

9. Design and Construction

Introduction

- 9.1** The achievement of high quality design is a core principle of the NPPF. It states that good design is indivisible from good planning'. The importance of design of the built environment and its contribution to making better places for people is emphasised.
- 9.2** Good design has a major role in contributing to the quality of life. Good design goes beyond the look of buildings and considers: the mix of uses and activities that help create lively and interesting places; the local character and distinctiveness of a place, reflected through its landscape and building materials for example; contributing to healthy lifestyles by making it easy for people to move by foot and by bike; fostering a sense of community through well designed, functional and attractive public spaces; and enhancing the quality of environment.
- 9.3** In short, good design will help create high quality, safe and successful places in Uttlesford where people enjoy living, working and visiting. Successful places are those¹:
- Having a complementary mix of uses and activities;
 - Being fit for purpose, accommodating uses well;
 - Encouraging easy movement;
 - Including successful public space
 - Being able to adapt to changing needs and circumstances;
 - Being efficient in how land and other resources are used
 - Having an appearance that is appealing and appreciated
 - and Having a distinctive, positive identity and sense of place;
- 9.4** This section of the Local Plan establishes general policies that guide the design of all development in the district and then focuses on the requirements for the new garden communities and strategic development sites. These policies will need to be read in accordance with any future guidance that might be published by the Council at a later date, including for example any location specific or thematic design guidance. The Applicant will also have regard to the Essex Design Guide, which provides specific information about local character and distinctiveness and provides key principles which should be applied to any new development². Furthermore, design guidance in 'made' neighbourhood plans, where relevant to a particular proposal, will also need to be considered and addressed in any design response.

Design and Local Distinctiveness

- 9.5** Towns and villages in the district have grown over time, historically responding to their location and cultural heritage, the surrounding landscape and built form, and

¹ Source: The Design Companion for Planning and Placemaking (Urban Design London, 2017), Transport for London (Urban Design London), 2017. This document supports and extends national Planning Practice Guidance and is intended for use by all those involved in the planning and placemaking process to help secure higher standards of urban design and the delivery of better practice

² The Essex Design Guide (ECC, 2018). Available: https://www.essex.gov.uk/Environment%20Planning/Development-in-Essex/Documents/19715_essexdesignguide.pdf

with traditional materials reflecting the geology of the wider area. These elements shape the character of the built form.

- 9.6** The pattern of development varies across the district. In larger settlements the historic core has been surrounded by more recent development. The smaller villages retain their historic pattern with more limited evidence of expansion.
- 9.7** Local characteristics should be identified through site analysis plans prepared as part of any planning application or development framework, and be used to frame a positive place-based response. A design-led response to development, referencing good practice principles³, will help create successful places. Where new development is proposed in Uttlesford it should be of a high-quality, irrespective of scale or use. The Essex Design Guide notes that new neighbourhoods 'should have a defining character, with distinctive features or materials that make it distinguishable from other areas of the development'⁴. Another important aspect of high quality design is community safety, including crime reduction. In order to maximise community safety development should seek to adhere to the guidelines set out in the national Planning Practice Guidance and the Secured by Design guides⁵.

³ Building for Life (Built for Life, 2015). Available:
<https://www.designcouncil.org.uk/sites/default/files/asset/document/Building%20for%20Life%2012>

The Essex Design Guide (ECC, 2018). Available:
https://www.essex.gov.uk/Environment%20Planning/Development-in-Essex/Documents/19715_essexdesignguide.pdf

⁵Secured by Design Initiative Design Guides (Association of Chief Police Officers). Available:
<http://www.securedbydesign.com/industry-advice-and-guides>

Policy D1: High Quality Design

All new development in Uttlesford should contribute to the creation of high quality places through a design-led approach underpinned by good design principles and reflecting a thorough site appraisal. Development proposals should be informed by Building for Life 12 and other good practice principles, including the Essex Design Guide. All buildings, spaces and the public realm should be well-designed and display a high level of architectural quality which responds positively to local context. Development should refer to Secured by Design principles to reduce crime and encourage safer communities.

Proposals for new development should seek to optimise the capacity of the site by responding appropriately to the scale, character and grain of the existing built form. Proposals should also demonstrate how they respond to the landscape, local and longer-views and the natural and historic environments.

Development should integrate well with existing neighbourhoods, positively contributing to the public realm and street environment, creating well connected, accessible and safe places. Development should provide for a rich movement network and choice of routes.

Development should result in healthy places which prioritise active travel and provide opportunities for and access to facilities for sport and physical activity.

All development within residential and mixed use areas, including town and local centres, should have active frontages, particularly at street level, and provide a clear distinction between areas of public and private realm.

Proposals for new development should demonstrate how they respond to and enhance the amenity value of an area through consideration of matters such as overlooking, natural light, micro-climate, outlook and amenity space. Equally, proposals for new development should meet the nationally described space standards⁶ and the necessary dwelling mix, privacy, daylight and sunlight for future occupiers.

New buildings should be designed with flexibility and adaptability in mind, so that they can respond to changing social, environmental, economic and technological needs. New development should be designed such that it does not prejudice future development or design of adjoining sites. Consideration should be given to smart technology solutions that support high quality design outcomes.

In residential neighbourhoods and mixed use areas, including town and local centres, the townscape impacts of any large floorplate developments will be minimised through incorporation of finer grain frontages that wrap around the larger unit. This approach also applies to large surface and multi-storey car parks as well as servicing areas in these locations.

⁶ Department for Communities and Local Government, Technical Housing Standards – nationally described space standards, March 2015 (Updated May 2016)

- 9.8** The quality and provision of car parking can be a major determinant on the quality of place, particularly in residential areas. If it is not provided in the right place, it is unlikely to be used properly. The location and provision of parking should respond to basic urban design principles, with on-plot and on-street parking provided in close proximity to the home. Rear courtyards should be avoided. Where parking is provided on-street, consideration should be given to using different materials to define the use of different areas. Where possible, unallocated on-street parking provision, which is more land-efficient than parking courts, should be provided. The growth of on-line (internet) sales will result in an increasing number of delivery vehicles parking up in residential areas. The design of on-street parking should consider the provision of short stay drop-off areas.

Policy D2: Car Parking Design

Parking within new residential development should be designed such that it is conveniently located and overlooked so that it can be used in the way it is intended for, avoiding informal parking that undermines the quality of the street environment. Parking should be unobtrusive, with garages (where proposed) set back from the building line and street trees used to soften the visual impact of parked cars, particularly on street. The use of permeable surfaces for areas of parking will be supported.

- 9.9** Much development that takes place will be small scale and involve extensions to existing properties. These also impact on the quality of place and local amenity. Applications for such development in ~~the~~ Uttlesford should demonstrate how they respond to the local context and do not unduly impact upon neighbouring amenity.

Policy D3: Small Scale Development/ Householder Extensions

Proposals for small scale development, including extensions to existing buildings, must be of a high standard of design, responding to or improving the site and surrounding area.

The scale, height and massing of any development or proposed extension should relate to the surrounding area and existing buildings.

All new residential developments should accord with appropriate space standards.

New development should avoid detrimental impacts on occupiers of surrounding properties, particularly in terms of noise, privacy, overshadowing and access to natural daylight.

Garden Communities and Strategic Development Sites

- 9.10** Proposals for large scale development, including the new garden communities and other strategic development sites (comprising those in excess of 100 residential units), should be informed by a masterplan that comprises part of a development framework for the site. This should place the site in its wider context and avoid narrowly looking at landownership boundaries.
- 9.11** The development framework should be prepared and agreed by the Council prior to any application for development being submitted. In the case of the new garden communities the development frameworks will be prepared as development plan or supplementary planning documents and adopted by the Council.
- 9.12** The development framework should establish the design principles for the sites, including its integration with existing areas and neighbourhoods, connections and linkages allowing movement for all, the location and mix of uses, and provision of community infrastructure and green space.
- 9.13** The development framework should help create places of distinct character and variety, responding to local building types and materials, how the place will be used and need to adapt over time.
- 9.14** Consideration should be given to a sensible and logical approach to phasing, such that new development works well from the outset, with the impact of ongoing development on new and existing residents minimised.
- 9.15** In addition to the development frameworks, the Council will require a set of design codes to be prepared for the new garden communities and other strategic development sites. These can either form part of the development framework, or comprise a condition to the granting of outline planning permission, requiring submission of a code before submission of any reserved matters.
- 9.16** Design codes can be used to provide greater certainty and control over design quality in the long term. The NPPF states that local authorities should consider their use where they could help deliver high-quality outcomes. The design codes should cover building heights, depths and widths, street typologies and landscape treatments. The code may also include details of façade treatments.

Policy D4: Development Frameworks and Codes

Development frameworks shall be prepared for the garden communities and all strategic development sites for approval by the Council prior to submission of any planning application. In the case of the new garden communities the development frameworks will be prepared as development plan or supplementary planning documents and adopted by the local planning authority. Where sites subject to a development framework cross multiple land ownerships, the different landowners should work together to prepare a joint development framework that demonstrates how comprehensive development will be delivered.

The development frameworks should demonstrate how good placemaking can be achieved through establishment of:

- A clear vision and concept for the garden community or strategic development site.
- A development and land use plan showing the mix and type of development to come forward, including the broad locations of necessary supporting services, including local centres, open space, play and sports space, health and education.
- Framework plans establishing the intended form and grain of development, character areas, densities and building typologies.
- Development should demonstrate how it responds to the landscape context and the historic environment.
- A movement plan establishing the street hierarchy and typologies, and sustainable transport measures prioritising walking, cycling and public transport.
- A green infrastructure plan setting out the network and typology of green spaces, links, flood mitigation areas and areas of ecological importance
- A phasing and delivery plan, demonstrating a logical pattern of development that helps build community with supporting facilities provided at the right time.

Development frameworks should be informed by best practice landscape and urban design principles. Applications for the new garden communities and strategic development sites should demonstrate how they respond to best practice through submission of a Building for Life 12 assessment (or a later equivalent).

Development frameworks should outline how infrastructure will be delivered and the mechanisms by which Landowners will work together to deliver those infrastructure items.

Prior to the approval of any reserved matters or grant of detailed planning permission the Council will require a Design Code to be prepared for the garden community or strategic development site. Planning applications should demonstrate how they comply with the Design Code.

Shop Fronts

- 9.17** Shopfronts can contribute much to the locally distinctive character of towns and villages. They are important elements in the townscape and can contribute significantly to the attractive quality of any street scene. The design of ~~a~~ new shopfronts should reflect this, ~~recognise this~~ and seek to preserve or enhance and be appropriate to, ~~or enhance~~, the character and appearance of the building and its location. ~~New shopfronts~~ should respect the design of the building and not obscure, ~~or result in damage~~ or harm ~~to~~, existing architectural features.
- 9.18** Existing shopfronts that contribute to the appearance or special interest of a building or the street scene should be retained. Particularly in listed buildings or conservation areas, or where they are of design or historic significance in their own right or as part of a group. Any modifications necessary should be sympathetic to the original design
- 9.19** The Council will seek to protect existing shopfronts that make a positive contribution to the appearance and local distinctiveness of an area, for example through their architectural and historic merit. Special regard will be given to the need to preserve the appearance of shopfronts, taking into account the quality of design, historic importance and location. Good examples of shopfronts should be retained wherever possible.

Policy D5 Shop Fronts

The Council will support the retention and enhancement of historic shop fronts and other shop fronts of quality that contribute positively to the character and distinctiveness of the locality and historic environment.

Shopfront alterations which detract from the public amenity due to poor quality design or inappropriate scale, proportions, materials or detailing will not be supported.

Proposals for new shop fronts will be supported where they are of a high quality of design and preserve or enhance the amenity of the locality, including the character and appearance of built and historic environment.

This policy should be read in conjunction with the guidance set out in the Council's supplementary planning document for shop front design

- 9.20** The NPPF reinforces the role and importance of design review, which is a way of assessing the design quality of new developments by an independent panel of experts to help support high standards of design
- 9.21** Guidance on the Design Review process can be found via the Design Council Cabe⁷ website.
- 9.22** In Uttlesford, it is envisaged that all ~~strategicmajor~~ applications will be subject to design review. Schemes subject to review will include residential, commercial and mixed-use development proposals, infrastructure, community facilities, public realm and open space proposals.

Policy D6: Design Review

The Council will require emerging schemes for the new garden communities and other strategic development sites to be assessed through design review. Equally, and as appropriate, smaller sites in important and or sensitive locations will also be subject to design review. The Council will refer schemes to the East of England Design Review Panel operated by Shape East. The Council encourages design review to take place early in the process to allow scope for input into the emerging design. The final scheme submitted to the Council should include a report on the design review process and how the scheme has responded to this.

- 9.23** Innovative design, that raises the standard of design in Uttlesford, but which also promotes and reinforces local distinctiveness, is welcome. Contemporary design approaches may be acceptable where it responds positively to context.

Policy D7: Innovation and Variety

The Council will actively encourage development proposals that establish bespoke design solutions and residential typologies as opposed to application of standard 'off-the-shelf' housing types and layouts. Schemes that respond to and reinterpret local design cues are welcomed as well as consideration of smart technology solutions. The Council encourages applicants to run design competitions to generate a high quality architectural response to building design and layout.

⁷ Design Review (CABE). Available: <https://www.designcouncil.org.uk/what-we-do/built-environment/design-review>

Sustainable Design and Construction

- 9.24** All development in Uttlesford will be expected to make use of the best available sustainable design and technology. Proposals for development are expected to minimise the use of resources, mitigate against and be resilient to the impact of climate change. Current BREEAM standards for new construction⁸ should be used for assessing the sustainability of new, non-residential buildings. The Home Quality Mark⁹ has been developed by BREEAM to provide an indication of the quality and environmental performance of a new home. Housebuilders are encouraged to use this assessment method.

Policy D8: Sustainable Design and Construction

Proposals for new development are required to embed sustainable design and construction techniques from the outset.

Applications for development will need to demonstrate accordance with the appropriate Building Regulations and or BREEAM standards in force at the time of submission. Housebuilders are encouraged to register for assessment under the Home Quality Mark.

This should show how resource efficiencies and climate change adaptation measures will be incorporated through aspects such as the layout of the proposed development, orientation, massing, landscaping and building materials. Green roofs, walls and other similar measures are encouraged where appropriate.

Waste, recycling and storage areas should be provided. Equally, systems that reduce water consumption and allow for the reuse of grey water is encouraged. Development will not increase flood risk on or off site.

Development should maximise the opportunities for using of on-site renewable forms of energy.

- 9.25** Climate change is a global issue which has the potential to have significant environmental, social and economic impact on the UK. Addressing climate change is one of the core land use planning principles which the NPPF expects to underpin both plan-making and decision-taking. Thus, the policies below seek to minimise energy use within the built environment and thus reduce carbon dioxide emissions.
- 9.26** In setting out these policies, the Council is mindful that that the Government's Planning Practice Guidance allows latitude for local plans to set local requirements for sustainability targets subject to normal conventions relating to viability.

Energy Hierarchy

- 9.27** Reducing the net energy consumption of a building can be achieved in a number of

⁸ BREEAM UK, Non-domestic Buildings (United Kingdom), Technical Manual SD5076 4.1, 2014

⁹ <http://www.homequalitymark.com>

ways. Some of these can be relatively expensive and also result a significant amount of embodied energy being introduced to the building. Thus, adopting the wrong approach could easily result in an energy reduction strategy which impacts the overall viability of the project and may therefore not be enacted.

9.28 The Council therefore requires that energy efficiency measures are considered in the following order:

Design Optimisation

9.29 Adjusting building orientations, glazing proportions and external shading are often cost neutral at design stage but can have a significant impact on the finished building's energy demand. Suggested considerations are:

- Adopt a building orientation which optimises solar gain
- Adopt an appropriate amount of glazing on different facades to optimise solar gain whilst minimising losses. As a starting point, rough guidelines for glazing limits as a proportion of external wall areas are:
 - South Elevations: no more than 25%
 - West and East Elevations: no more than 20%
 - North Elevations: as little as is practicable
- Include external shading or eaves overhangs on southern elevations in order to reduce the risk of summer overheating (and thus reduce cooling loads)

Fabric Improvement

9.30 Heating, cooling and renewable energy technologies typically have a useful lifetime of around 20 years. However, the fabric of a building is likely to be in place for at least 50 years and often for much longer. In terms of return on investment, it therefore makes sense to invest in the fabric first. Improving the fabric performance to reduce energy use in the first place also means that when renewable energy sources are introduced, they are able to reduce the building's net energy use to a much lower level. Suggested improvements are:

- Increase the amount and/or performance levels of insulation in the walls, roof and floors (in that order)
- Improve the thermal performance of the glazing by fitting higher specification double glazing or triple glazing
- Seek to design out cold bridging – this is a reduction or discontinuity in the insulation layer which typically occurs at the junctions of walls/ floors/ roofs.
- Improve the building's airtightness levels
- Consider introducing Mechanical Ventilation with Heat Recovery systems to improve heating efficiency

Renewable Energy Sources

9.31 Having reduced energy demand through design optimisation and fabric improvement, the introduction of renewable energy sources have the potential to reduce the net energy consumption of the building to near zero levels. As these technologies often have an aesthetic impact, careful consideration should be given to their location and positioning, particularly within conservation areas. Consideration should be given to the following technologies:

- Solar Photovoltaic Panels
- Panels Solar
- Thermal Pane
- Air Source Heat Pumps
- Ground Source Heat Pumps
- Biomass Boilers

Energy Targets

9.32 Government guidance indicates that councils may require compliance with energy standards that exceed the Building Regulations. Having applied the Energy Hierarchy set out above, it is considered that carbon emission rates well below those set out in current Building Regulations are achievable whilst maintaining the viability of developments.

9.33 Targets for Dwelling Emission Rates (DER) are therefore set out in the policy below.

Policy D9: Minimising Carbon Dioxide Emissions

Development proposals for both commercial and residential buildings should demonstrate that they have applied the Energy Hierarchy, as set out in the Local Plan and, in doing so, have achieved a Dwelling Emission Rate (DER) which is 19% lower than the Target Emission Rate (TER) required by Building Regulations Part L 2013 Edition¹⁰.

Evidence should be provided in the form of an Energy Assessment which, as a minimum should include the following:

- A calculation of the energy demand and carbon dioxide emissions for the proposed buildings using approved Building Regulations software and carried out by a qualified energy assessor.
- Evidence that, as far as practicable, the development's design has been optimised to take into account solar gain, glazing proportions and external shading (Design Optimisation).
- Evidence that, as far as practicable, the development's fabric performance has been improved to minimise energy loss (Fabric Improvement).
- Evidence that renewable energy sources have been considered and incorporated into the development where it is feasible and economic to do so.

These requirements will apply unless it can be demonstrated that they would make the development unviable.

Highly Energy Efficient Buildings

9.34 Whilst Policy D9 will ensure a high level of energy efficiency in the district's new buildings, there is the potential to go considerably further and create buildings which achieve zero or near zero net energy consumption. The Council seeks to encourage such developments.

Policy D10: Highly Energy Efficient Buildings

Development proposals which demonstrate that the proposed buildings have a net emission rate of zero or below, or are proposed to be certified Passivhaus buildings, are encouraged, and will be considered favourably.

¹⁰ Currently Approved Document L1A: Conservation of fuel and power in new dwellings, 2013 edition and Approved Document L2A: Conservation of fuel and power in new buildings other than dwellings, 2013 edition. DCLG March 2014 (as amended).