sustainable building design

adopted 5th June 2008
### Sustainable Building Design

#### Brighton & Hove City Council’s Local Development Framework

**Summary table**

<table>
<thead>
<tr>
<th>Development type</th>
<th>What is recommended</th>
</tr>
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<tr>
<td><strong>Householder and small-scale developments</strong></td>
<td></td>
</tr>
<tr>
<td>New build residential (including mixed-use)</td>
<td>- Sustainability Checklist*; and - Level 3 of the Code for Sustainable Homes (CSH).</td>
</tr>
<tr>
<td>Residential involving existing buildings (including mixed-use, conversions and extensions)</td>
<td>- Sustainability Checklist*; - EST Home Energy Report; - reduction in water consumption; and - minimisation of surface water run-off.</td>
</tr>
<tr>
<td>Non-residential (including new build, conversions and extensions)</td>
<td>- Reduction in energy and water use.</td>
</tr>
<tr>
<td><strong>Medium-scale developments</strong></td>
<td></td>
</tr>
<tr>
<td>New build residential (including mixed-use)</td>
<td>- Zero net annual CO2 from energy use; - Sustainability Checklist*; - Level 3 of the Code for Sustainable Homes (CSH); and - Lifetime Home Standards.</td>
</tr>
<tr>
<td>Residential involving existing buildings (including mixed-use, conversions and extensions)</td>
<td>- No additional net annual CO2 emissions from new development; - Sustainability Checklist*; and - EcoHomes for refurbishment.</td>
</tr>
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<td>Non-residential involving existing buildings (including conversions and extensions)</td>
<td>- No additional net annual CO2 emissions from new development; and - reduction in water consumption; and - minimisation of surface water run-off.</td>
</tr>
<tr>
<td><strong>Major developments</strong></td>
<td></td>
</tr>
<tr>
<td>New build residential (including mixed-use)</td>
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</tr>
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<td>Residential involving existing buildings (including mixed-use, conversions and extensions)</td>
<td>- No additional net annual CO2 emissions from new development; - Sustainability Checklist*; and - EcoHomes for refurbishment.</td>
</tr>
<tr>
<td>Non-residential involving existing buildings (including conversions and extensions)</td>
<td>- No additional net annual CO2 emissions from new development; and - reduction in water consumption; and - minimisation of surface water run-off.</td>
</tr>
<tr>
<td><strong>Greenfield developments</strong></td>
<td></td>
</tr>
<tr>
<td>Land or site that has not previously been developed.</td>
<td>- Zero annual net CO2 from energy use; - minimise ‘heat island effect’ via contribution towards off-site tree planting; and - Considerate Constructors Scheme.</td>
</tr>
<tr>
<td>New build residential (including mixed-use)</td>
<td>- Sustainability Checklist*; - Level 5 of the Code for Sustainable Homes (CSH); and - Lifetime Home Standards.</td>
</tr>
<tr>
<td>New build non-residential</td>
<td>- 70% in energy and water sections of relevant BREEAM assessment within overall ‘Excellent’; and - submit feasibility study on rainwater harvesting and grey water recycling systems.</td>
</tr>
</tbody>
</table>

* Planning applications involving residential new build and conversions not accompanied by a completed sustainability checklist will be considered invalid. For further information/advice please visit [http://www.brighton-hove.gov.uk/index.cfm?request=c1174453](http://www.brighton-hove.gov.uk/index.cfm?request=c1174453)
What is an SPD?

A Supplementary Planning Document (SPD) is one of the material considerations that can be taken into account when determining a planning application. It forms a part of the Local Development Framework (LDF) and is intended to expand or add details to planning policies in the Development Plan Documents (DPD).

This SPD is one of a series produced by Brighton & Hove City Council and it is to be read in conjunction with the DPDs. Each SPD has been subject to a period of formal consultation and approval under the LDF. The guidance in this document does not take away the requirement to comply with Building Regulations or other statutory requirements.

Supplement to Planning Policy Statement 1 (PPS1) on climate change requires that local standards for sustainable buildings be set in a Development Plan Document (DPD). For this reason, the standards detailed in this document come in advance of local standards to be set in the Core Strategy. The Core Strategy is due to be submitted in Spring 2009 with a view to adopting in Spring 2010. The monitoring tools put in place alongside this SPD, particularly the Brighton & Hove / Southeasty Checklist, will serve to provide evidence in support of standards proposed in Core Strategy policies. Should local standards be agreed, this SPD will be reviewed accordingly.

In preparing this SPD the council has had particular regard to the relevant policy documents, particularly:

- Planning Policy Statement 1 (sustainable development) and Supplement to PPS 1 (planning and climate change);
- South East Plan policies, particularly policy CC4 (sustainable construction);
- Brighton & Hove Local Plan Policy SU2 (efficiency in development in the use of energy, water and materials) in particular, but also policies SU1, SU4, SU14, SU16, QD1, QD3, QD14 and QD15;
- refreshed Brighton & Hove 2020 Community Strategy ambitions and targets; and
- emerging Brighton & Hove Core Strategy policies.

It incorporates existing guidance on renewable energy (SPGBH 16) and sustainability checklist (SPGBH 21) and complements SPDs on Construction and Demolition Waste (SPD03) adopted in 2006 as well as the forthcoming SPDs on Nature Conservation and Developers Contributions. This draft SPD was adopted by the Environment Committee on March 2008.

In order to make sure the information in this document is user-friendly and up to date, the SPD is composed of this written statement detailing minimum standards recommended for developments in the city and dedicated pages in Brighton & Hove City Council’s website containing supporting information and advice on how to meet the recommendations.
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Section 1 – Introduction

1.1. What is Sustainable Building Design?

The way we design, build, operate and decommission buildings has significant impacts on the environment. In the UK, the built environment is responsible for 50% of carbon dioxide emissions (CO₂) and 24% of waste generation is from demolition and construction. Households are responsible for 25% of CO₂ emissions, over 50% of water consumption, and 8% of waste generation¹. Our current energy and resource use is not sustainable; future generations will not be able to enjoy the same quality of life we do unless we reduce the environmental impacts associated with our lifestyles and the way we design and use buildings.

Designing and constructing buildings with improved environmental performance is an essential part of delivering sustainable development. This means looking at:

- energy efficiency: how buildings can maintain a comfortable indoor temperature and appropriate light levels but use less energy for heating, cooling and lighting (space and water heating are responsible for 73% of domestic UK emissions²);
- approaching resource use sustainably: minimising waste, minimising water use, sourcing locally, and using sustainable materials (that are non-polluting, from renewable sources, recyclable and have recycled content, sourced locally and have low embodied energy);
- enhancing biodiversity;
- promoting sustainable transport provision; and
- exploring health impacts from buildings and development.

Applying these design principles minimises the environmental impact of new buildings. However, new buildings account for less than 1% of overall stock at any time³. It is therefore crucial to apply these principles to buildings already standing to improve their environmental performance.

In Brighton & Hove, early stakeholder consultation revealed support for an approach to sustainable building design that:

- adopts a holistic approach to the development process including the design, construction, re-use and decommissioning stages of a building’s lifecycle;
- addresses all developments in the city while setting different targets for different types of developments;
- seeks to improve the environmental performance of the city’s built stock; and
- aims to communicate, educate and engage with city residents so as to inspire them to make buildings in Brighton & Hove meet the highest possible standards of sustainable building design.

1.2. **What are the benefits of Sustainable Building Design?**

Designing a good, environmentally sensitive new building or improving the environmental performance of an existing building during refurbishment can significantly:

- improve comfort which affects user satisfaction, morale and staff productivity;
- reduce costs associated with energy and water use, maintenance and refurbishment;
- reduce environmental impacts associated with energy and resource use;
- improve a building’s ability to cope with future changes in use and climate; and
- improve opportunities to let or sell in a competitive market.

1.3. **What are the aims of this SPD?**

- To provide detailed, up to date, clear advice to various user-groups on relevant sustainable design policies;
- to improve the environmental performance of the city’s new build and existing buildings; and
- to make sure all developments in Brighton & Hove achieve the highest possible standards of sustainable building design.

This SPD will incorporate current guidance on Energy Efficiency & Renewable Energy (SPGBH 16) and the Brighton & Hove Sustainability Checklist (SPGBH21).

1.4. **What information can be found in this SPD?**

This SPD provides further guidance on:

- what the local planning authority recommends for developments in the city in terms of sustainable building design, including targets, standards and thresholds;
- how to achieve recommended standards; and
- opportunities for owners and occupiers to improve the environmental performance of the city’s buildings even when planning permission is not required.

This SPD is intended for owners and occupiers, communities, developers, builders / contractors, planners and design professionals.

Information on CO₂ emissions and climate change, reduction targets and resource saving technologies is fast changing. The speed of change is such that some policy documents become redundant soon after being published.

Hence, the contents of this SPD will be communicated via two different means: this written statement and dedicated pages within the council’s website. This written statement contains longer-standing aspirations with regards to targets, standards and thresholds set for developments in Brighton & Hove. The dedicated pages on the council’s website offer supporting information on the fast changing issues related to technologies and ways to achieve recommended standards.

1.5. **What are the key drivers and relevant policy framework?**

In the UK, there are wide ranging and numerous policies at national, regional and local level that are associated with sustainable design issues. At the time of adoption there are at least

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4 Carbon Trust (2005), ‘Building a Brighter Future’ [www.carbontrust.co.uk/NR/rdonlyres/A89DB6C2-9AE7-4450-BC24-9999F5A79284/0/Building_a_Brighter_Future.pdf](http://www.carbontrust.co.uk/NR/rdonlyres/A89DB6C2-9AE7-4450-BC24-9999F5A79284/0/Building_a_Brighter_Future.pdf)
9 Planning Policy Statements and Guidance and 21 documents currently relevant to this SPD. These and other documents are detailed in Section 3 - Appendices (see annexed document). However, it is important at this stage of the document to highlight key cross-disciplinary policies that emphasise the holistic nature of sustainable building design practices at national, regional and local level.

1.5.1. National

The relevant national policy is PPS 1: Delivering Sustainable Development. Paragraph 5 of PPS 1 states that:

Planning should facilitate and promote sustainable and inclusive patterns of urban and rural development by:
- making suitable land available for development in line with economic, social and environmental objectives to improve people's quality of life;
- contributing to sustainable economic development;
- protecting and enhancing the natural and historic environment, the quality and character of the countryside, and existing communities;
- ensuring high quality development through good and inclusive design, and the efficient use of resources; and,
- ensuring that development supports existing communities and contributes to the creation of safe, sustainable, liveable and mixed communities with good access to jobs and key services for all members of the community.

Supplement to Planning Policy Statement 1 (PPS1) on climate change requires that local standards for sustainable buildings be set in a Development Plan Document (DPD). For this reason, the standards detailed in this document come in advance of local standards to be set in the Core Strategy. The Core Strategy is due to be submitted in Spring 2009 with a view to adopting in Spring 2010. The monitoring tools put in place alongside this SPD, particularly the Brighton & Hove / Southeast Checklist, will serve to provide evidence in support of standards proposed in Core Strategy policies. Should local standards be agreed, this SPD will be reviewed accordingly.

1.5.2. Regional

The relevant regional policy is CC4 - Sustainable Construction of the Draft South East Plan.

The construction of all new buildings, and the redevelopment and refurbishment of existing building stock, will be expected to adopt and incorporate sustainable construction standards and techniques. This will include:

i) high standards of energy and water efficiency that exceed current standards required by the Building Regulations and reflect best practice;
ii) designing to increase the use of natural lighting, heat and ventilation, and the provision of a proportion of energy demand from renewable sources;
iii) reduction and increased recycling of construction and demolition waste and procurement of low-impact materials; and
iv) designing for flexible use and adaptation to reflect changing lifestyles and needs and the principle of 'whole life costing'.

Brighton & Hove City Council's Local Development Framework
1.5.3. Local

At a local level it relates to:

- Policy SU2 - Efficiency of development in the use of energy, water and materials of the Brighton & Hove Adopted Local Plan; and
- Preferred Options PRE1 and PRE2 of the Brighton & Hove Core Strategy.

Policy SU2 states that:

Planning permission will be granted for proposals which demonstrate a high standard of efficiency in the use of energy, water and materials provided that they are otherwise in accordance with the other policies of the development plan. Proposals will be required to demonstrate how the following factors have been integrated into their siting, layout and design:

a. measures that seek to reduce fuel use and greenhouse gas emissions;
b. the incorporation / use or the facilitation of the use, of renewable energy resources;
c. measures that seek to reduce water consumption;
d. measures that enable the development to use greywater and rainwater; and
e. the use of materials and methods to minimise overall energy and / or raw material inputs.

When considering these factors, particular regard should be given to the following:

i) daylight / sunlight;
ii) orientation;
iii) building form;
iv) materials;
v) the use of natural ventilation;
vii) fenestration;
vii) landscaping;
viii) provision of space within each planning unit and general facilities for refuse, waste recycling and composting; and
ix) suitable space for occupier and visitor cycle parking.

Planning permission will not be granted for proposals that have not taken into account efficiency in the use of energy, water and materials and incorporated measures suitable to the proposal.

The refreshed 2020 Community Strategy contains targets and aspirations for the city:

- to reduce CO2 emissions by 3.5% each year (2003-2004 baseline);
- at least 98% of developments to involve brownfield sites each year; and
- to reduce water use.

Core Strategy Preferred Options recommend that:

PRE 1 - A policy is included in the Core Strategy that requires all new developments to achieve the highest recognised standards of sustainable building design, management and recycling and provide gains in environmental and ecological properties.

PRE 2- The council will produce Supplementary Planning Documents specifying minimum performance standards, cumulative targets for increasing resource efficiency and impact assessment requirements in all development.
Section 2 - Standards by development size

This section of the SPD gives details on how planning aims to deliver the policies and targets highlighted above. It focuses on different aspirations for each type or size of development. This approach reflects the fact that larger schemes benefit from economies of scale and that some developments benefit from lower land and construction costs.

It is intended that all planning applications involving residential new build and conversions will be assessed using the Brighton & Hove Sustainability Checklist available on http://www.brighton-hove.gov.uk/index.cfm?request=c1174453

Key challenges for Brighton & Hove

In terms of sustainable building design in general and resource-efficiency in particular some issues emerge as particularly critical to Brighton & Hove context. They are:

- CO2 emissions: the Community Strategy's 3.5% CO2 reduction target per year between 2006 and 2020 represents the city’s contribution to meeting national reduction targets (2003 Energy White Paper - see detailed policy guide in annex document). The 2003-2004 baseline used for calculation did not account for emissions arising from growth. In principle, this implies that existing activities need to halve CO2 emissions within the next 14 years and that new ones emit no CO2. Nearly half of the city’s emissions come from domestic energy use. This ultimately means that all new homes must be zero carbon. That is, emit no net annual CO2 from energy use at their operational stage.

- Water: South East England is unique as approximately 70% of the water supplies come from groundwater. Southern Water data indicates that winter rain is vital to refill reservoirs and increase river flows and groundwater recharging. This has led the Environment Agency to classify the region as ‘highly water stressed’\(^5\). The region is densely populated and developments proposed in the South East Plan are likely to place greater pressure on water supplies. Current per capita consumption in the region is on average 150 to 160 litres per person per day (l/p/d). According to the Audit Commission\(^6\), Brighton and Hove’s consumption is higher averaging 169 l/p/d. In this context, promoting high standards of building design and changes in public behaviour and expectations is crucial. Progressive reduction of water use leading up to water neutrality\(^7\) in developments is one of the key challenges for the region in general and Brighton & Hove in particular.

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\(^5\) Water stress is related to the amount of water available per person for a given area now and in the future. An area of serious water stress is defined as that where the current household demand for water is high in relation to current effective rainfall or future household demand is likely to be a high proportion of the effective rainfall available to meet demand. In areas of serious water stress, water abstraction is already close to or above acceptable limits. For further info please visit publications.environment-agency.gov.uk/pdf/GEHO0107BLUT-e-e.pdf

\(^6\) See www.areaprofiles.audit-commission.gov.uk/(hetaryjbmfytiv555mpewayv)/DataProfile.aspx?entity=0

\(^7\) Water neutrality is a relatively new concept. The steering group for the Thames Gateway water neutrality project has defined water neutrality as meaning “total water use after new development must be equal to or less than total water use in the area before the planned development (both domestic and non domestic).”
Waste: the global environmental cost of waste disposal in Europe is rising significantly. At present the bulk of Brighton & Hove’s untreated waste is disposed to local landfill. In the medium- and long-term this is not a sustainable solution and the use of more distant sites is likely to incur in increased environmental impact for transporting waste. Meanwhile the tax on waste disposal to landfill is also increasing.

The objective criteria against which developments in the city will be judged are aimed at assessing whether resources in general are being used sustainably. Reflecting the importance and urgency of the issues highlighted above, high standards should be achieved by development in the city, particularly with regards to energy, water and waste.

Standards: at present, the Code for Sustainable Homes (CSH) and BREEAM schemes are recognised, accredited methods for assessing the performance of developments in the UK. Developments should meet minimum standards recommended in this SPD and demonstrate commitment towards achieving certification under such schemes.

Existing building stock: the largest challenge facing this SPD is unquestionably to secure sustainable building design features in developments involving the existing stock. Current national policy tends to focus on large-scale new housing developments and not on the existing stock. Brighton & Hove is unique in that since 2001, new homes coming through the planning system have accounted on average for only 0.3% of the total number of households in the city each year\(^8\) (well below 1% national average). Furthermore, just over half of housing completions between 2000 and 2006 were small developments containing 9 units or less. Of these 70% involved conversions and changes of use.

In order to face up to these challenges and deliver national policy through the local planning system as well as the city’s own aspirations for sustainable communities and buildings, minimum standards recommended for all development in the city are detailed below.

In assessing the achievement of such standards in developments in the city, the council will consider:

i. site constraints,
ii. technical viability,
iii. financial viability: and
iv. delivery of additional benefits.

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\(^8\) Brighton & Hove City Council, *Housing completions database*, Planning Strategy & Monitoring unit, February 2007. For further details regarding the existing housing stock in the city please see item 3.2 of the annexed document.
2.1. **Householder and small-scale developments**

These are defined as:
- new residential development and/or mixed-use developments numbering 2 or fewer residential units; or
- residential extensions, conversions and changes of use and/or mixed-use developments numbering 2 or fewer residential units; or
- retail developments with gross floorspace of 150 sq m or less; or
- any other type of development of 235 sq m or less.

This category accounts for properties that enjoy special permitted development rights such as single dwelling houses and offices with a floorspace of 235 sq m or less. It also accounts for the smallest scale of development in Brighton & Hove and includes:
- approximately 23% of all housing completions between 2000 and 2006\(^9\);
- over 2/3 of retail units in the city’s regional, district and town and local centres\(^10\); and
- 69% of all offices, high-tech and light industrial completions between 2001 and 2006\(^11\).

**RECOMMENDED STANDARDS FOR HOUSEHOLDER AND SMALL-SCALE DEVELOPMENTS INCLUDE:**

<table>
<thead>
<tr>
<th>Development type</th>
<th>What is recommended</th>
</tr>
</thead>
<tbody>
<tr>
<td>New build residential (including mixed-use developments)</td>
<td>- Submit a completed Sustainability Checklist(^9); and &lt;br&gt;- achieve minimum rating of Level 3 of the Code for Sustainable Homes (CSH)(^12).</td>
</tr>
<tr>
<td>Residential involving existing buildings (including mixed-use, conversions and extensions)</td>
<td>- Submit a completed Sustainability Checklist(^9); &lt;br&gt;- complete EST Home Energy Report for each residential unit and demonstrate which recommended actions will be incorporated into the house or development; &lt;br&gt;- demonstrate how water consumption will be reduced; and &lt;br&gt;- demonstrate how surface water run-off will be minimised.</td>
</tr>
<tr>
<td>Non-residential (including new build, conversions and extensions)</td>
<td>- Demonstrate how energy use and water consumption will be reduced.</td>
</tr>
</tbody>
</table>

* The Brighton & Hove Checklist is an online tool that can be viewed and completed on [HTTP://WWW.BRIGHTON-HOVE.GOV.UK/INDEX.CFM?REQUEST=C1174453](HTTP://WWW.BRIGHTON-HOVE.GOV.UK/INDEX.CFM?REQUEST=C1174453)*

Planning applications involving residential new build and conversions that are not accompanied by a completed Brighton & Hove Sustainability Checklist will be considered invalid.

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\(^12\) Information about the Code for Sustainable Homes can be viewed and downloaded on [www.clg.gov.uk](http://www.clg.gov.uk).
2.2. Medium-scale developments

These are defined as:

- new residential development and/or mixed-use developments numbering 3 to 9 residential units; or
- residential extensions, conversions, changes of use and/or mixed-use developments involving 3 to 9 residential units; or
- retail developments with gross floorspace between 151 and 999 sq m; or
- any other type of development between 236 and 999 sq m.

This category accounts for:

- 29% of residential developments completed between 2000 and 2006;\(^{13}\)
- just under one in ten retail units within the city’s regional, district and town and local centres;\(^{14}\) and
- 17% of all offices, high-tech and light industrial completions between 2001 and 2006;\(^ {15}\)

**RECOMMENDED STANDARDS FOR MEDIUM-SCALE RESIDENTIAL DEVELOPMENTS INCLUDE:**

<table>
<thead>
<tr>
<th>Development type</th>
<th>What is recommended</th>
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</thead>
<tbody>
<tr>
<td>All</td>
<td>Minimise ‘heat island effect’ via contribution towards off-site tree planting (see annexed document); and achieve a level of performance equivalent to that required under the Considerate Constructors Scheme;(^ {16})</td>
</tr>
<tr>
<td>New build residential (including mixed-use developments)</td>
<td>Emit zero net annual CO2 from energy use; submit a completed Sustainability Checklist; achieve a minimum rating of Level 3 of the Code for Sustainable Homes (CSH); and be designed to Lifetime Home Standards;(^ {18})</td>
</tr>
<tr>
<td>New build non-residential developments</td>
<td>Score at least 50% in the energy and water sections of the relevant BREEAM(^ {19}) assessment within a minimum overall rating of ‘Very Good’.</td>
</tr>
</tbody>
</table>

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\(^ {13}\) Brighton & Hove City Council, Housing database, Planning Strategy & Monitoring unit, February 2007.

\(^ {14}\) These centres are identified in Local Plan policies SR4, SR5 and SR6. Data source: Brighton & Hove City Council, Retail Study database, Planning Strategy & Monitoring unit, February 2007.

\(^ {15}\) Brighton & Hove City Council, Employment Land Study database, Planning Strategy & Monitoring unit, February 2007.

\(^ {16}\) For details on Considerate Constructors Scheme please visit [www.considerateconstructorsscheme.org.uk](http://www.considerateconstructorsscheme.org.uk).

\(^ {17}\) Information about the Code for Sustainable Homes can be viewed and downloaded on [www.clg.gov.uk](http://www.clg.gov.uk).

\(^ {18}\) Information on how to meet Lifetime Homes Standards is available on [www.lifetimehomes.org.uk](http://www.lifetimehomes.org.uk).

\(^ {19}\) Details regarding BREEAM (Building Research Establishment Assessment Method) assessment and certification can be viewed and downloaded from [www.breeam.org](http://www.breeam.org).
| Residential involving existing buildings (including mixed-use, conversions and extensions) | Submit a completed Sustainability Checklist*;  
| | demonstrate how no additional net annual CO2 emissions will arise from new development; and  
| | achieve significant environmental improvements demonstrated via EcoHomes for refurbishments. |
| Non-residential involving existing buildings (including conversions and extensions) | Demonstrate how no additional net annual CO2 emissions will arise from new development; and  
| | how water consumption will be reduced; and  
| | how surface water run-off will be minimised. |

* The Brighton & Hove Checklist is an online tool that can be viewed and completed on [http://www.brighton-hove.gov.uk/index.cfm?request=c1174453](http://www.brighton-hove.gov.uk/index.cfm?request=c1174453)

** For further information and contribution calculator please see section 3.3 of the annex document.

Planning applications involving residential new build and conversions that are not accompanied by a completed Brighton & Hove Sustainability Checklist will be considered invalid.

The council will normally expect applications to be supported by a commitment to achieve certification under the CSH and/or BREEAM schemes.

In the case of new residential developments (including conversions, extensions and changes of use), should a developer satisfactorily prove that recommended energy standards cannot be fully met on-site, contributions to secure shortfall via environmental improvements to the city's existing housing stock may be sought. These will be secured via a S106 agreement and be used to fund improvements in the environmental performance of existing buildings in the vicinity of the development. Further information is available in section 3.2.2 of the annex document.
2.3. Major developments

These are defined as all developments:
- new residential development and/or mixed-use developments numbering 10 residential units or more; or
- residential extensions, conversions, changes of use and/or mixed-use developments involving 10 residential units or more; or
- any other type of development over 1,000 sq m or being developed on a site having an area of 0.5 hectares or more.

These account for developments coming under the definition of major applications found in Article 8 of 1995 Town and Country Planning (General Development Procedure) Order. The reference to ‘out-of-town’ retail supports key objectives of Planning Policy Statement (PPS) 6.

This category includes:
- 48% of residential developments completed between 2000 and 200620;
- just under one in ten retail units within the city’s regional, district and town and local centres21; and
- 14% of all offices, high-tech and light industrial completions between 2001 and 200622.

RECOMMENDED STANDARDS FOR MAJOR DEVELOPMENTS INCLUDE:

<table>
<thead>
<tr>
<th>Development type</th>
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</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>Minimise ‘heat island effect’ via contribution towards off-site tree planting23; and achieve a level of performance equivalent to that expected under the Considerate Constructors Scheme23.</td>
</tr>
<tr>
<td>New build residential (including those in mixed-use developments)</td>
<td>Emit zero net annual CO2 from energy use; submit a completed Sustainability Checklist24; achieve a minimum rating of Level 4 of the Code for Sustainable Homes (CSH)24; submit feasibility study on rainwater harvesting and grey water recycling systems; and be designed to Lifetime Home Standards25.</td>
</tr>
</tbody>
</table>

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23 For details on Considerate Constructors Scheme please visit [www.considerateconstructorsscheme.org.uk](http://www.considerateconstructorsscheme.org.uk).
24 Information about the Code for Sustainable Homes can be viewed and downloaded on [www.clg.gov.uk](http://www.clg.gov.uk).
25 Information on how to meet Lifetime Homes Standards is available on [www.lifetimehomes.org.uk](http://www.lifetimehomes.org.uk).
New build non-residential developments

- Score at least 60% in the energy and water sections of the relevant BREEAM\textsuperscript{26} assessment within a minimum overall rating of ‘Excellent’; and
- Submit a feasibility study for rainwater harvesting and grey water recycling systems.

Residential involving existing buildings (including mixed-use, conversions and extensions)

- Submit a completed Sustainability Checklist\textsuperscript{*};
- Demonstrate how no additional net annual CO2 emissions will arise from new development; and
- Achieve significant environmental improvements demonstrated via EcoHomes for refurbishments.

Non-residential involving existing buildings (including conversions and extensions)

- Demonstrate how no additional net annual CO2 emissions will arise from new development; and
- How water consumption will be reduced. And
- How surface water run-off will be minimised.

\* The Brighton & Hove Checklist is an online tool that can be viewed and completed on [http://www.brighton-hove.gov.uk/index.cfm?request=c1174453](http://www.brighton-hove.gov.uk/index.cfm?request=c1174453)

\** For further information and contribution calculator please see section 3.3 of the annex document.

Planning applications involving residential new build and conversions that are not accompanied by a completed Brighton & Hove Sustainability Checklist will be considered invalid.

The council will normally expect applications to be supported by a commitment to achieve certification under the Considerate Constructors Scheme, CSH and/or BREEAM schemes.

In the case of new residential developments (including conversions, extensions and changes of use), should a developer satisfactorily prove that recommended energy standards cannot be fully met on-site, contributions to secure shortfall via environmental improvements to the city’s existing housing stock may be sought. These will be secured via a S106 agreement and be used to fund improvements in the environmental performance of existing buildings in the vicinity of the development. Further information is available in section 3.2.2 of the annex document.

\textsuperscript{26} Details regarding BREEAM assessment and certification please visit [www.breeam.org](http://www.breeam.org).
2.4. **Greenfield site developments**

These are developments on ‘greenfield land’ as defined by reference to the definition of previously-developed land set out in Annex B (Definitions) to PPG 3. This involves **land or a defined site (usually farmland and/or amenity area) that has not previously been developed**.

Development in Greenfield sites is a contentious issue in the UK in general and in Brighton & Hove in particular. This is due to the tensions arising from a limited amount of physical space available for development and an expanding population in need of housing. Some of the potential negative effects of Greenfield site development involve reduction/loss of agricultural and/or amenity space, destruction of natural habitats and expansion of transport infrastructure.

Brighton & Hove is no exception. In fact, due to its geographical location between the sea and the Downs, the availability of Greenfield sites is arguably more limited than in other UK cities. Should the loss of Greenfield sites take place, then the highest level of resource-efficiency must be sought to minimise the impact of development.
RECOMMENDED STANDARDS FOR DEVELOPMENTS IN GREENFIELD SITES INCLUDE:

<table>
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<th>Development type</th>
<th>What is recommended</th>
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| All              | ▪ Emit zero annual net CO2 from energy use;  
                  ▪ minimise ‘heat island effect’ via contribution towards off-site tree planting**; and  
                  ▪ achieve a level of performance equivalent to that expected under the Considerate Constructors Scheme²⁷. |

| New build residential (including those in mixed-use developments) | Submit a completed Sustainability Checklist*;  
                                                                 ▪ achieve a minimum rating of Level 5 of the Code for Sustainable Homes (CSH)²⁸; and  
                                                                 ▪ be designed to Lifetime Home Standards²⁹. |

| New build non-residential developments | Score at least 70% in the energy and water section of the relevant BREEAM³⁰ assessment within a minimum overall rating of ‘Excellent’; and  
                                           ▪ submit feasibility study on rainwater harvesting and grey water recycling systems. |

* The Brighton & Hove Checklist is an online tool that can be viewed and completed on http://www.brighton-hove.gov.uk/index.cfm?request=c1174453

** For further information and contribution calculator please see section 3.3 of the annex document.

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²⁷ For details on Considerate Constructors Scheme please visit www.considerateconstructorssscheme.org.uk
²⁸ Information about the Code for Sustainable Homes can be viewed and downloaded on www.clg.gov.uk
²⁹ Information on how to meet Lifetime Homes Standards is available on www.lifetimehomes.org.uk
³⁰ Details regarding BREEAM (Building Research Establishment Assessment Method) assessment and certification can be viewed and downloaded from www.breeam.org