

**Hastings Local Development Framework
Supplementary Planning Document**

**HOUSEHOLDER DEVELOPMENT:
Sustainable Design**



February 2007

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1. Foreword

- 1.1 This Supplementary Planning Document (SPD) sets out guidance specifically for householders that will help them achieve good quality design when extending or making alterations to their homes. In particular, the SPD promotes methods of building that will lessen the impact on the environment and contribute to energy efficiency.
- 1.2 Technology surrounding energy efficiency and sustainable design and construction techniques is continuously evolving, with the volume of production gradually increasing. Advice is becoming more accessible for householders, with larger retailers as well as specialist production companies promoting the sale of wind turbines and solar panels to contribute to sustainable energy.

2. Introduction

- 2.1 A Supplementary Planning Document (SPD) expands or adds details to planning policies. It is one of the considerations that can be taken into account in determining planning applications.
- 2.2 The purpose of this document is to explain in more detail policies DG1, DG3, DG12, DG24, DG26 and DG27 of the Hastings Local Plan 2004 (see Appendix 1).
- 2.3 Whilst Council wishes to promote sustainable building techniques in all forms of development, the guidance set out in this document is directed specifically at development concerning **existing residential dwellings**.
- 2.4 The guidance in this document does not take away the requirement to comply with Building Regulations or other statutory requirements.
- 2.5 The six overall objectives for the document are:
 1. To raise the general awareness of the effects of climate change and to promote the benefits of sustainable, energy efficient building techniques.
 2. To improve the appearance of the Borough's built environment by promoting good quality design of house extensions and alterations.
 3. To improve the energy efficiency of homes in the Borough through influencing future householder development.
 4. To increase the use of renewable energy technology in providing for the energy needs of residents in the borough.
 5. To save water by encouraging the efficient use of rainwater in residential properties and to reduce the amount of surface water entering the sewer system and contributing to flash flooding.
 6. To reduce waste by encouraging reuse of building materials and incorporation of recycling facilities for households.

3. What is sustainable development and climate change?

- 3.1 The term 'Sustainable Development' describes a way of developing our built environment. Its aim is to enable people to satisfy their basic needs and enjoy a better quality of life without compromising the quality of life for present and future generations. This means improving our economic and social well being by ensuring that future development not only provides for our needs, but also reduces harmful impacts on the environment by using alternative methods and materials in construction, helping to achieve a healthier, less polluted environment.
- 3.2 Whilst the precise impacts of climate change are not clear, the Government has a significant programme of measures in place to lessen domestic energy use. National planning policy clearly sets out how planning can contribute to reducing emissions and stabilising climate change, and take into account the consequences. Much of this can come through improvements to existing developments, and as such, it is important to make existing buildings and proposed extensions as energy efficient as possible, by reducing energy demand and creating electricity and heat through renewable energy sources. Making decisions at an early stage in the design of development, such as orientating extensions to maximise the use of passive solar gain, and using materials that require less energy to make and that perform more efficiently, can ensure that the amount of harmful gases produced as a result can be significantly reduced.
- 3.3 The policy background at international, national and local scales can be found in Appendix 1 of this document.

4. What am I planning to do?

- 4.1 Before starting work on altering or extending your home, you may need to seek professional advice on a number of issues. These include:

Ownership

- If you are a leaseholder you may need to check that you have permission from the freeholder to undertake work on the property.
- If you are working on a party wall, the Party Wall etc Act 1996 requires you to get the consent of the person sharing ownership of the wall. This can affect floors between flats.
- If you are building right up to the boundary, you must ensure that the foundations do not extend onto your neighbours' property unless you have their consent.

Planning permission

- You will need to contact the Planning Department to check whether your proposal requires planning permission.

Designing out crime

- Whether you are planning a new extension, a non-attached structure or just replacing windows and doors, appropriate security standards should be adopted. For further information please see www.securedbydesign.com or contact Sussex Police.

- 4.2 Below are some examples of proposed works and where in the document you can find guidance that relates to them. Each example is followed by the pages where guidance can be found:

Proposed Works

- Building an extension - pages 4-9
- Building a structure that is not attached to the dwelling - pages 4-9
- Replacing windows or doors - pages 4-5, 7
- Building a hard-standing - pages 4, 5, 7
- Solar panels, wind turbines and ground source heat pumps - pages 7-8

5. Design considerations

- 5.1 In planning to alter or extend your home, you may wish to consider the following points:

Passive Solar Gain

- 5.2 Passive solar gain is a method of designing buildings or extensions that maximises the use of energy from the sun. Whilst planning regulations and the nature of your property may restrict where an extension can be built, passive solar gain can be achieved by positioning extensions in ways minimise the need to heat, light and ventilate properties.

Appearance

- 5.3 The appearance of the proposed extension or alteration will be taken into account when the Council considers your planning application, if one is required. As such, householders should consider the following in terms of the design of their proposal:

- Make sure the proposal fits in with the surrounding area. The appearance and scale of the proposal should not detract from the surrounding buildings.
- Materials should generally either match or complement those of the existing dwelling.
- Where possible it is generally best to integrate the roof of the extension into the main roof. Flat roofed extensions can look 'tacked on' and flat roofs usually need more maintenance.
- The design of porches should reflect the design of the main house in terms of the materials used and the roof detailing.
- The spaces between buildings can be an important part of the character of the area. Side extensions should not result in a terracing effect by closing the gap between properties.
- Dormer windows should generally be set into the main roof, rather than replacing it, and where possible, should have a roof to match the main roof.
- Care should be taken regarding the siting of new garages so that they do not dominate a property when viewed from the street.

Impact upon neighbours

- 5.4 Another important point to think about when designing your extension is its relationship to neighbouring properties, which will be a major consideration in

determination of your planning application. You should therefore consider the following points:

- Glazing to sidewalls should generally be avoided because it could result in a loss of privacy to neighbours. Where it is unavoidable obscure glass should be used. Similarly, side dormers should not be positioned to look directly into windows of neighbouring properties.
- Balconies on flat roofed extensions are rarely acceptable because they result in a loss of privacy, not only to properties to the rear, but also to adjacent properties.
- Two storey extensions are rarely acceptable close to the boundary due to the loss of daylight and sunlight that would affect the neighbouring property. It is good practice to set two storey extensions as far off the boundary as possible.
- It is good practice to restrict the depth of rear extensions to approximately 3m, because in most cases the impact on the neighbouring property would not be unreasonable. However, this depends where neighbouring properties are located in relation to your own.
- It is important to take account of windows on neighbouring properties to make sure any extension does not result in unreasonable loss of daylight or sunlight.
- It is important to pay special regard to the ground levels when considering the impact of an extension on a neighbour. Where the ground drops away, an extension may appear very much bigger when viewed from an adjacent property.

6. Materials

- 6.1 The choice of construction materials has wide environmental impacts, although careful specification can help to minimise these. It is important to consider the benefits of using different types of materials when planning your development. The extraction, processing, manufacture and transport of building and construction materials can have an adverse impact on the environment, whereas locally produced products help to maintain local character and in some instances, can aid the local economy. Using recycled and reclaimed products will also have a positive environmental effect.

Timber

- 6.2 Using timber in construction can have many benefits. Timber is an organic, non-toxic and naturally renewable building material. It is also recyclable, biodegradable, and has excellent thermal insulating properties. If timber is to be used in your proposed development, you should check that the materials are from a sustainable source. The Forest Stewardship Council (FSC) and the Pan European Forest Certification Scheme (PEFC) are the two most well established and reputable certification bodies. For further information, please see their websites at www.fsc.org, and www.pefc.org.

UPVC

- 6.3 Unplasticised Polyvinyl Chloride (uPVC) is widely used in the construction industry, most commonly in window, door and guttering products, although other options such as timber framed windows and aluminium guttering are also available. The production, use and disposal of uPVC has many negative and harmful effects, both upon our health and the environment.

- 6.4 The production of uPVC is an energy intensive process and there are associated environmental risks in oil extraction and global transportation. It involves the use of highly toxic chemicals, resulting in toxic by-products, which have demonstrated hazards to health.
- 6.5 It is almost impossible to repair UPVC and even slight damage normally requires replacement of the whole unit. It is also very difficult to recycle and the chemical process involved in doing so is environmentally damaging. For this reason, most uPVC in use will end up in landfill sites, resulting in a high risk of the contamination of air, soil and water.

Energy and Insulation

- 6.6 A significant amount of energy in housing is used for the day-to-day running of a property, for example, in heating, lighting and cooking. Energy efficient measures help to reduce harmful emissions as well as reducing household running costs during the lifetime of the building. However, consideration should still be given to the amount of energy needed to produce the material, as well as how well it performs, to ensure that the least non-renewable energy is expended as a result.
- 6.7 Insulation is one way in helping to create energy efficient homes. Many examples of natural, environmentally friendly insulating materials are available for use, as opposed to man-made materials. Sheep's wool and recycled paper both have very good insulating properties and are not harmful to the environment. To ensure the safety of this material, fire prevention would be covered through the Building Regulations.
- 6.8 Another way to improve energy efficiency is to install double-glazed or triple-glazed windows. However, if the property is a listed building or situated in a Conservation Area, the windows should follow the design of the original windows in the property. Other effective measures to reduce energy consumption in the home include the installation of energy efficient boilers with good heating controls, and energy efficient lighting.
- 6.9 It is also important to ensure that any new structures will not overheat in warm weather, and that energy expenditure by way of internal heating is reduced in the winter. Green roofs provide an element of control by maintaining temperatures and are specially designed to allow selected plant species to grow on its surface. More information can be found at www.livingroofs.org.

7. Renewable Energy

- 7.1 Extending and making alterations to your property presents an opportunity to consider the energy resources that will provide power for it. Examples of renewable energy resources available and suitable for householder developments are listed below. However, the costs and efficiency of these resources need to be considered in each individual case.
- Solar Photovoltaic Systems
 - Solar Water Heating Systems
 - Wind Turbines
 - Ground Source Heat Pumps

- 7.2 **Solar photovoltaic systems** can be incorporated into wall cladding, roof tiles or glazing. These systems convert energy from the sun into electricity and require only daylight, and not necessarily sunlight, to do this. You should check with the planning department before installing a photovoltaic system, as this may or may not require planning permission, depending upon how far the system protrudes from the surface that it is attached to.
- 7.3 **Solar water heating systems** are the most popular form of solar energy used in the UK. The system is connected to the hot water system and can provide over half of a household's hot water requirements.
- 7.4 Wind is a free and renewable source of energy. Small-scale **wind turbines** are a good way of generating clean energy and reducing electricity bills. The blades of a wind turbine drive a generator directly to produce electricity. The energy from turbines can either be used by the householder or sold to the grid.
- 7.5 If you intend to erect a domestic wind turbine you should consult the planning department to find out whether it requires planning permission. This will depend upon its size and the height and location of its installation. Turbines that require planning permission will be assessed against their impact on the surrounding area, in terms of their appearance and impact on the public realm, location and the amount of noise they will produce in operation.
- 7.6 **Ground source heat pumps** are used to extract heat from the ground to provide space heating and to pre-heat hot water. The solar heat that the earth traps passes below ground level to where it is stored and can be extracted. Electricity is required to pump the heat from the ground, although for every unit of energy used, about 4 units of power are created. The energy generated by a ground source heat pump can be considered 100% renewable if the power to operate it comes from sources such as solar panels or wind turbines. Ground source heat pumps can be laid in horizontal trenches or bored deep into the ground in a vertical well, which can be an advantage with limited space.
- 7.7 If you are intending to install a ground source heat pump system you should consult the planning department in order to see whether planning permission will be required. This will depend on the amount and location of work required to install the piping system in the ground.
- 7.8 The Department of Trade and Industry has a funding scheme, the Low Carbon Buildings Programme, which offers financial help to householders that are hoping to invest in renewable energy technologies. Further information on these schemes can be found at www.lowcarbonbuildings.org.uk. Many energy suppliers also offer special offers and discounts that can reduce the cost of making energy saving improvements to your home.

8. Water Management

- 8.1 There are also a number of ways in which water efficiency can be improved. You may wish to consider the following in your development:
- **Water butts** – Rainwater can be collected by connecting the down pipe from your roof to water butt with an overflow pipe continuing to the surface water sewer

- **Rainwater Harvesting Systems** – These store larger amounts of water and are normally in underground water tanks. Used to their full potential, these systems can account for up to half a household's total water consumption.
- **Sustainable Urban Drainage Systems (SuDS)** – These help to dispose of surface water and deal with runoff by incorporating porous surfaces and soft landscape to replicate natural drainage.

8.2 In order to reduce the potential for flooding, householders should not build over an existing culvert. The creation of new culverts or an extension of an existing culvert is strongly discouraged. Consultation with the Environment Agency should also be undertaken in respect of existing culverts and watercourses.

8.3 New development, which includes non-porous surfaces such as roofs and driveways, add to the amount of rainwater entering the drainage system. Sustainable Urban Drainage Systems (SuDS) help to dispose of surface water in alternative ways to reduce the amount that sewers have to cope with. We can reduce the risk of flash flooding during storms when the surface water sewer system has vast amounts of rainwater to deal with, by incorporating porous surfaces and soft landscaping, such as trees and grass, which allow rainwater to be absorbed and soaked away naturally into the earth.

9. Waste & Recycling

9.1 It is important to consider how previously used materials, either reclaimed or recycled, can be incorporated into the proposed development. Materials reclaimed on site, or recycled and reclaimed materials from elsewhere, can perform equally as well as new materials. Some materials can also be used in other ways, for example, for hardcore and infill.

9.2 Waste and recycling facilities for ongoing use should also be considered and incorporated into the design. The waste of materials during construction is an unnecessary expenditure and adds to the burden of materials being disposed of. A good way to minimise waste is to ensure the design of your development utilises whole units of construction materials. You should also allow space to store waste materials and recycling bins and boxes.

10. Appendix 1: Policy Background

10.1 Planning policies supporting and influencing this SPD are shown below.

International Planning Policy

- Kyoto Protocol - This is an international agreement to reduce greenhouse gas (GHG) emissions. The UK has committed to a 12.5% reduction by 2012.
- EU Energy Performance of Buildings Directive - The European energy-rating scheme for buildings requires an energy-rating certificate to be displayed in all public buildings. The aim is to give building owners and occupiers an incentive to improve energy performance.

National Planning Policy

10.2 National planning guidance is set out in Planning Policy Guidance Notes (PPG) and Planning Policy Statements (PPS).

- PPS1 – Delivering Sustainable Development
- PPS22 – Renewable Energy

PPS1 states “sustainable development is the core principle underpinning land use planning”. It sets out overarching policies on how sustainable patterns of development will be implemented through the planning system.

PPS22, and its companion guide, encourages the appropriate development of further renewable energy schemes in accordance with the aims and targets specified in the Energy White Paper.

PPS1 and PPS22 are material considerations relevant to this SPD.

Regional Planning Guidance

10.3 Regional Planning Guidance (RPG) 9 for the South East was adopted in March 2001. It includes policies on sustainability and design by emphasising regionally important issues to which Local Authorities should respond. In addition to this, the document entitled “Proposed alterations to Regional Planning Guidance South East – Energy Efficiency and Renewable Energy”, published in May 2003 sets out a vision for the substantial increase in energy efficiency and the proportion of energy supplied by renewable sources.

10.4 The South East Plan (SEP), under new legislation, will replace RPG9. It is being prepared following the sustainability issues set out in PPS1 and consequently has stronger policies related to sustainable development than RPG9.

County Planning Guidance

10.5 The main objective of the East Sussex & Brighton and Hove Structure Plan 1991-2011 (adopted December 1999) is to improve the quality of life for people living in, working in, and visiting East Sussex and Brighton & Hove. As part of its strategy, the document sets sustainable development at the core of its principles. The overall aim of the Plan is:

“To seek a more environmentally sustainable future for the county and to meets the needs for development and change in a manner that is more sustainable in the long term.”

Local Planning Policy

- 10.6 The Hastings Local Plan 2004 provides a framework for guiding development in the borough. It is set out in a number of policies, on different areas, which determine what development is acceptable.
- 10.7 Hastings Local Plan does not contain policies relating specifically to sustainable development. It is intended that the Local Development Framework will include policies, which define and strengthen the Borough’s position on the sustainability of future development.
- 10.8 The policies that are concerned with this document are:

POLICY DG1 - Development Form

In determining planning applications, the Council will have regard to the following considerations:

- (a) The full and efficient use of land;
- (b) Sympathy with the appearance and character of the area and suitability in scale, massing, design, appearance, materials, layout and siting, both in itself and in relation to nearby buildings (including parts of buildings), spaces and views;
- (c) Respect for site levels and characteristics, potential for development and inclusion of good quality hard and soft landscaping, including the retention of trees or other features of importance;
- (d) Adequate space for private and public use (including children’s playspace) and visual amenity;
- (e) Suitable layout and design features to ensure personal and general safety and security;
- (f) Protection of living conditions of existing and future occupants from, for example, noise, dominance and loss of outlook, light and privacy;
- (g) Sufficient information to ensure full assessment of the likely effects of the proposal; and
- (h) Safety and convenience on the public highway.

POLICY DG3 - Sunlight and Daylight

The design and layout of new development should ensure that there is adequate natural light for the new buildings. In addition, development should not cause unacceptable loss of daylight, sunlight or outlook to neighbouring properties.

POLICY DG12 – Two Storey Side Extensions

Planning permission for two storey side extensions to houses will only be granted where they:-

- (a) Will not cause a significant loss of light or overshadowing to a neighbouring property, or be unduly overbearing;
- (b) Will not lead to a terracing effect in the street, or an otherwise cramped form of development which would adversely affect the general character and appearance of the area;

- (c) Are designed with a roof in keeping with the property; e.g. a roof to match that of the original dwelling

POLICY DG24 – Energy Efficient Development

Development should as far as possible be designed to be energy efficient in terms of:-

- (a) Site layout – use of land, location within site, orientation and landscaping;
- (b) Building design - building form and materials used.

Particular support will be given to proposals incorporating or facilitating the use of energy efficient supply technology and/or renewable energy resources.

POLICY DG26 - Flood Risk

Planning permission will not be granted for new development, within areas at risk from river or coastal flooding, unless environmentally acceptable flood mitigation and protection measures can be provided by the developer, to compensate for the impact of development.

Planning permission will not be granted for development which would be detrimental to the integrity of sea, tidal or fluvial defences or river channels or would impede access to and along these for future maintenance and improvements.

POLICY DG27 – Surface Water Retention

Planning permission for development that, as a result of increased surface water runoff, could increase the risk of flooding, will only be granted where the Council (in consultation with the Environment Agency) is satisfied that all appropriate alleviation and mitigation works (including the promotion of Sustainable Urban Drainage Systems) have been investigated, designed and constructed before the start of development. Proposals for the long-term management of these works must be submitted at or before the planning application stage. Temporary means of dealing with silt and run-off from development sites will be required during the construction phase to prevent pollution.

11. Appendix 2: Glossary of Terms

11.1 Much of this document uses terminology relating to construction and materials, which is not commonly known to people that aren't familiar with the industry. This glossary provides definitions for obscure words and names that are found within the SPD.

11.2 Each word in the glossary below is followed by its definition:

Biodegradable

Material that naturally decomposes by bacterial action.

Climate change

Climate change is a natural process caused by the 'greenhouse effect'. The greenhouse effect is the natural process whereby atmospheric gases allow energy from the sun to reach the earth's surface and warm it up. In turn, the Earth gives off infra-red heat radiation. Most escapes to outer space but some are trapped by the greenhouse gases and heat the Earth. The natural balance of this process has been upset by human activity, by increasing the concentration of greenhouse gases.

Carbon Dioxide/CO₂

A gas formed as a result of certain actions, such as combustion and breathing. Carbon dioxide is absorbed by plants.

Dormer window

A vertical window that projects from a sloping roof plane.

Greenhouse gases

The gases in the earth's atmosphere, which include carbon dioxide, methane and nitrous oxide and occur naturally in the environment. However, human activities including the combustion of fossil fuels (oil, gas and coal) and industrial activity, have greatly added to the concentration of these gases in the atmosphere.

Greenhouse effect

The phenomenon whereby the earth's atmosphere traps solar radiation caused by the presence in the atmosphere of gases such as carbon dioxide and methane that allow incoming sunlight to pass through, but absorb heat radiated back from the earth's surface. This results in an increase in atmospheric temperature.

Orientation

Relative position.

Passive Solar Gain

Utilising energy from the sun for space heating through the design of a building.

Photovoltaic cells

Photovoltaic cells are technological systems that convert light into electricity. They can come as separate units or in the form of roof tiles or other forms of external cladding.

Porous Surface

A surface that allows water or air to pass through it.

uPVC

Abbreviation for unplasticised polyvinyl chloride, which is often used in windows frames.

12. Further Information

12.1 Further information on sustainability and making your building more energy efficient can be obtained from the following sources:

- A sustainable construction resource funded by the Department of Trade and Industry – www.sustainable-construction.org.uk/
- The Government's Sustainable Development web page - www.sustainable-development.gov.uk/
- The Energy Saving Trust, a non-Governmental organisation funded by the Government and the private sector - www.est.org.uk/
- The Sustainable Development Commission is the Government's independent watchdog on sustainable development - www.sd-commission.org.uk/
- The Low Carbon Buildings Programme, funded by the Department of Trade and Industry, provides grants for micro-generation technologies – <http://www.est.org.uk/housingbuildings/funding/lowcarbonbuildings>
- The National Energy Foundation – <http://www.nef.org.uk>
- The Environment Agency – www.environment-agency.gov.uk
- The British Photovoltaic Association – www.pv-uk.org.uk
- British Association for Bio Fuels and Oils (BABFO) – the trade body for producers – www.biodiesel.co.uk
- For more information about solar water heating and a list of suppliers, please visit the Solar Trade Association's website - www.solartradeassociation.org.uk
- Crime Prevention advice – www.securedbydesign.com
- An independent UK resource for green roof information – www.livingroofs.org

12.2 Planning officers will be pleased to provide further guidance on planning matters or general design advice. Please either contact us on the details below, or visit our website at www.hastings.gov.uk/planning.

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