of the potential for home-working, and
- 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 of people of different ages and needs.

All new development in Essex should be built to meet these 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.

Visual richness

Many new developments are visually monotonous. 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 also 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

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 necessarily 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 83
Abode, New, Harlow

6. Influences upon sustainability

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

| Sustainability objective | Urban Place Supplement |
|-----------------------------|--|
| Spatial criteria | Walkable neighbourhoods Resource efficiency in use of land; Density Improving local services and job opportunities; Mixed-use |
| Buildings and site criteria | Minimising ecological damage and waste Reducing pollution Sustainable construction, drainage and energy efficiency Water conservation |
| Community criteria | Mixed communities Social cohesion Neighbourly urban design Safe public places |

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Spatial Criteria

Development opportunities cannot 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, urban extensions all perform to their 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.

Below is a summary description of generic, urban places together with a series of **Development Types** that characterise and express their potential for sustainable development and the principle guidance within this document. For a description of Development Types see pages 70-71.

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 within 800m of the centre point of these urban centres (see EDI website for maps of each urban centre).

Within Urban Centres, only the following Development Types shall apply: Compact Development
Small Infill



Image 89b
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 on page 8).

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

Robust Urban Form

Small Infill



Image 89c
Neighbourhood Centres

Regeneration Areas

Local Plans and Local Development Frameworks frequently identify parts of urban areas that require a concerted effort of renewal and community action to bring about local regeneration. These areas may contain tracts of brownfield land and sustainable development can be regarded as a vehicle for achieving physical and social regeneration. Some may not presently be well-connected to other parts of the town and this would need correcting, but the existence of adequate land for development may enable a new neighbourhood unit of 50 hectares (and multiples thereof) to emerge with sufficient critical mass for it to flourish.

Within Regeneration Areas, only the following **Development Types** shall apply:

- Compact Development**
- Robust Urban Form**
- Small Infill**

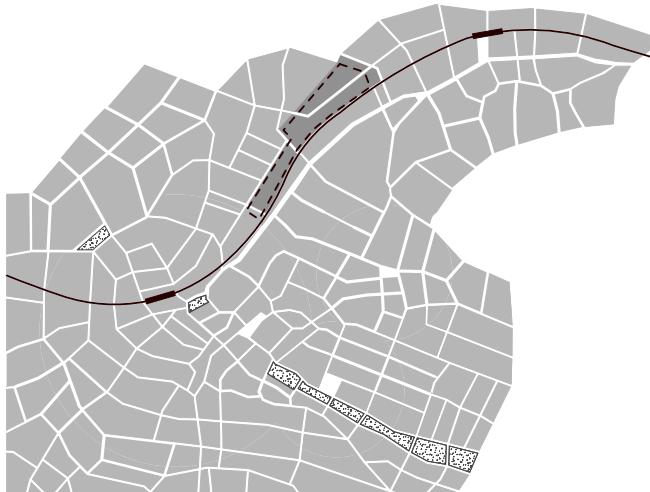


Image 89d
Regeneration Area

63

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**

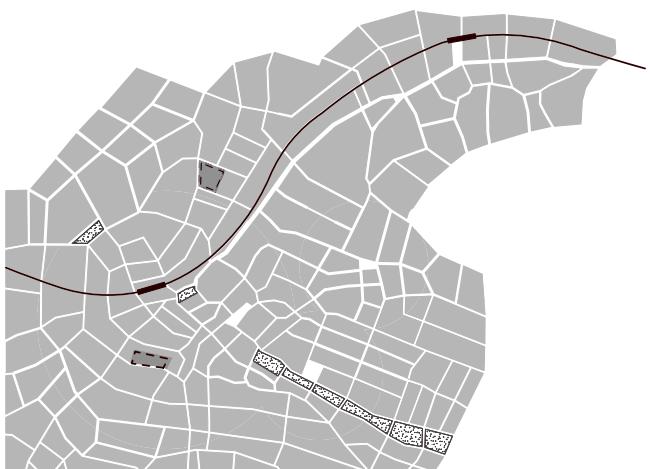


Image 89e
Small Urban Infills

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 50ha 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 less than 50ha in area, the development type will be determined by the ‘fit’ of the site to the other scenarios in Diagram 4 (see page 67). Like all the spatial criteria scenarios for sustainable development, 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 the centre be well-served by public transport.

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

Large Urban Infill

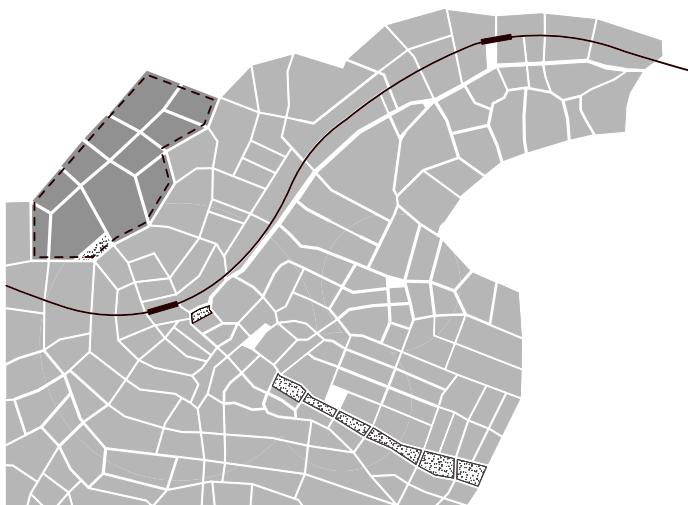


Image 89f
Large Urban Infill

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 coincided with land severed from the adjacent landscape by the construction of new highways. In these circumstances the extension is rarely adequately ‘plumbed’ 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, previously described as a unit of sustainable development. Individually, these scribe an area of 50 ha and new ones must be arranged to accommodate a variety of development densities that are highest within the neighbourhood center and least dense towards the edge of the neighbourhood.

A single 50ha extension would have a theoretical ‘capacity’ of 2,000 homes and considerable scope for non-residential uses, including space for business development. Image 91 illustrates how these new neighbourhoods can be brought together to construct an urban extension of considerable 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 of at least 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 ‘green’ power generation. 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.

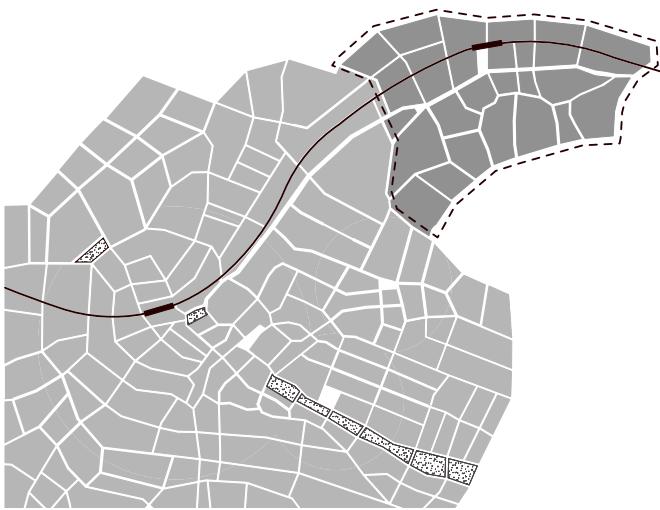


Image 89g
Sustainable Urban Extension

Within these situations, only the following **Development Type** shall apply:
Sustainable Urban Extension

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 represent those parts of an urban area that are not, and have the least potential for becoming, sustainable communities. This guidance therefore places a density ceiling upon sites in these locations.

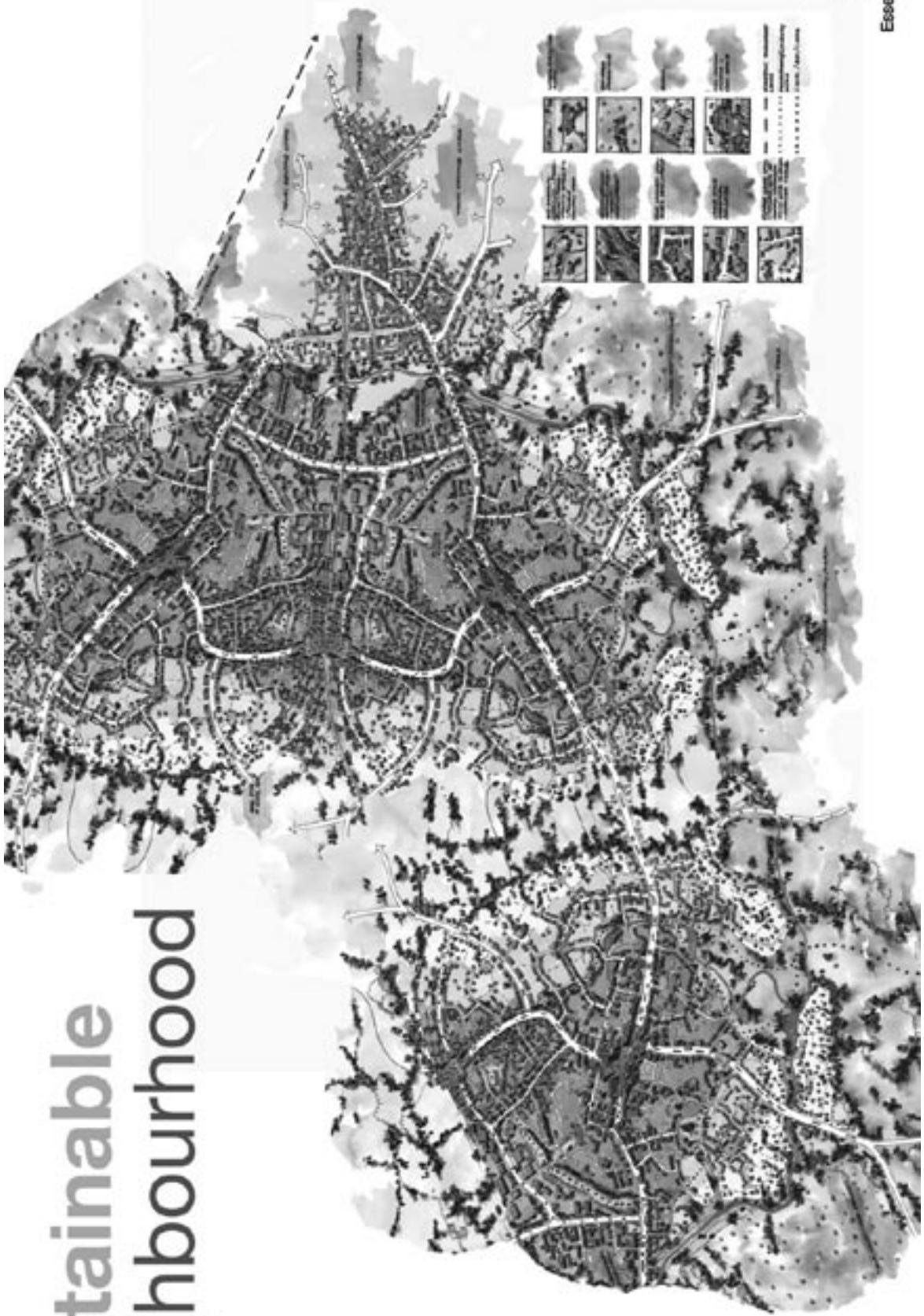
Within these situations, only the following **Development Type** shall apply:
None of the above: see Essex Design Guide 2005

65



Image 90
Assembled Town Diagram

Sustainable neighbourhood



Development types

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

These scenarios are self-selecting after having regard to:

- their spatial proximity and therefore their potential for sustainable development, and
- their site area

See pages 13

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

Diagram 4: Development Types

Compact Development

See page 13 for requirements



- Minimum density of 75dph
- Applies: to all sites within town centres and neighbourhoods except small infill sites and where accessible amenity does not currently exist. Also applies as appropriate within sustainable urban extensions.
- These schemes make the most of their central location by being compact whilst also offering a high quality environment. They should be mixed-use where this is possible but as a minimum, half the ground floor frontage onto main streets (connectors to adjacent neighbourhoods) must be non-residential.
- The mix and proportion of uses will be determined by the Context Appraisal.
- Buildings and space must be designed to be flexible (how else can they be made flexible) and as a minimum, the ground floor ceiling

height of every building shall be 3.0m or 3.5m if fronting a main street.

The potential for home-working must be considered with reference to the advice contained within the advice note found on the EDI website.

- The public realm must also be robust, enabling it to accommodate a variety of known, existing and unknown, future demands.
- All developments must achieve an Eco Home/BREEAM Very Good - Excellent sustainability rating.
- Car parking will be underground, under-deck, under-croft or multi-storey with some short-stay, on-street spaces for visitors and customers.
- Requirements for flexible buildings, space and sustainability rating as Compact type.

Robust Urban Form

See page 13 for requirements



- Variety of housing and apartments
- Minimum residential density = 60 dph, or higher if compatible with surroundings
- Robust building types required

- Maximum car parking provision of 150% for housing and 1 space/75m² commercial
- Underground or under deck parking but with active frontages to streets
- Sustainability rating as most compact type

Sustainable Urban Extension

See page 13 for requirements



- Minimum site area 50ha
- Minimum, average density across area 65dph with the highest density at the centre of the extension.
- These schemes must contribute substantially to the employment needs of the town. They must be largely self-sufficient for all primary services.
- Car parking will 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 must include power generation infrastructure to meet 100% of the needs of the development.
- All development must achieve an Eco Home/BREEAM Very Good-Excellent sustainability rating.

Small Infill

See page 13 for requirements



- Maximum site area 0.1ha
- Density to be compatible with surroundings.
- Context Appraisal not required.
- Mix of use and car parking informed by the surroundings, but a minimum of 50% ground

floor frontage on a main street must be non-residential.

- Requirements for flexible buildings, space and sustainability rating as Compact type.

None of the above

See page 13 for requirements



- Maximum density 50dph
- All development must achieve an Eco Home/BREEAM Very Good-Excellent

sustainability rating.

- Refer to Essex Design Guide 2005 for further guidance.

Densities for sustainable development

The existence of a substantial and compact residential and business community within easy walking distance of a centre is the principle platform for sustainable development. This catchment (around 5,000 people for a typical, sustainable neighbourhood) can support a bus, 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 in pockets that may not combine to an average density of 65dph and a population of at least 5,000 people. 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.

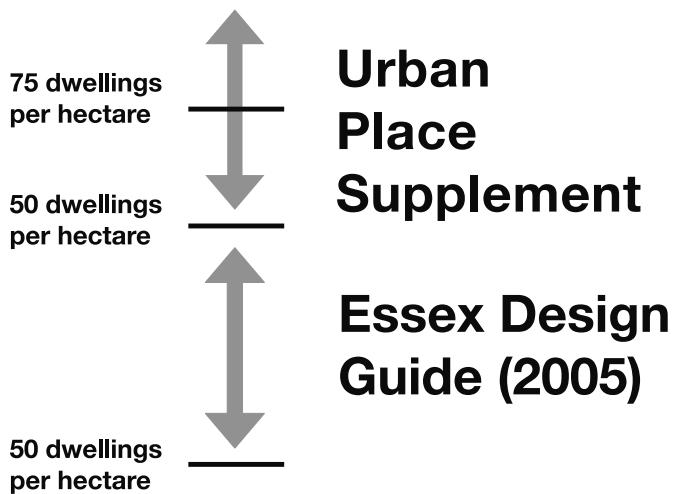


Image 92

Development Densities and applicable policy guidance

Therefore, 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 reducing, minimum density elsewhere. 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 infills or extensions are proposed it is important to ensure 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 5,000 people per unit of sustainability – 400m radius and 50 hectares.

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 as 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 requires 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 $75m^2$ of non-residential use should be used.

A typical calculation and illustrative diagram would be:

example calculation

Apartments no. 210

Houses no. 25

Plus, non-residential space with residential use above:

Community use $(150 \div 75m^2) = 2$

Commercial use $(3750 \div 75m^2) = 50$

Total 287

Net site area = 2.5ha

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.

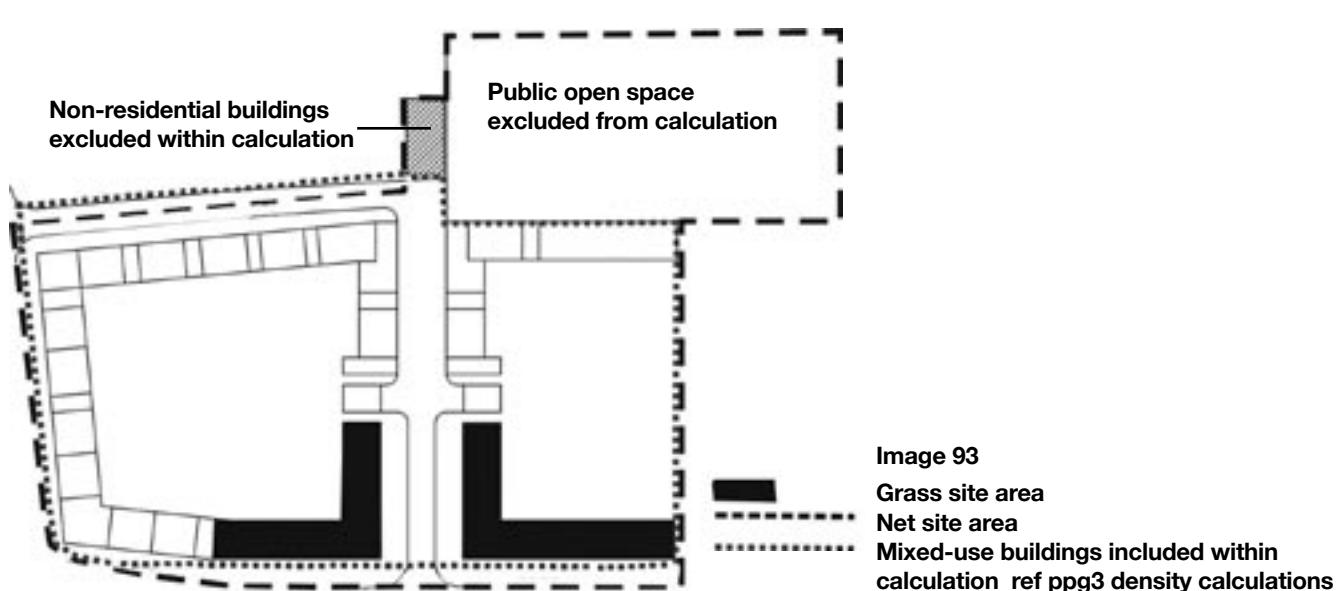




Image 93a

Chancellor Park Primary School, Chelmsford

Buildings and Site Criteria

The way in which we construct and use buildings has a critical impact upon the environment. Building them 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 Urban Drainage (see page 78). A comprehensive approach, using the Eco Home/BREEAM methodology should then identify the most appropriate combination of measures to achieve a high degree of environmental sustainability throughout all aspects of the design.



Image 94

Green buildings: important in creating sustainable developments Vauban, Freiburg, Germany

Sustainable construction

Sustainable construction methods must be used to provide us with attractive high performance buildings while minimising the use of energy and materials, and causing less pollution and waste.

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 their 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 Guide to Housing Specification 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)

Modular building

The terms modular, portable and system built have different meanings and each refer to a different structural type and construction technique. 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, portable and 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 (due to construction speed and alternative materials) make a strong case for an increased use of these building systems over traditional construction methods.

However, the application of modular construction must be carefully considered; the longevity and value of these relatively new construction techniques in the UK still remains unproven and therefore must be treated with caution.

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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)

In the period 2007 – 2011, all new developments seeking planning permission within Essex must achieve a Very Good rating under the EcoHomes method of environmental assessment or the appropriate BREEAM methodology. From January 2012 onwards, all developments are required to achieve an Excellent rating. Water and Waste management are priorities within Essex and the highest possible scores must be achieved in these categories.

Development that is designed in accordance with the guidance contained within the Urban Place Supplement is likely to score well.

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.

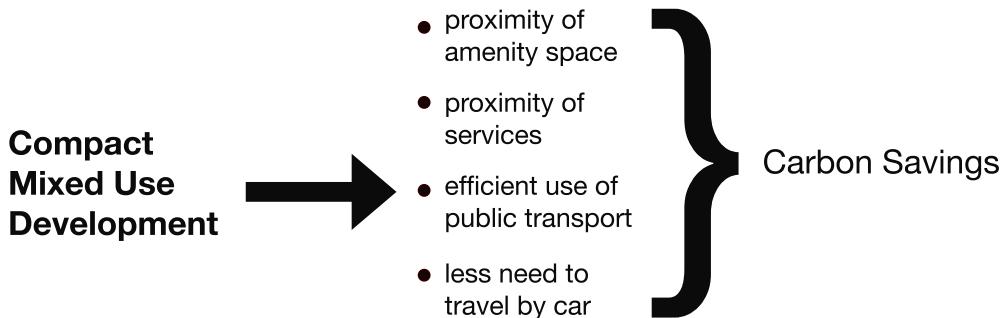


Image 94a

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 technology exists that can bring additional carbon savings to a scheme over and above those generated by being simply well-located. Some of these are required and others are recommended and may be employed as part of a sustainability strategy for any site. Installing energy saving measures at the design stage does not significantly increase building costs but will produce significant savings and reduced running costs.

The improved thermal efficiency of buildings to either reduce energy demands for heat or cooling is largely achieved by higher standards in construction and specification such as insulation, double glazing, higher thermal mass, natural ventilation and air management and the specification of energy efficient appliances

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 ventilation. South-facing glazing can be used to trap heat which is retained by using high levels of thermal insulation elsewhere in the building fabric.

The design of buildings should utilise solar gain as part of the energy management of the development. However, achieving a good layout of development is more critical for a raft of community and safety reasons (see Community Criteria on page 86 which should take precedence in the unlikely event that there are conflicting requirements).

Building fabric should be airtight and natural air movement achieved by passive stack ventilation (PSV). The design and location of the 'passivents' should be considered with care, especially their likely impact upon the skyline.

All non-domestic buildings should generally 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 97

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.

Efficient lighting

Highly efficient lighting standards play an important role in achieving high BREEAM and EcoHomes standards. The use of dedicated energy efficient light fittings means that conventional bulbs cannot replace compact fluorescents. Legislation within part L1A and L1B (domestic) of the Building Regulations 2006 states that it would be reasonable to install fixed energy efficient light fittings in the most frequented locations in the dwellings to a number not less than one per 25 metres squared area (excluding garages) and one per four fixed light fittings. In relation to external lighting, the legislation suggests either that external lighting should not exceed 150 watts per light fitting and the lighting should automatically switch off when there is enough daylight and when it is not required at night or the light fittings only have sockets that can be used by lamps having an efficacy greater than 40 lumens per circuit watt.

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 and must be incorporated into larger schemes.

All developments above a threshold of 1000sq m or 10 dwellings must incorporate infrastructure for renewable heat and power generation so as to provide at least 10% of their predicted energy requirements.

Recommended systems include:

Solar panels

Solar thermal systems or solar hot water systems absorb energy from the sun to heat water passing through the panels. They can typically provide around 50% of a home's hot water requirement.



Image 100
Wind turbines Frankfurt, Germany

Photovoltaic panels

Photovoltaic systems convert energy from the sun into electricity through semi-conductor cells. More electricity is produced with more sunlight, but energy can still be produced in overcast or cloudy conditions. They can be mounted in panels on the roofs of buildings or integrated with external cladding or glazing and can also be used to replace conventional materials such as roof tiles and prestige cladding, thus helping to off-set their cost. Importantly, their use and location must be considered as part of the architectural design.

Wind energy

Wind energy is one of the most cost effective methods of renewable power generation. Small turbines can supply power direct to single users, such as homes, schools and businesses or a single larger turbine can supply a whole development (a large, 1MW generator can supply power for 1000 homes). Noise and visual impact are important considerations in the location of turbines and the suitability of the technology will 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 power generation measures, described above. These 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 biomass fuels such as waste wood 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. Alternatively, gas can 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 biomass to the plant.

Ground source heat pumps (GSHP)

Ground warmth can be collected by circulating water through pipes laid horizontally in the ground or down deep bore holes. A heat pump can then take the low temperature heat and upgrade it to a higher, more useful temperature and is often used in conjunction with underfloor heating systems. A geothermal survey would be necessary to assess the suitability of the ground thermal properties for this technology.



Image 100a

1. Existing urban area
2. Sustainable urban area
3. Bio mass crop production in country park
4. Combined heat and power plant

The pipe network for a horizontal GSHP system requires a relatively large area of land and would therefore be appropriate on the edge of an urban/rural area where tracts of agricultural land may be available nearby. The adjacent land could alternatively be used to grow silage or coppice for a CHP system.

All development sites (or combination of adjacent development sites) over 50ha shall incorporate either a Combined Heat and Power plant or Ground Source Heat Pumps, or both. These must be designed to supply 100% of the needs of the development when used either exclusively or in combination with other on-site, largely carbon neutral power generation measures.

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 in the buildings

- The use of rainwater harvesting
- The use of Sustainable Urban Drainage
- Performance of water appliances.

Although the consumption of treated water depends a lot on the behavior 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 sewerage 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 requirement for non-domestic buildings shall be calculated and designed separately.

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

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

All development is required to submit a water conservation strategy as part of any planning application for 1 house or more or any commercial development, that demonstrates how this standard is to be reached.

Sustainable Urban Drainage Systems (SUDS)

Whilst a high proportion of rainfall will be directed to on-site storage tanks, once 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 Urban Drainage Systems are designed to either re-install water into the ground or to hold it and facilitate its evaporation. The principle advantages of SUDS is in regulating the flow of water in times of heavy rainfall (reducing the risk of flooding), reducing the risk of river pollution and creating an amenity for urban dwellers.



Image 101

SUDS: water bodies can offer opportunities for quality designed spaces, Malmo, Sweden

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 created for the storage of surface run-off.

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



Image 102
SUDS can also provide opportunities for play

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 bio-diversity, 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 102)

Stormwater 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.

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 passing, 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 effect 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 four key sustainable objectives, to be achieved simultaneously with economic growth and employment, social progress and prudent use of natural. It requires protection of existing species and habitats, as well as management and aftercare of areas that are to be retained, enhanced or created.

All new developments in Essex will therefore be expected to enhance existing bio-diversity and create new habitats.

Developments can provide many opportunities for bio-diversity 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.

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 bio-diversity in urban areas.

See appendix: "Biodiversity by Design – A Guide for Sustainable Communities" (Town and Country Planning Association, 2004) and "Integrating Biodiversity into Development"

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 that live there. These reflect the relative importance of the sites or the species.

In addition, non statutory areas exist which are often referred to as County Wildlife Sites. There is a general presumption against development that may harm any site of international or national importance. Development will only be approved on a site with local designation if there is adequate environmental compensation

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

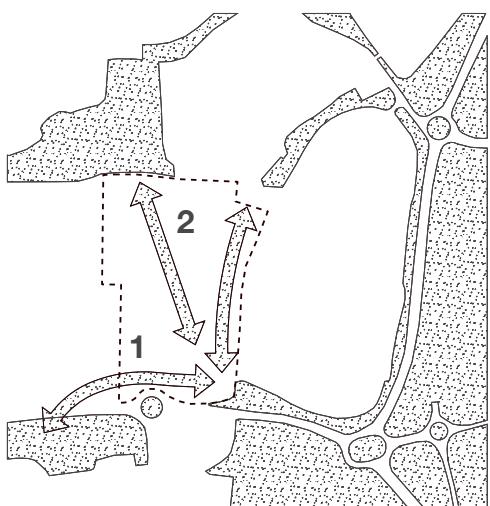


Image 105a

1. Site

2. Potential green corridors

Green public space

All new development must include measures to encourage biodiversity by creating varied habitats, and a rich diversity of trees and planting throughout the built environment.

Some areas should be left uncultivated. 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 105a)

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 outdoor living area.

Green roofs can support either large and elaborate vegetation, including trees, using deep soil bases (• intensive • green roofs) or support mainly mosses and sedums using shallow soil layers (• intensive • green roofs). Intensive green roofs are flat and usually require artificial irrigation. The deeper soil layer has structural implications for the building design.



Image 106

Green buildings important in creating sustainable developments Vauban, Freiburg, Germany

Places such as the deck above communal parking in higher density development can be designed for this situation. Extensive green roofs can have a pitch of up to 30°, are lightweight but still provide additional thermal insulation and encourage biodiversity.

Brownfield sites may be heavily contaminated and have poor soils but they can have a high ecological value. Brown roofs can be used to recreate this 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. (Image 108)

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

Green Point System

To achieve bio-diversity within new urban areas, this guidance sets out a point score system. Points are awarded for any measure that contributes to the bio-diversity within new development.

Areas to be developed must reach a Green Points Score of at least 1000 points per hectare.

This can be achieved in different ways and the designer – with the advice of an appropriately qualified ecologist – can select the preferred mosaic of ecological features that will be part of the Ecology Strategy for the site. The following table sets out the range of options that are available to reach the full score. The kind and combination of measures will depend on the individual conditions and opportunities on each site.

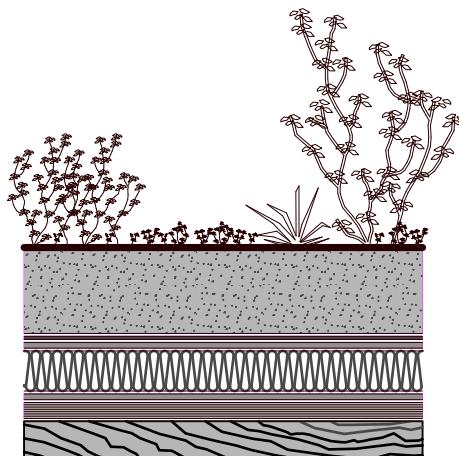
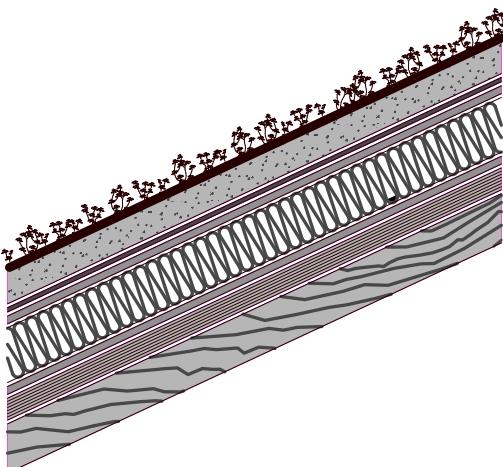


Image 107
Extensive green roof

Image 108
Intensive green roof

The Green Points table

The green points system should be seen as indicative and provides the background context for what should be required to achieve planning permission. A balanced judgment is still required by a suitably qualified and experienced ecologist. They should draw up the proposals for biodiversity proposals and enhancements for the development proposal.

It should consider what is appropriate for the area, taking into account considerations such as 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.

A scheme of management must be provided to demonstrate how any habitat or vegetation is to be established and managed in the future. It must be based on information in the ecological strategy.

This is in addition to protection of statutory sites and protected species.

The Essex Biodiversity Project (EBP) has produced guidance for planners and developers entitled, Integrating Biodiversity into development. The original version is on a CD and the latest updated version is on the EBP website at www.wildlifeandplanningessex.org.uk. Further information in the definitions can be found in Appendix 7.

| Insert Site Area (ha) | 1 | | | | |
|--|-----------------|--------------------------------------|---------------------------------------|---------------------------------|--------------------------------------|
| Points Required | 1000 | | | | |
| Habitat | Unit of measure | Points available per unit of measure | Maximum points available for the site | Insert area of habitat proposed | Points gained or lost are calculated |
| Loss of BAP habitat | ha | -1000 | -1000 | | 0 |
| Enhancement of BAP species/habitat | ha | 1000 | 1000 | 0.1 | 100 |
| Creation of BAP species/habitat | ha | 800 | 800 | 0.05 | 40 |
| Loss of high priority brownfield land (see Buglife definitions) | ha | -1000 | -1000 | 0 | 0 |
| Loss of medium priority brownfield land (see Buglife definitions) | ha | -800 | -800 | 0 | 0 |
| Provision of effective habitat linkages* between the development and other sites | ha | 500 | 5000 | 0.1 | 50 |
| Plants with good source of nectar, berries, seeds or nuts (see explanation note below) | m2 | 1 | 100 | 20 | 20 |
| Dry habitat – with plants requiring little water | m2 | 1 | 100 | 15 | 15 |
| Wetland habitat – e.g. ponds, lakes, reed beds, ditches (with native marginal planting) as part of a SUDS | m2 | 2 | 1000 | 50 | 100 |
| Designed/potential area for climbing plants on buildings and structures (vertical area coverage) | m2 | 1 | 100 | 50 | 50 |
| Loss of mature trees (see BAP for definition) | no. | -100 | -100 | | 0 |
| Tree planting of locally native species | no | 1 | 100 | 100 | 100 |
| Bird boxes or other nesting provisions | no. | 2 | 50 | 10 | 20 |
| Bat boxes or other roosting provisions | no. | 2 | 50 | 20 | 40 |
| Green roofs | m2 | 1 | 600 | | 0 |
| Brown roofs | m2 | 1 | 600 | 500 | 500 |
| TOTAL | | | | | 1035 |

Table: Demonstrates how green points can be achieved on site of 1 hectare

Below, two case studies show how the required green point score can be achieved in different developments. The first example is a 2.6ha development which reaches the required green point score of 2608 through incorporating a range of green elements throughout the development. The combination shown in the example is just one way to show how the score can be achieved, with many other combinations possible.

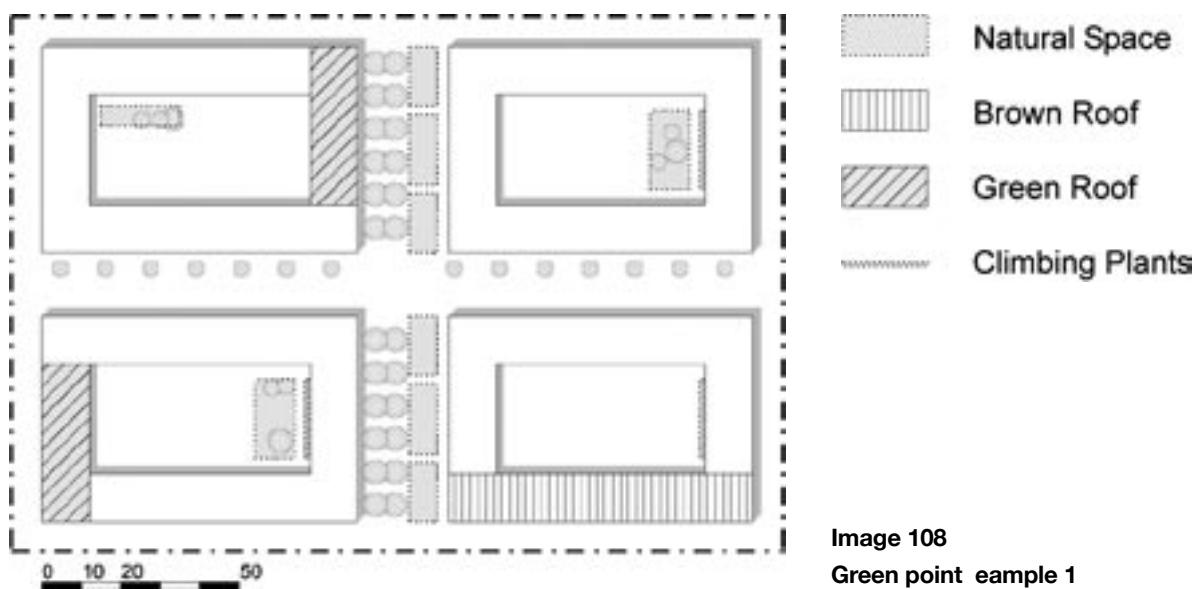


Image 108
Green point example 1

| Habitat | Unit of measure | Points available per unit of measure | Maximum points available for the site | Insert area of habitat proposed | Points gained or lost are calculated |
|---|-----------------|--------------------------------------|---------------------------------------|---------------------------------|--------------------------------------|
| Creation of BAP species/habitat | ha | 800 | 2080 | 0.123 | 98.4 |
| Plants with good source of nectar, berries, seeds or nuts | m ² | 1 | 260 | 260 | 260 |
| Dry habitat – with plants requiring little water | m ² | 1 | 260 | 100 | 100 |
| Designed/potential area for native climbing plants on buildings and structures (vertical area coverage) | m ² | 1 | 260 | 260 | 260 |
| Tree planting of locally native species | no. | 1 | 260 | 50 | 50 |
| Bird boxes or other nesting provision | no. | 2 | 130 | 10 | 20 |
| Bat boxes or other roosting provisions | no. | 2 | 130 | 5 | 10 |
| Green roofs | m ² | 1 | 1560 | 960 | 960 |
| Brown roofs | m ² | 1 | 1560 | 950 | 850 |
| TOTAL | | | | | 2608 |

This example shows a small urban infill site of 0.1 ha. The required 10 points can be reached through either of the shown measures. Again, there are many other ways to achieve the score.

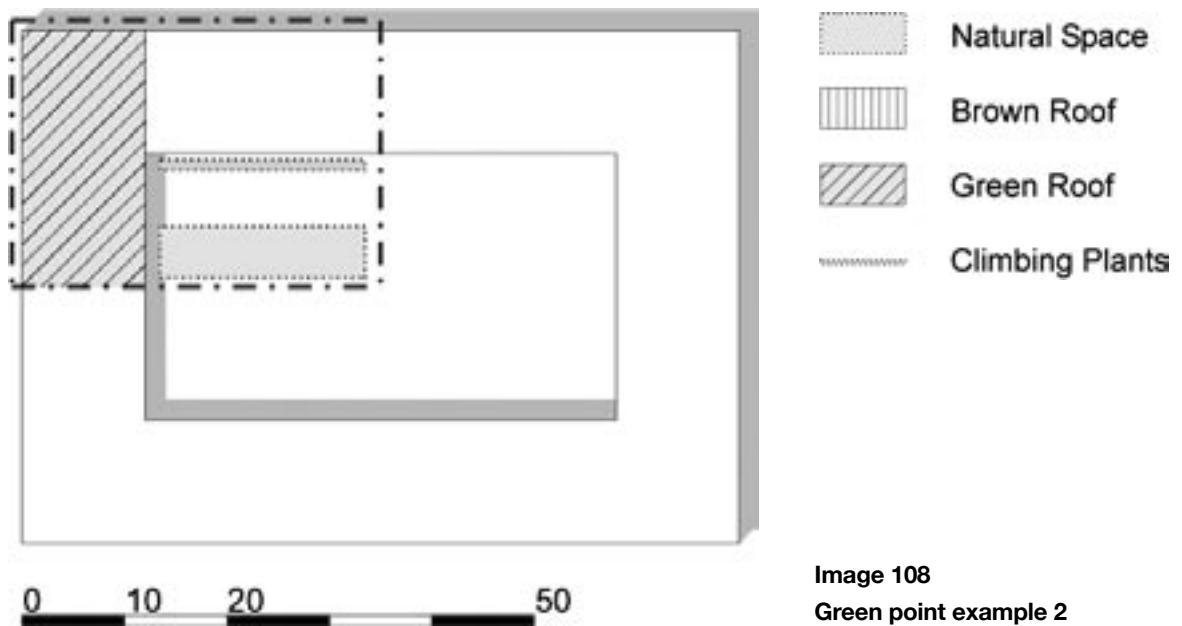


Image 108
Green point example 2

| INSERT SITE AREA (ha) | 0.1 | | | | |
|---|-----------------|--------------------------------------|---------------------------------------|---------------------------------|--------------------------------------|
| POINTS REQUIRED | 100 | | | | |
| Habitat | Unit of measure | Points available per unit of measure | Maximum points available for the site | Insert area of habitat proposed | Points gained or lost are calculated |
| Creation of BAP species/habitat | ha | 800 | 80 | 0.005 | 4 |
| Plants with good source of nectar, berries, seeds or nuts | m ² | 1 | 10 | 15 | 10 |
| Dry habitat – with plants requiring little water | m ² | 1 | 10 | 10 | 10 |
| Designed/potential area for native climbing plants on buildings and structures (vertical area coverage) | m ² | 1 | 10 | 50 | 10 |
| Bird boxes or other nesting provision | no. | 2 | 5 | 5 | 5 |
| Bat boxes or other roosting provisions | no. | 2 | 5 | 5 | 5 |
| Green roofs | m ² | 1 | 60 | 55 | 55 |
| TOTAL | | | | | 99 |

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)

Through the platform of 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 positive improvement.

Neighbourly urban design

This guidance is directed at steering a change in 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.

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 108a

Community for both the young and old, Freiburg, Germany

Applying the guidance

Development scenarios

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 have produced a tool for designers, the community and others to help them assess schemes against a number of criteria. This is called the Building for Life criteria.

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.

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.

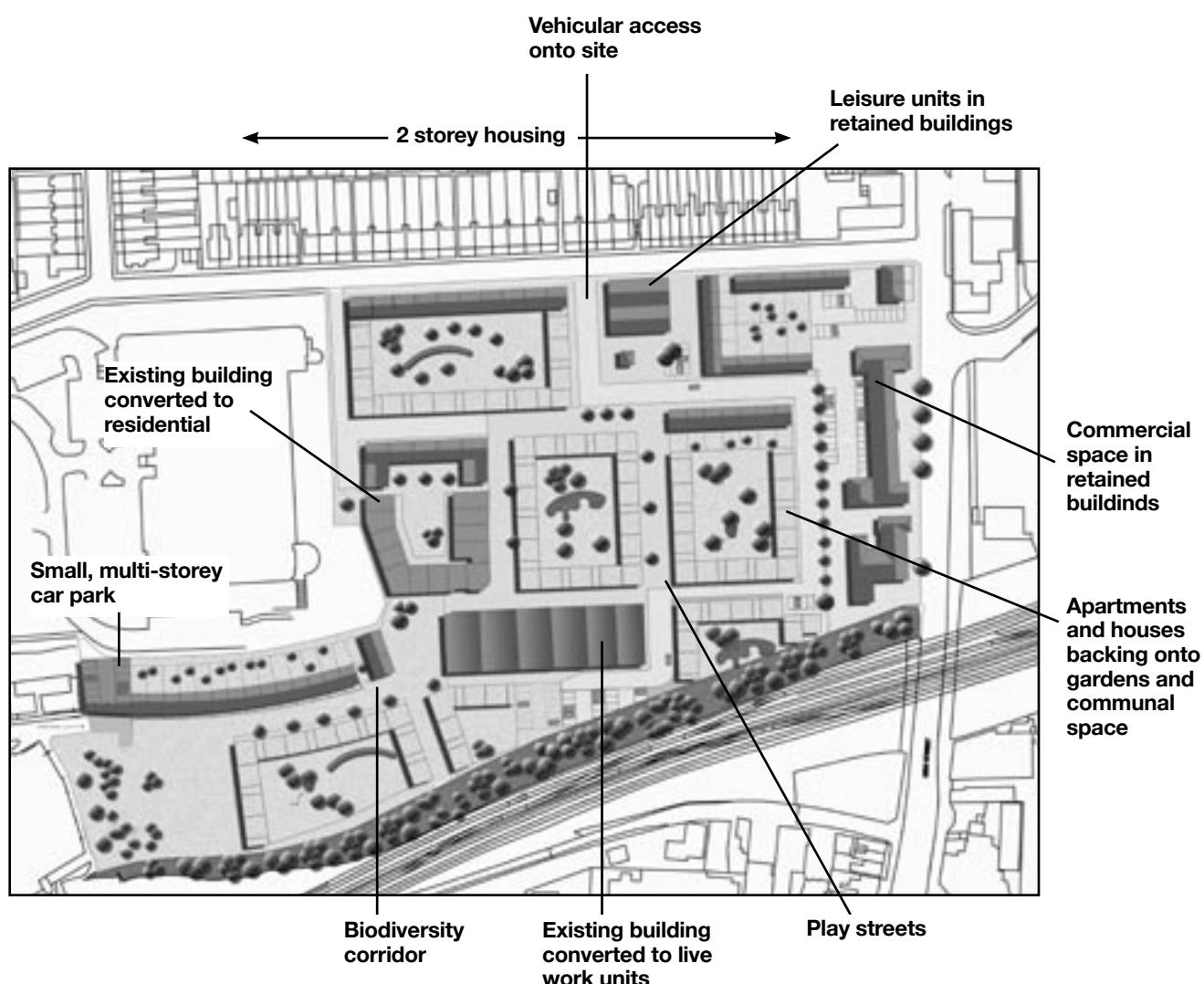
Several interesting industrial buildings exist on the site and these have been retained and re-used for commercial, leisure and residential purposes. New buildings are either houses or apartments of between 2 and 4 storeys that have car parking that is either placed under-deck with landscaping above, 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 planning 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



Building for Life

Assessment of UPS development scenarios - Town Centre

| 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 though 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 to provide a substantial. |
| 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 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 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 schemes 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. |
| Design and construction | |
| 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 of 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. |

| Environment and Community | |
|--|--|
| 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 bio-diversity 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 cafes? | This is a town centre site and is close to all major facilities. Anglia Ruskin University and the main line railway station are 5 minutes distant on foot. |

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.

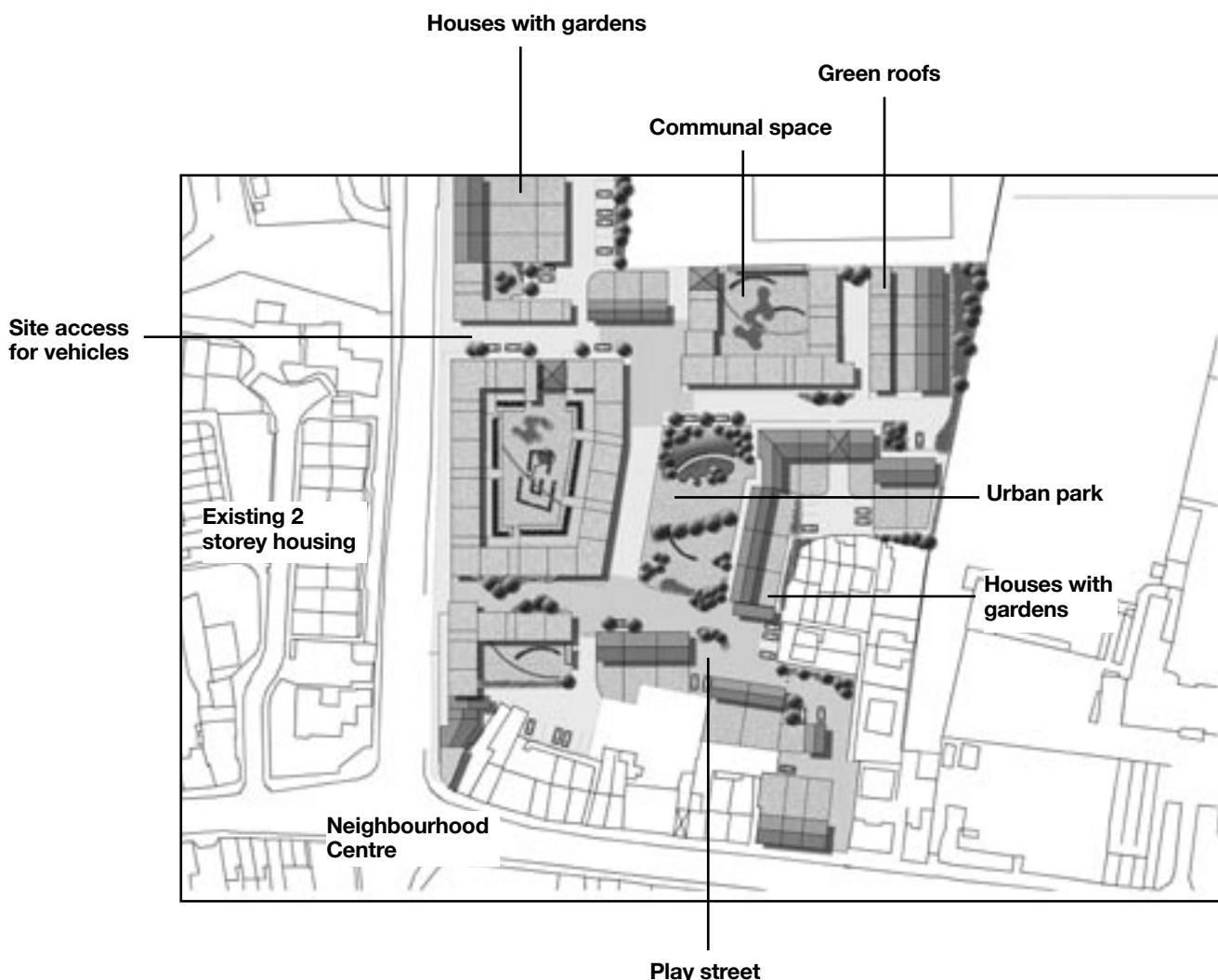
A variety of houses, apartments, business units and shops combine to create a development of mixed-tenure, type, value and use. The 'intensive Green Roofs' above the parking decks can be used for socialising, playing or simply sitting outside. Other properties have private, enclosed gardens.

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



Building for Life

Assessment of UPS development scenarios - Neighbourhood

| 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 though 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? | Buildings on the site have been cleared, save for a couple of small sheds in commercial use. The gently sloping site has been exploited to allow for partial, underground car parking. |
| 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. 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 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. |
| Design and construction | |
| 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 of 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. |
| Environment and Community | |
| 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). 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? | <p>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.</p> |
| Does the development provide (or is it close to) community facilities, such as a school, park, play areas, shops, pubs or cafes? | <p>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.</p> |

Small Infill

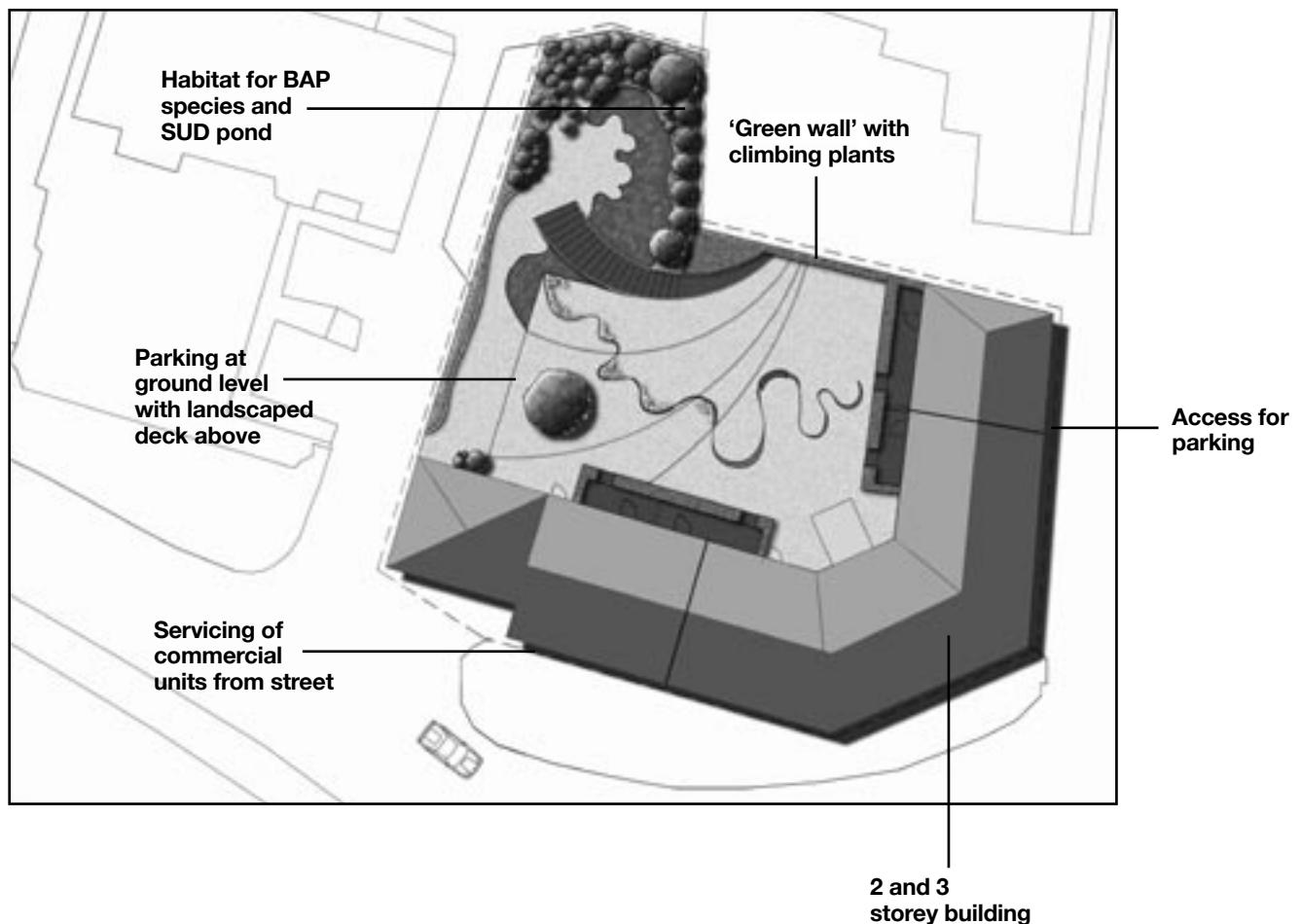
70+ dwellings/hectare

This site is located within less than 5 min 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 it's 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 bio-diversity.

Site area: 0.1 ha

Net density: 100 dph, inc. open space



Building for Life

Assessment of UPS development scenarios - Small Infill

| Character | |
|--|---|
| 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. |
| Roads, parking and pedestrianisation | |
| 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 schemes 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 Rochford in that the fronts of buildings face public space and the street. |
| Design and construction | |
| 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. |
| 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. |
| Environment and Community | |
| 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? | High Eco-Home/BREEAM rating (as above). 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. The scheme has scored 100 Green Points per hectare in its incorporation of bio-diversity habitat. Part of the Bio-diversity strategy for the site has been the inclusion of an area of natural habitat. A water harvesting tank is provided within the semi-basement for irrigating the landscaping, washing cars, flushing toilets etc. |
| 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 cafes? | 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. |

Case studies

Introduction

The following section summarises the findings of a selection of study visits to compact urban schemes during 2005. All the developments are different and show a variety of solutions to key issues from car parking provision to tenure. Most of the developments have, in one way or another, received positive reviews and are regarded to be good precedents for high density urban development.

Our assessment of each case study is based on the principles outlined within this document and a site visit. No residential consultation took place and the appraisal of the scheme was undertaken only from external space. In reviewing high density schemes it is important to gain an appreciation of the context of each development. Studying schemes in metropolitan areas should not be seen as trying to applying the London model to Essex – but to understand the reasons behind each success and failure and ensure lessons are learnt for future developments. These case study sheets will not be included in the final copy of the Urban Place Supplement.

Beaufort Court

Lillie Road, Fulham. Feilden Clegg/Peabody trust



Notes from site visit

| Likes | Dislikes |
|--|---|
| <ul style="list-style-type: none"> Crisp design Architecture fits in well with surrounding context Tenants meeting room | <ul style="list-style-type: none"> Communal space is taken up by a fenced sports facility (padlocked at the time of our visit) Little additional public open space Very poor landscaping Front space behind high wall on street may be a missed opportunity Deck parking ramp and bin area obtrusive and unsecured |

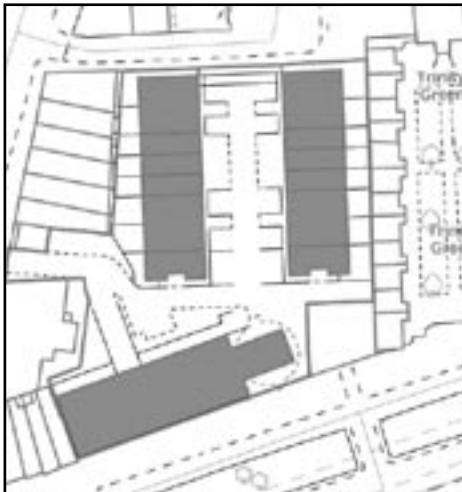


The analysis

| | | | | | |
|--------------------------------------|---|---------------------------|--------------------------------------|--------------------------------|--------------------------|
| Date built: | 2003 | Building depth: | 11.6m | On street: | n/a |
| Project Value: | £7.4 million | Frontage: | 63.2m | Dedicated off-street bays: | n/a |
| The Site | | Retail units: | n/a | Garages: | n/a |
| Site Area: | 0.53 hectares (131 acres) | Bin store: | caged in front of ground floor flats | Deck parking spaces: | 44 |
| Number of bed spaces: | 238 | Lifts: | none (three stairways) | Overall land budget | |
| Type and mix of dwellings: | houses and flats | | | Dwellings footprint: | 14% flats 14% houses |
| Density: | 122 dph | Space in the home | | Private gardens: | 6% flats 17% houses |
| Units: | 65 | Typical garden area flat: | 9sq.m | Communal space: | 23% |
| Section Type: | 28 social rental 14 key worker rental 19 shared ownership 4 rough sleeper initiative | Typical garden area: | 12.5sq.m rear | Roads and footpaths: | 15% |
| The Building (Beaufort Court) | | Balcony: | 52sq.m | Landscape: | 9% |
| Building perimeter: | 162m | Storage area: | 6.4sq.m | Other – Tenants meeting rooms: | 2% |
| | | Living area: | 1sq.m | | |
| | | Small bedroom: | 15sq.m | | |
| | | Large bedroom: | 116sq.m | | |
| | | | | Other information | |
| | | Car parking | | Cost per unit: (2003) | £115,230 |
| | | Spaces per dwelling: | 0.67 per dwelling | Postcode: | SW6 1UD |
| | | | | | Building for Life Award. |

Chronos

Mile End Road, Whitechapel. Proctor Matthews/Copthorn Homes



Notes from site visit

Likes

- Sympathetic architecture with some good detailing
- Mixed-use

Dislikes

- Waste storage bins are located so they cut off blocks from communal space
- Poor communal space – could be avoided if all parking were underground
- High density at expense of quality communal space



The analysis

| | | | |
|-----------------------------|------------------------------|-----------------------------------|--------------------------|
| Date built: | 2002 | Space in the home | Dedicated parking bays |
| Project Value: | £8.0 million | Typical garden area flat: | 6% |
| The Site | | n/a | Communal space: |
| Site Area: | 0.4 hectares | Typical garden area house: | 0% |
| Number of habitable rooms: | 458/ha | Balcony: | Roads and footpaths: 29% |
| Type and mix of dwellings: | flats and townhouses | (semi-closed) | Landscape: 5% |
| Density: | 162 dph | Storage area: | Other – Bin storage: 3% |
| Units: | 65 | Living area: | |
| Section Type: | no social housing allocation | Small bedroom: | |
| | | Large bedroom: | |
| The Building (Flats) | | Car parking | Other information |
| Building perimeter: | 130m | Spaces per dwelling: per dwelling | Cost per unit: (2003) £ |
| Building depth: | 14m | On street: | Postcode: E1 4TP |
| Frontage: | 50m | Dedicated off-street bays: | Building for Life Award. |
| Retail units: | 6 including restaurant | Garages: | |
| Bin store: | shared for town houses | Deck parking spaces: | |
| Lifts: | communal for flats | 40 (approx) | |
| | 1 | | |
| | | Overall land budget | |
| | | Dwellings footprint: | 17% flats |
| | | | 27% houses |
| | | Private gardens: | 13% flats |

Hart Street

Brentwood. Countryside Homes



Notes from site visit

Likes

- Blends into the conservation area yet provides a high density development
- Uses local materials
- Well designed communal space
- Under-deck parking

Dislikes

- External building envelope lacks ambition



The analysis

| | | | | |
|-----------------------------------|----------------------|----------------------------|---------------------------|--|
| Date built: | - | Lifts: | - | Overall land budget |
| Project Value: | £-million | Space in the home | | Dwellings footprint: 48% |
| The Site | | Typical garden area flat: | 5.3sq.m (conservatory) | Private gardens: 2% |
| Site Area: | 0.25 hectares | Balcony: | - | Communal space: 26% (8% of which forms two garden areas) |
| Number of bed spaces: | - | Storage area: | - | Landscaping: 19% |
| Type and mix of dwellings: | flats and townhouses | Living area: | 22sq.m | Other – car park vent: 2% |
| Density: | 192 dph | Small bedroom: | 5.28sq.m | car park ramp: 3% |
| Units: | 48 | Large bedroom: | 10.28sq.m | |
| Section Type: | flats (2,3,3 bed) | Car parking | | Other information |
| The Building (Hart Street) | | Spaces per dwelling: | 1.7 per dwelling | Cost per unit: (2003) £- |
| Building perimeter: | 376m | On street: | n/a | Postcode: - |
| Building depth: | 10m (max) | Dedicated off-street bays: | n/a | |
| Frontage: | 97m | Garages: | n/a | |
| Retail units: | n/a | Deck parking spaces: | 82 | |
| Bin store: | - | | | |

Fulham Island

CZWG/Manhattan Loft Corp, & Osborne Group



Notes from site visit

- Likes**
- Comfortable blend of unity and variety – fitting into the eclectic architecture of surroundings
 - Communal courtyard
 - Successful mixed-use
 - Excellent waste and recycling arrangements
 - Good public realm and pedestrian priority of surrounding streets

- Dislikes**
- No affordable housing



The analysis

| | | | |
|----------------------------|--|---|--|
| Date built: | 2004 | The Building (Fulham Island) | Car parking |
| Project Value: | £9.4 million | | Spaces per dwelling: 1 per dwelling |
| The Site | | | On street: n/a |
| Site Area: | 0.6 hectares (1.5 acres) | Building perimeter: 243m Block depth: 46m x 66m Frontage: 243m Retail units: Offices, shops (including 7000sq.ft Marks and Spencer), restaurant. | Dedicated off-street bays: n/a Garages: n/a |
| Number of bed spaces: | - | | Deck parking spaces: 25 (basement level) |
| Type and mix of dwellings: | flats | Bin store: Basement Lifts: Residential lift from reception. | |
| Density: | 60 dph | | |
| Units: | 22 | | |
| Section Type: | no affordable homes 20 flats (2 and 3 bedrooms) 2 penthouses 10 flats in refurbished building | Space in the home Balcony: -sq.m Storage area: -sq.m Living area: -sq.m Small bedroom: -sq.m Large bedroom: -sq.m | Overall land budget Buildings footprint total: 50% Communal space: 23% Roads and footpaths: 22% Other – On street café space: 4% Service vents: 1% |
| | | | Other information Cost per unit: (2003) £- Postcode: SW6 |

Murray Grove

Hackney, London. Cartwright Pickard Architects/Peabody Trust



Notes from site visit

| Likes | Dislikes |
|---|--|
| <ul style="list-style-type: none"> Courtyard Strident design comfortable in its context | <ul style="list-style-type: none"> Longevity/robustness of modular construction for the future Deck access and problems with privacy and nuisance No bicycle facilities |



The analysis

| | | | | |
|------------------------------------|--|--------------------------|-----------------------------|---|
| Date built: | 1999 | Retail units: | n/a | Overall land budget |
| Project Value: | £28 million | Bin store: | rear with private courtyard | Dwellings footprint: 41% |
| The Site | | | | |
| Site Area: | 0.21 hectares | Lifts: | 1 located in rotunda | Private gardens: 0% |
| Number of bed spaces: | - flats | | | Communal space: 48% |
| Type and mix of dwellings: | 142 dph | Space in the home | | Roads and footpaths: 11% |
| Density: | 30 | Balcony: | -sq.m | |
| Units: | Peabody trust apartments for young singles and couples | Storage area: | -sq.m | Other information |
| Section Type: | | Living area: | -sq.m | Cost per unit: (1999) £- |
| | | Small bedroom: | -sq.m | Postcode: N1 7QZ |
| | | Large bedroom: | -sq.m | |
| The Building (Murray Grove) | | | | |
| Building perimeter: | 131m | Car parking | Spaces per dwelling: | No car parking provision was a condition of planning permission. |
| Building depth: | 8m | | | No bike provision either – 10mins walk for Oldstreet tube station |
| Frontage: | 59m | | | |

Appendix 1 – Glossary

Term Description Alternative

| Term | Description | Alternative |
|------------------------------------|--|---|
| 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. | • Responsive Environments (Bentley et al) |
| BAP | Biodiversity Action Plan, See Integrating Biodiversity into development | |
| 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 | • Essex Biodiversity Project www.essexbiodiversity.org.uk/ |
| BREEAM* | To be defined by mapping coordinated with district councils | • See EDI website |
| Communal gardens | Shared private amenity space | |
| dph | Dwellings per hectare | • People per hectare • Habitable rooms per hectare • Plot ratio |
| 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. | • Vitality |
| Legibility | The ease with which the parts of a town can be recognised and organised into a coherent pattern. | |
| Neighbourhood Centre | Definition to follow on after public consultation. | |
| 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). | • Connectivity |
| Play Street | Residential streets that are designed for outdoor play and socialisation, where the needs of the car are of secondary importance. | • Home Zone |

*BRE's Environmental Assessment Method 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 www.breeam.org

| Term | Description | Alternative |
|---|--|---|
| Private Space | Space that is designed for exclusive use and are 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. | |
| Spatial Context | Summarises the position and role within an urban area. | |
| Space Syntax model | Space Syntax is a set of techniques for the analysis of spatial configurations of all kinds | See www.spacesyntax.org |
| Strategic Public Transport Route | Main transport corridor: 15 minute bus frequency in each direction | |
| Sustainable Communities | Mixed-use and varied (culturally, economically etc | <ul style="list-style-type: none"> • See Office of the communities |
| Sustainable Development | Development that is located, designed, constructed and used in a manner that minimises energy consumption and waste whilst maximising biodiversity gain. | <ul style="list-style-type: none"> • Rio Earth Summit definition • Balancing of economic, community and ecological needs. |
| Sustainable Urban 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. | |
| Urban Capacity | The capacity of sites or areas to accommodate new buildings and activities. Usually expressed numerically, but taking into account the potential for mixed-use. | |
| Urban Centre | Defined by population: urban centre needs to have a population of 35,000 or over. | |
| Urban Centre small | Has a population of under 35,000 | |
| Urban Grain | 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. | |
| Variety | Of use, occupancy, tenure, value, ownership, and activity occurring over time. | |

| Term | Description | Alternative |
|-----------------|--|---|
| Visual Richness | The degree to which surface interest and detail is either designed specifically for the benefit of the viewer or is incidentally derived | |
| Walkable | The area contained within a 5 or 10 catchment minute walking distance (400 or 800 metres) of principle attractors such as bus routes, railway stations, neighbourhood or town centres. | |
| Work-homes | 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. | <ul style="list-style-type: none"> • Live-Work |

Appendix 2 – Planning Context

The Draft 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 protecting 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.

PPS1 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 which 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.

PPG3 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.

PPG13 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.

PPG17 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

Appendix 3 – Context Checklist

Essex Design Guide, Urban Place Supplement (2005)
 Information required to inform Context Appraisals:

| Data | Value | Source of information |
|--|--|--|
| Spatial context | | |
| proximity to town centre | within 800m | ECC website |
| proximity to neighbourhood centre | within 400m | Survey |
| proximity to public transport corridor | within 400m | Survey |
| Built form context | | |
| urban form | Pattern of streets and spaces Morphology Materials Building heights styles and identity Skylines Landmarks | Survey Local Authority Essex County Council Civic Societies |
| Functional context | | |
| existing pattern of uses | Type Floorspace | Survey LA records |
| economic development initiatives | Skills training Start-up units Business support | Learning and Skills Council LA Essex Development & Regeneration Agency |
| doctor surgeries | | Primary Care Trust |
| healthy living centre/clinic | | Primary Care Trust |
| | | |
| secondary school | | ECC |
| primary school | | ECC |
| pre-school nursery | | LA |
| | | |
| community centres | | |
| library | | |
| public art | installations and strategies | LA ECC |
| | | |
| green space | global structure | survey LA |
| sports fields | global provision | survey LA |
| play space | diversity of provision | survey LA |
| bio-diversity structure | global structure local incidents and gaps BAP targets sites of importance | survey English Nature LA ECC Essex Wildlife Trust & Local groups |

| Data | Value | Source of information |
|--|---|--|
| landscape character | topography landform sals geology hydrology land-use regeneration micro-climate | survey LA ECC English Heritage Countryside Agency |
| areas liable to flood | | Environment Agency |
| heritage assets | Sites & Monuments Record Listed buildings Conservation Areas | survey ECC LA Civic Societies English Heritage |
| Operational context | | |
| car parking management | parking and servicing restrictions resident parking schemes enforcement | LA |
| public space management and maintenance | programmes & events quality of maintenance delivery mechanism | LA ECC |
| school place availability | | ECC |
| pre-school places | | operators |
| community centre availability | | operators |
| capacity of GP surgeries | | Surgery Primary Care Trust |
| employment space availability | | Agents LA 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 | | LA ExDRA |
| housing need | | LA Registered Social Landlords |
| housing demand | | Agents |
| education investment proposals | | ECC LA |
| 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:

<http://www.edi.co.uk>

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>

Heritage Monuments Record

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

Local Authority Sports Officers

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

Childrens Nurseries

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

Schools

<http://194.129.26.30/applications/schools/>

Primary Care Trusts

<http://www.nhs.uk/england/>

Local Strategic Partnership: Community Strategies

http://www.goeast.gov.uk/Partnerships/Local_Strategic_Partnerships/

Flood Risk Maps

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

Homes for Life

www.lifetimehomes.org.uk

Car Sharing

www.thamesgateway-carshare.com

www.essexcarshare.com

www.liftshare.com

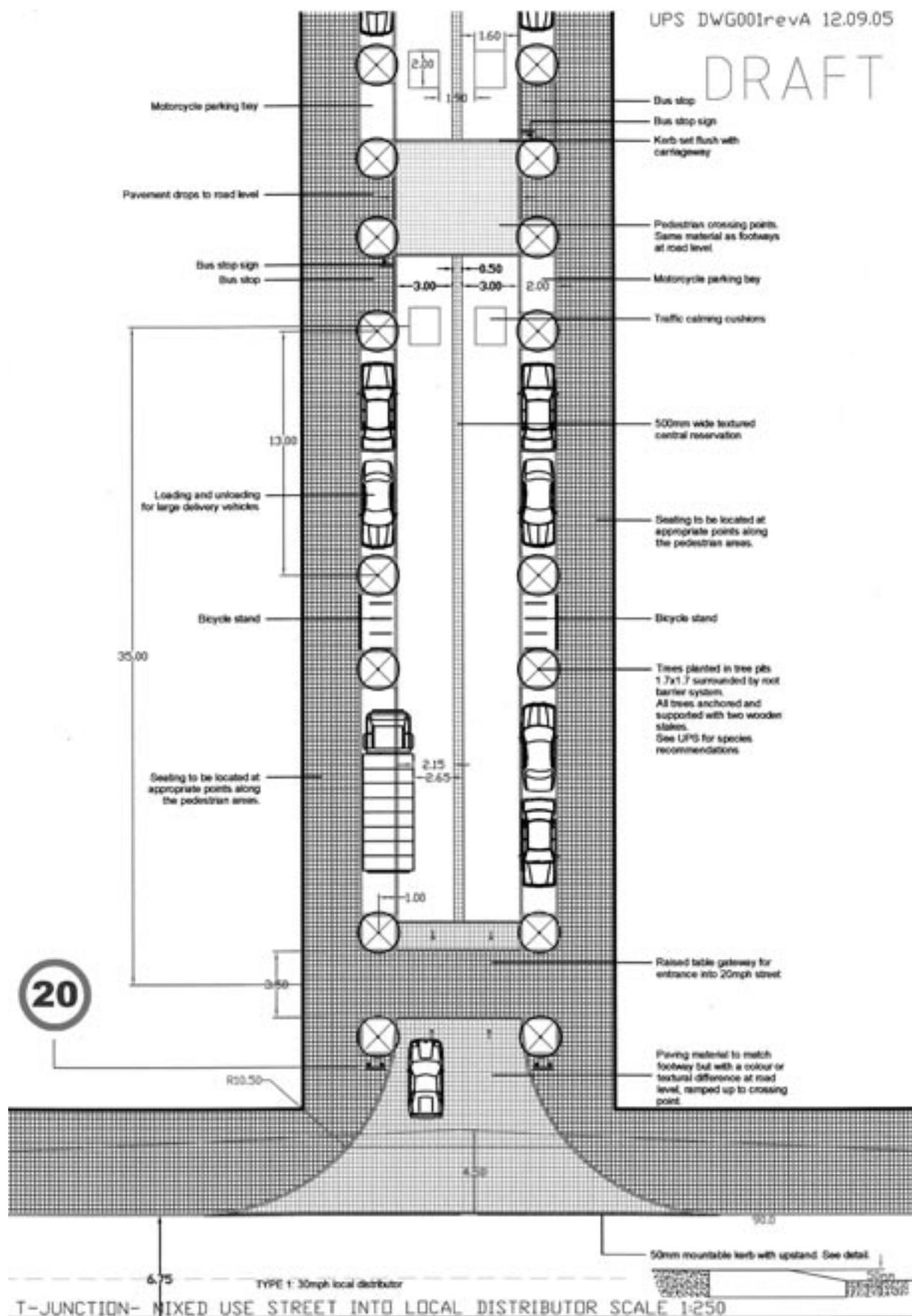
www.carclubs.org.uk

Appendix 5 – Spatial Development Types

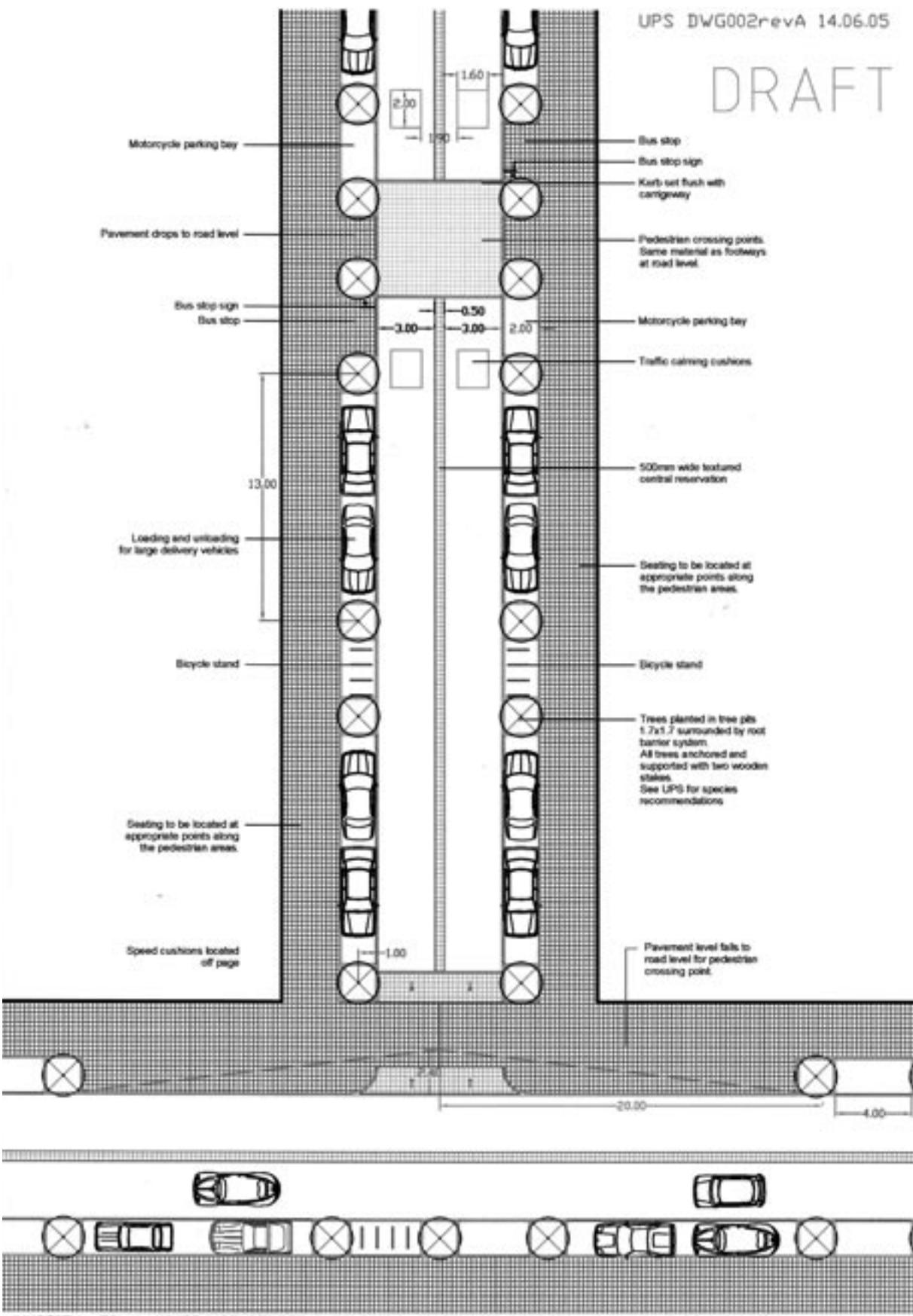
| scenario | specific requirements | requirements for all development |
|-----------------------------|---|---|
| Town Centre | <p>Min. 75dph on any site, unless an alternative scenario applies</p> <p>Non-residential use on ground floor of primary frontage</p> | BREEAM Eco-home/ very good rating required post 2011 Excellent rating+ maximum score required for Water Conservation and Waste Recycling |
| Neighbourhood | <p>Min. 70dph on any site, unless site is a Small Urban Infill</p> <p>Non-residential use on ground floor of primary frontage</p> | 10% energy needs met from renewable sources on sites over 1,000m ² or 10 homes |
| Small Urban Infill | Imitate density of surroundings | A Water Management Strategy, which must include: |
| Regeneration Area | Min. average 65dph across site but a variety of densities within | <ul style="list-style-type: none"> • Rainwater harvesting system • Sustainable Urban Drainage System |
| Large Urban Infill | <p>Min. average 65 dph across site but a variety of densities within</p> <p>Combined Heat and Power System required to meet 100% of the needs of the development</p> <p>Sustainable Urban Drainage System with open water</p> | <p>Ecology Strategy required</p> <p>Public Artists shall be engaged on all development projects on sites over 0.1ha</p> <p>Lifetime Homes Standard required</p> |
| Sustainable Urban Extension | | |

Appendix 6 – Road Types

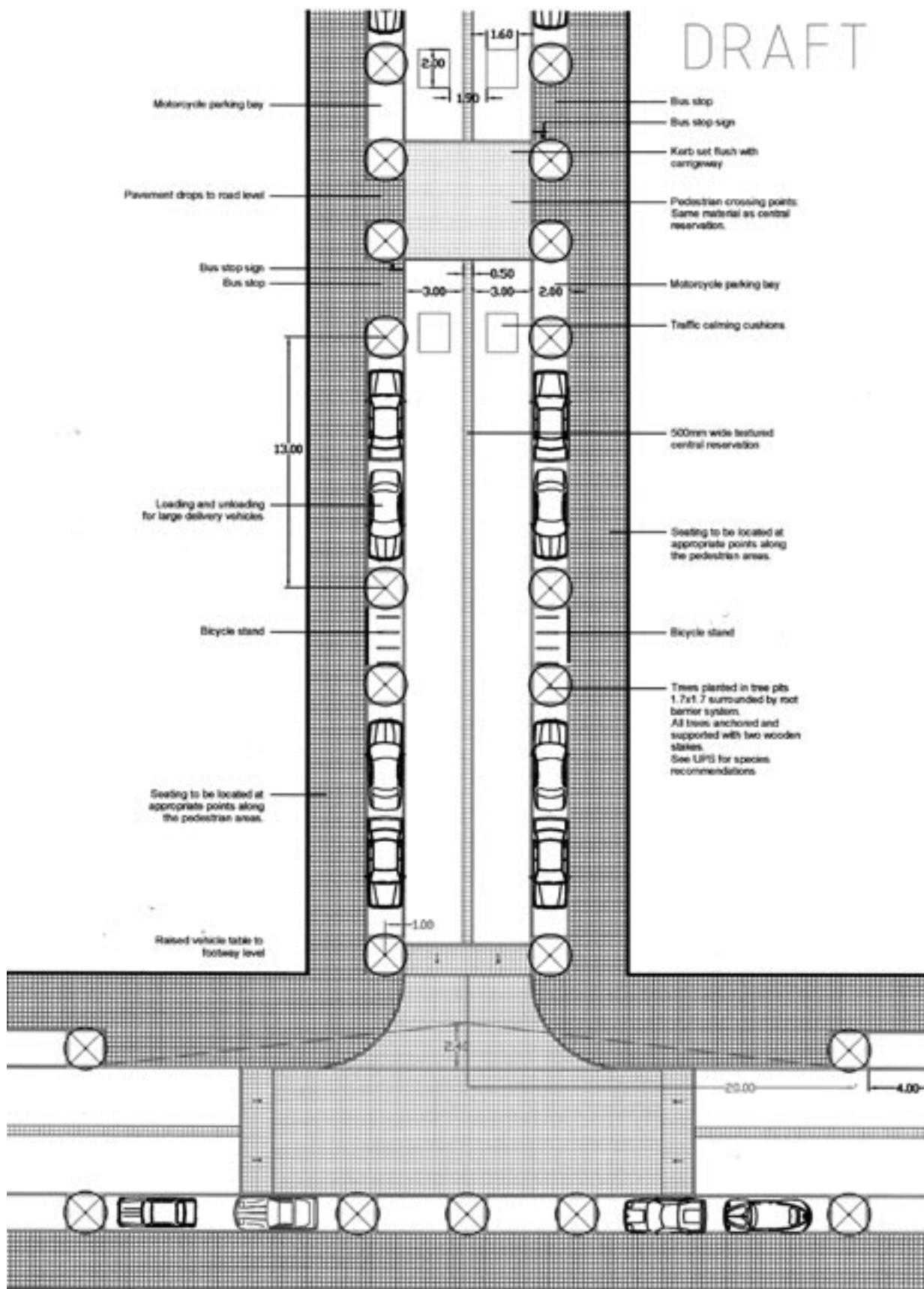
Mixed Use Street T-Junction with local distributor



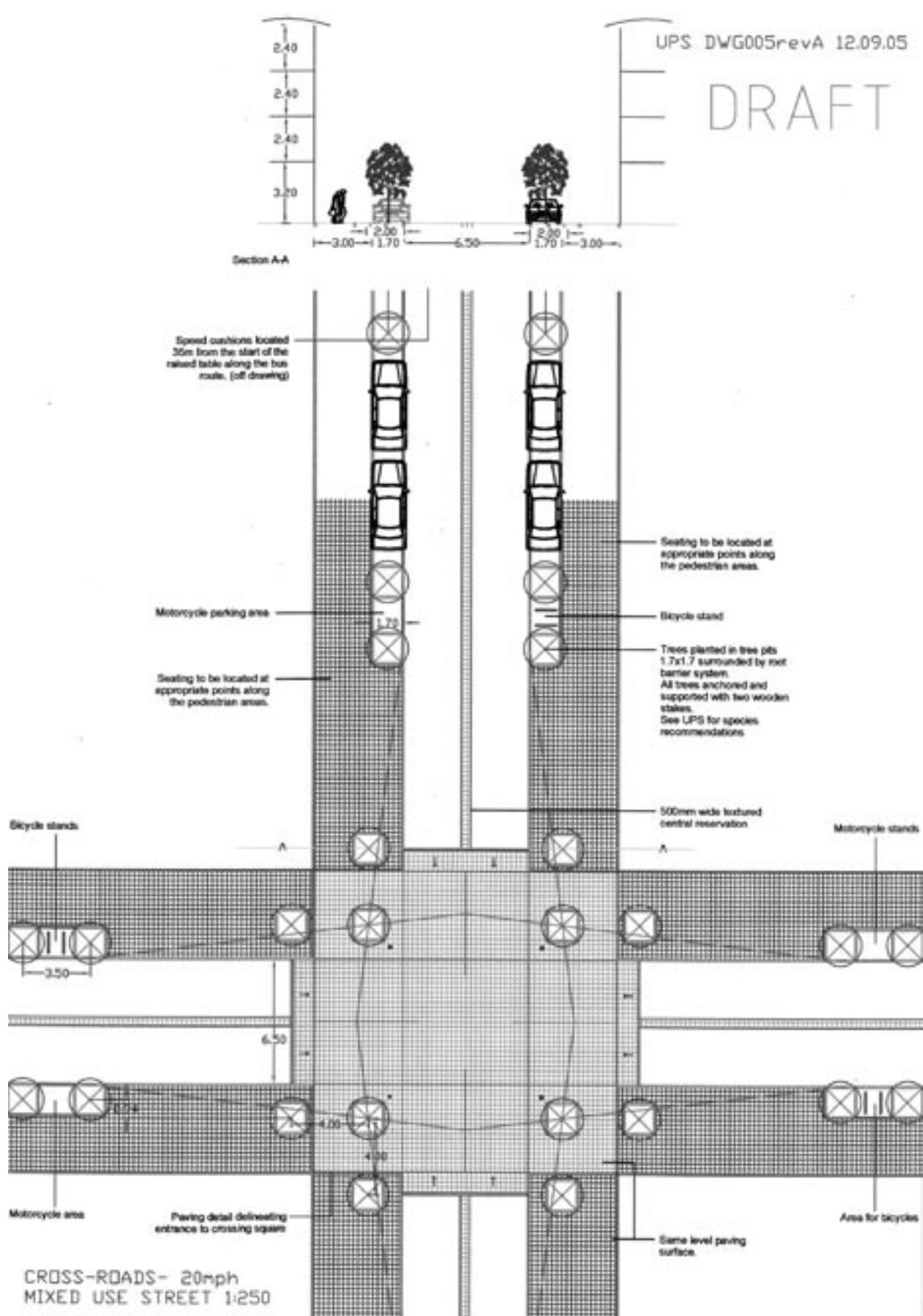
Mixed Use Street T-Junction Option 1



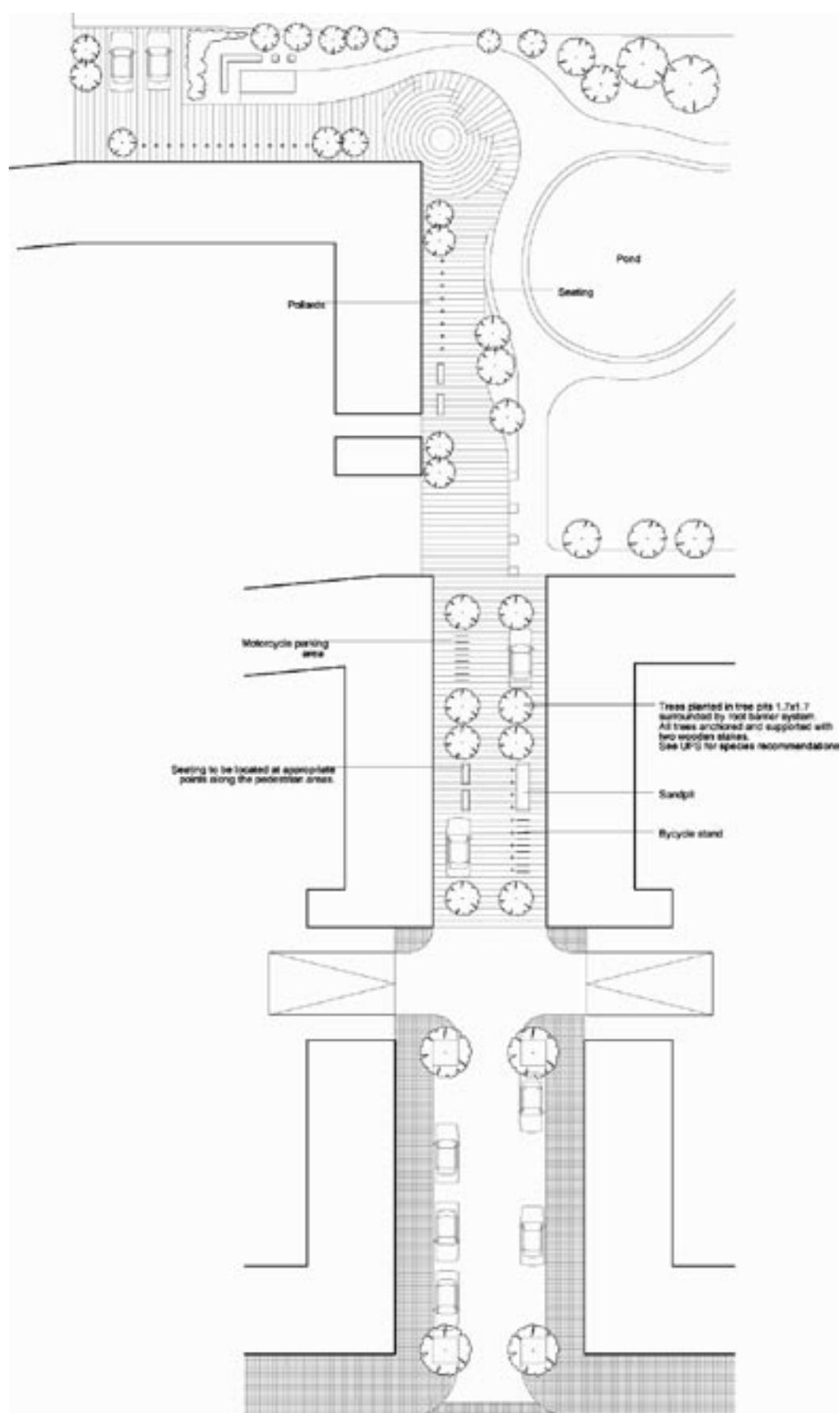
Mixed use street T-Junction Option 2 with table



Mixed Use Street Cross Roads



Play Street



Appendix 7

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 are there are often BAPs for the relevant district. See web links for further information www.essexbiodiversity.org.uk or www.ukbap.org.uk.

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. This should be identified in the ecological strategy by the ecologist and management should be set out in the agreed scheme of management.

Loss of high and medium priority brownfield land

Definitions to assess a brownfield site's potential invertebrate biodiversity are currently being developed by Buglife and will soon be available at www.buglife.org.uk. They are based on a simple assessment of habitat features such as plant groupings, structure and diversity, substrates and hydrology."

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 SUDS

Sustainable (Urban) Drainage Systems (SUDS) The greatest emphasis should be on the conservation, enhancement and creation of BAP habitats and habitats for BAP species. See page 64 for further information.

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 (eg 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- www.londons-swifts.org.uk

Green and brown roofs

For further information see p81

Credits

This draft was written by a variety of people from both within Essex County Council and from outside the organisation.

It has been informed by several strands of work: a series of discussions with colleagues from within ECC and Essex local authorities, who included:

Richard Button, Colchester Borough Council

Ian Howes, Colchester Borough Council

Ian Ward, Colchester Borough Council

Roger Estop, Chelmsford Borough Council

Roy Chandler, Chelmsford Borough Council

Paul Sutton, Epping Forest District Council

and also,

Alan Stones, Architect

Charles Glass, Architect

Richard Bailey, Essex Development and Regeneration Agency

Study visits within the UK and to other parts of Europe throughout 2004 and 2005

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 as well as transcripts from each event, from www.essexcc.gov.uk/edi

The main body of the UPS text was written by officers of Essex County Council, Built Environment Branch:

- **David Balcombe • Elizabeth Moon • Susan Waldock • Peter Dawson • Isabelle Lines-Slatter**
- **Colin Munsie • Eva Herr**

with valued assistance from:

- **Keith Lawson • Phil Callow • Martin Wakelin • Crispin Downs • Emma Simmonds**

The following consultants were engaged to draft specific contributions to the Urban Place Supplement:

Alan Stones, Architect – development scenarios

Mathew Brundle, WSP – environmental sustainability

Designed by **Terry Coelho**

The Supplement was edited by **David Balcombe** and illustrated by **Ken Philpot, Peter Dawson and Eva Herr, Paul Calder, Siobhan Mayer, Almudena Quiralte and Noel Isherwood**.

