

SPD- Energy Efficiency and Renewable Energy Adopted October 2007

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Introduction

1 Introduction

Introduction

1.1 This Supplementary Planning Document (SPD) is one in a series of guidance notes prepared to support the Uttlesford Local Plan, adopted by the Council in January 2005. Government advice on preparing SPDs is set out in Planning Policy Statement 12: Local Development Frameworks (PPS12). This includes the requirement that each SPD should be subject to a sustainability appraisal. This has been carried out by consultants White Young Green Environmental and is available on request or can be viewed on the Council's website at www.uttlesford.gov.uk

Consultation

1.2 PPS12 says that the community must be involved in the preparation of each SPD and that the Council should take their views into account before finalising it. The Statement of Consultation, which is available at the council offices and on the website sets out who the Council consulted, the main issues they raised and how those issues have been addressed in the SPD.

Purpose of the Energy Efficiency SPD

1.3 This Energy Efficiency SPD will give people making planning applications additional information on the measures that they can include in new development to reduce energy use. This SPD supports policies GEN2 and ENV15 in the Uttlesford Local Plan. Policy GEN2 includes a criteria which says that all development should help to minimise water and energy consumption. This SPD only deals with the energy aspect of this requirement.

The Context

1.4 There is now an overwhelming body of scientific evidence showing that climate change is a serious and urgent issue. Climate change for the eastern region means hotter, drier summers with more chance of heatwaves and drought, and wetter, milder winters with more chance of storms and flooding.

1.5 In January 2006 Uttlesford District Council (UDC) together with Braintree District Council signed a joint protocol on climate change and the Nottingham Declaration on Climate Change. UDC is committed to tackling the causes and effects of climate change in Uttlesford including producing a climate change strategy and action plan to reduce carbon dioxide emissions from its own operations.

1 Introduction

Baseline Information

Greenhouse Gas Emissions

1.6 In 2004 the UK emitted more than 150 million tonnes of carbon dioxide -a major cause of climate change. Energy use in all buildings accounted for nearly half the emissions and more than a quarter of this came from the energy we use to heat, light and run our homes. The chart below shows as a national average the source of these domestic emissions. Uttlesford itself has high domestic emissions (3.2 tonnes per person) compared with the national average of 2.6 tonnes per person.

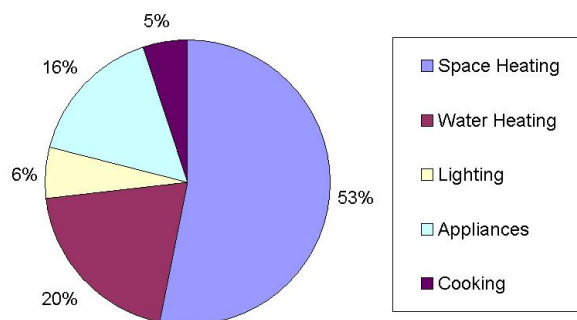


Figure 1.1 Domestic Emissions by End Use 2003

1.7 In relation to transport the UK transport industries were responsible for emitting the equivalent of 86 million tonnes of carbon dioxide in 2002 compared with 88.3 million tonnes in 2000 and 58.5 million tonnes in 1990. Greenhouse gas emissions from private vehicles belonging to UK households rose by 6% between 1990 and 2002 from 59.2 million tonnes to 62.8 million tonnes. Greenhouse gas emissions from road transport now make up 18% of all greenhouse gas emissions compared with 14% in 1990. Greenhouse gas emissions from the UK air transport industry fell following the terrorist attacks on September 11 but despite this the air transport industry still has the largest increase in emission levels since 1990. Between 1990 and 2002, greenhouse gas emissions from the air transport industry rose from 20.2 million tonnes to 37.5 million tonnes an increase of just over 85%.

Energy Use

1.8 Domestic gas sales in Uttlesford in 2004 at 20,255kWh per consumer were lower than the Essex Average of 21,270 kWh. In terms of commercial gas sales Uttlesford at 385,645kWh per consumer was also below the Essex Average of 497,933kWh. Domestic Electricity

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consumption, however, at 5,900 kWh per meter point was above the county average of 5,125kWh. Consumption of industrial and commercial electricity in the District at 59,800 kWh was below the Essex average of 62,091 kWh.

1.9 Figures for the total average domestic energy consumption per household in 2004 show that Uttlesford households at 33,420 kWh consumed more than any other district within the county and therefore more than the average county consumption of 25,839 kWh.

1.10 It is vital to make sure that homes and other buildings are built in a way that minimises the use of energy and so reduces harmful carbon dioxide emissions. Development needs to be planned in order to reduce the need for travel and infrastructure including railways, roads, water supply and drainage will need to be improved to deal with more extreme climate conditions.

Policy Framework

National Policy Background

1.11 The Government has committed the UK to reducing carbon dioxide emissions. The international Kyoto Protocol, ratified in February 2005, commits the UK to reducing greenhouse gas emissions by 12.5% below 1990 levels between 2008 and 2012. The Energy White Paper published in February 2003 aims for a reduction in UK carbon dioxide emissions of at least 60% by 2050, with real progress by 2020. This 60% is likely to be made legally binding with the introduction of a Climate Change Act in 2007. At the moment none of these targets include emissions for international aviation or shipping.

1.12 The Stern Report commissioned by the Treasury and released in October 2006 sets out the economic case for action on climate change and concluded that the cost of doing nothing would be much higher than tackling the causes of climate change now. Following this the Government has announced plans to make it's 60% carbon dioxide target legally binding. The Government has also made clear it's intention to make sure all new homes in the UK are "zero carbon" by 2016, and has produced the Code for Sustainable Homes to try and achieve this. The Code is a voluntary initiative to encourage changes in the building industry towards more sustainable practice.

National Planning Policy Guidance

1.13 National Policy on Renewable Energy is set out in Planning Policy Statement 22: Renewable Energy. This says that Local Planning Authorities (LPAs) and developers should consider the opportunity for incorporating renewable energy projects in all new developments. LPAs should encourage such schemes through positively expressed policies in Local Development Documents. Small scale renewable energy schemes can be incorporated both into new developments and some existing buildings. LPAs may include policies requiring a percentage of the energy for new, residential, commercial or industrial development to be provided from on site renewable energy.

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1.14 The Government has also published a consultation Planning Policy Statement on Planning and Climate Change as a supplement to Planning Policy Statement 1: Delivering Sustainable Development. In it the Government says that LPAs should be concerned with the environmental performance of new development and engage constructively and imaginatively with developers to encourage the delivery of sustainable buildings but LPA's should not need to devise their own standards for the environmental performance of individual buildings because this is set out nationally in Building Regulations.

1.15 The Government also issued in December 2006 a consultation document on Building a Greener Future: Towards Zero Carbon Development which sets out targets for achieving a 25% improvement in the energy/carbon performance in buildings by 2010 a 44% improvement by 2013 and zero carbon by 2016. The Government has also indicated that it intends to look at progressive tightening of the Building Regulations.

1.16 The Government sees a complimentary relationship between these three - in considering the location and design of new development planning can reduce the need to travel and build in provision for low carbon or renewable sources of energy supply. While Buildings Regulations and the Code for Sustainable Homes will focus on the performance of the buildings themselves

Regional Planning Policy

1.17 The East of England Plan has a section on Carbon Dioxide Emissions and Renewable Energy. Policy ENG1 says that new development should be located and designed to optimise its carbon performance. The policy also encourages the supply of energy from on site renewables and encourages LPA's to include ambitious but viable targets within development plan documents (DPDs) for the proportion of energy supply within substantial new developments which should be from renewable sources. Before DPDs are in place at least 10% of energy supply in these developments should come from renewables.

Local Plan Policy and Supplementary Planning Documents

1.18 The Uttlesford Local Plan adopted in January 2005 contains two policies which the SPD is intended to support. Policy GEN2 requires that all development is built in such a way as to minimise consumption of energy. Policy ENV15 supports small scale renewable energy schemes to meet local needs. The policies are included below. The adopted supplementary planning documents on home extensions and replacement dwellings and the urban place supplement also include advice on energy efficiency.

Local Plan Policy 1

GEN2 - Design

Development will not be permitted unless its design meets all the following criteria and has regard to adopted Supplementary Design Guidance and Supplementary Planning Documents.

- a) It is compatible with the scale, form, layout, appearance and materials of surrounding buildings;
- b) It safeguards important environmental features in its setting, enabling their retention and helping to reduce the visual impact of new buildings or structures where appropriate;
- c) It provides an environment, which meets the reasonable needs of all potential users.
- d) It helps to reduce the potential for crime;
- e) It helps to minimise water and energy consumption;
- f) It has regard to guidance on layout and design adopted as supplementary planning guidance to the development plan.
- g) It helps to reduce waste production and encourages recycling and reuse.
- h) It minimises the environmental impact on neighbouring properties by appropriate mitigating measures.
- i) It would not have a materially adverse effect on the reasonable occupation and enjoyment of a residential or other sensitive property, as a result of loss of privacy, loss of daylight, overbearing impact or overshadowing.

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Local Plan Policy 2

ENV15 - Renewable Energy

Small scale renewable energy development schemes to meet local needs will be permitted if they do not adversely affect the character of sensitive landscapes, nature conservation interests or residential and recreational amenity.

1.19 The rest of this document looks at the local implications of the Urban Place Supplement and the Code for Sustainable Homes and sets out in more detail guidance to help applicants comply with criterion e) of Policy GEN2 and Policy ENV15 .

The Guidance

2 The Guidance

The Urban Place Supplement and Code for Sustainable Homes

The Urban Place Supplement

2.1 The Urban Place Supplement (UPS) is a supplement to the Essex Design Guide. The Council adopted this as a supplementary planning document in March 2007 and it is available on the Uttlesford website. The UPS has a section on designing for reduced energy use (Pages 135-141). It encourages developers to reduce energy demands for heating and cooling by including higher standards of construction and specification such as insulation, double glazing, air management etc as a starting point for reducing the energy demand when the building is in use.

2.2 In a warming climate, buildings should be designed to avoid overheating and the need for artificial cooling which can be energy intensive. This can be achieved by:

- Using external shading to reduce solar gain.
- Using blinds within double glazed units
- Using solar control glass
- Using equipment with a reduced heat output
- Incorporating mass within the building's thermal envelope (e.g. the floor or the internal walls) to smooth out variations in internal temperature
- Using increased ventilation preferable by natural means to remove heat from the building
- Avoiding large areas of glazing on the east and west face as the resulting solar heat gains are difficult to control.

2.3 The UPS suggests that all development above 1,000m² or 10 dwellings should incorporate on-site infrastructure for renewable energy to provide at least 10% of the predicted energy requirements of the development in use. The Council is suggesting that in Uttlesford this should be extended to developments of 5 dwellings or more see Guidance Note 4. Large developments (over 50ha) should incorporate a combined heat and power district heating system along with other renewable energy technologies. These should be designed to supply 100% of the predicted energy requirements of the development in use.

Code for Sustainable Homes

2.4 The aim of the code is to increase environmental sustainability of homes and give homeowners better information about the running costs of their homes. It also offers a tool for home builders to demonstrate the sustainability performance of their homes and to differentiate themselves from their competitors.

The Guidance

How Does it Work?

2.5 The Code sets out sustainability standards which can be applied to all new homes. A home can achieve a sustainability rating from one to six stars depending on the extent to which it meets these standards. One star is the entry level but the minimum standards for this are higher than those found in the minimum mandatory standards set out in the Building Regulations. Six stars is the highest level - the best development in sustainability terms. At each level there are minimum energy efficiency/carbon emissions and water efficiency standards. The categories included in the Code are:

- Energy CO2
- Water
- Materials
- Surface Water Run-off
- Waste
- Pollution
- Health and Well Being
- Management
- Ecology

2.6 Apart from the minimum requirements the Code is flexible and developers can choose which and how many standards they implement to obtain "points" to achieve a higher sustainability rating. The Code also gives "credits" for other environmental considerations such as sustainable construction materials and availability of recycling facilities, cycle spaces and home offices. At the moment the code is voluntary but the Government is considering making compliance with the code mandatory after April 2008. The Urban Place Supplement seeks a 3 star rating up to 2012 with the highest possible scores for water and waste management.

Uttlesford Guidance 1

The Council will negotiate to achieve a three star rating on new development up to 2012. After this the Council will encourage all development to achieve a four star rating up to 2016 when all development will be expected to be zero carbon with a six star rating.

Uttlesford Guidance

2.7 The following guidance is based on the energy hierarchy below which sets out in order of priority the ways in which energy use can be reduced. The Council will expect developers to look at the higher levels first and only once these have been addressed to move down to the lower levels.

The Guidance

Hierarchy 1

Avoiding Unnecessary Energy Use

Re-organise systems so that energy use can be reduced to the minimum, for example by designing buildings to be warmed by the sun, using natural light and ventilation, or enabling people to get access to the amenities they want with fewer and shorter car journeys.

Hierarchy 2

Use Energy more Efficiently

Finding ways of getting more benefit per unit of energy, for example by using higher efficiency appliances, generating heat and power together or insulating buildings better to retain heat.

Hierarchy 3

Use Renewable Energy

Switch to less damaging low-carbon energy sources, especially renewables, for example solar and wind power, energy crops or hydro.

Hierarchy 4

Offsetting Emissions

The Council is proposing to seek developer contributions where development leads to increased emissions. The contributions will be used to provide grants and incentives for people to reduce greenhouse gas emissions from existing housing by investing in energy efficiency and renewable energy.

1. Avoiding Unnecessary Energy Use

2.8 The location of new building is an important factor and the Council will continue to support development which makes efficient use of land in appropriate locations near services and with access to public transport etc to reduce energy involved in travel.

The Guidance

2.9 With new buildings the aim is to encourage energy efficient buildings that use the minimum amount of energy but still meet the needs of the people who are using them. The way in which the development is built can directly affect the energy consumption of the development as well as the overall quality of the environment. The Council will encourage developers to consider the following elements in their site planning.

- Wherever possible, taking into account the context of the site and its surroundings buildings should be positioned to make sure that the principal rooms face south to benefit from solar gain. Within 30 degrees of south is the ideal. Appropriate external shading should be included for any south facing glazing to prevent overheating in the summer. Unoccupied rooms and/or rooms with a lower heat demand can be positioned on the north side of the building. Large windows should be avoided on the north facing side to reduce heat loss.
- The way the buildings are laid out on the site should also take account of the wind direction. Tree and shrub planting schemes can act as windbreaks, reducing the wind chill factor and sheltering surfaces from the cooling effects of wind. Landscaping should be planted in the direction of the prevailing winds. Use of native species will also create valuable opportunities for habitat creation to support biodiversity.
- Careful consideration should be given to any possible overshadowing since this will reduce the amount of solar gain in the development and also for sites next to the development.

2. Use Energy More Efficiently

Energy Efficiency in Buildings

2.10 The issues below are not within planning control but if you are building a new home or planning improvements to an existing home then they are things that you should consider and they are listed here for that reason.

2.11 The first thing is to make sure all existing buildings are as efficient as they can be. Things to check are:

Insulation:

2.12 This includes loft or cavity wall insulation. If the building has solid walls then you can install external or internal cladding but if you live in a listed building and/or your house is within a conservation area then please check with the Council before starting work. It will probably require Listed Building Consent or Planning Permission. The Council will not approve works likely to change the character of a Listed Building. Older buildings may provide homes for nesting birds and/or bats. These are protected against harm and disturbance. If you think they may be present you should get advice before doing the work.

The Guidance

Low energy lighting:

2.13 In most buildings lighting accounts for between 10 and 15% of the electricity bill. Some energy efficient lighting can save up to ten times its initial purchase price over its lifetime and a large range of types is available, including spot lamps, candle lamps and coloured lamps. Large fluorescent tubes can be replaced by smaller diameter tubes which are more efficient. Generally only fittings which can accommodate low energy bulbs should be used.

Improve Ventilation:

2.14 Heat exchangers on extractor fans transfer the heat from the extracted air to the incoming fresh air instead of being wasted

Draught Proofing:

2.15 Introduce draught proofing to make sure no heat is being lost through gaps around doors, floorboards, skirting boards and windows, while allowing for appropriate ventilation.

Appliances:

2.16 When buying appliances ask for ones with a high energy efficiency rating. Switching appliances like televisions and computers off rather than leaving them on standby when you are not using them also reduces energy use.

Heating:

2.17 Set your heating to come on only when you need it. Turn the thermostat down a few degrees and have thermostatic controls fitted on each radiator. When your boiler needs replacing make sure it is an "A" rated model and the right size for your heating needs.

Drying Clothes:

2.18 Drying clothes outside rather than using the tumble drier reduces energy use. In new developments space should be provided for drying areas.

Design and Materials

2.19 A significant amount of energy can be used in the transportation of building materials. This can be reduced by recycling materials which may already exist on the site e.g. re-using excavated topsoil elsewhere on the site and using locally sourced (aggregates or timber) or locally manufactured products. The use of local products will also support the local economy. The council will support proposals which include the transport of construction materials and waste by rail and water where this is feasible.

The Guidance

2.20 New development should be designed to encourage the use of natural light and ventilation with high levels of insulation. 40% of energy costs in large commercial developments can be accounted for by lighting. Energy use for lighting in all buildings can be minimised by making sure that there is good access to natural light. This will be affected by orientation, built form and the internal layout of the building.

2.21 There are many sources of advice available on how this can best be achieved and they are listed in Appendix 1

2.22 In relation to extensions and replacement dwellings the Council has adopted SPD which contains advice on energy efficiency. The Council's requirements are set out below.

Uttlesford Guidance 2

Extensions

In relation to extensions, where a property is proposed to be extended the Council will expect cost effective energy efficiency measures to be carried out on the existing house. Applicants are asked to complete and submit a home energy assessment form and are notified of energy savings measures that the Council will require as part of the conditions of granting planning permission for the extension.

Uttlesford Guidance 3

Replacement Dwellings

In the case of replacement dwellings if the replacement is bigger than the existing house then the Council will seek an "as built" dwelling emission rate 10% lower than the target emissions rate calculated to comply with Part L1A of the Building Regulations.

3. Use Renewable Energy

2.23 New buildings should be designed for energy efficiency and where possible should include some form of renewable energy and combined heat and power generation. The council would prefer this to be on site but off site solutions may be considered where clear benefits can be demonstrated e.g where the needs of more than one development can be supplied. Renewable energy technologies can also be introduced onto existing buildings but this is only advisable after all the basic measures have been introduced to make the existing building as efficient as possible.

The Guidance

Uttlesford Guidance 4

The Council will encourage developers to provide at least 10% of the predicted energy requirements for the development from on site renewables or low carbon energy sources in all developments larger than 1,000m² or five homes.

Wind Energy

2.24 There are no existing wind farms in the District. Policy ENV15 supports small scale schemes and the supporting text refers to single wind turbines as an example of the sort of development which might be appropriate. In considering proposals for large scale schemes the Council will not support proposals in locations where environmental, economic and social impacts can not be addressed satisfactorily.

2.25 Small scale wind turbines including roof mounted models are now available. If you would like to install a turbine you should seek advice on the suitability of the turbine for your location and commission a site survey in order to determine the wind speed and expected efficiency of the turbine.

Uttlesford Guidance 5

At the moment the Council requires applications to be submitted for domestic wind turbines, but where there is no visual or noise impact on neighbours planning permission will normally be granted. The Government is currently consulting on changing permitted development rights for householders who want to use microgeneration technologies and one suggestion is that subject to limitations on height above the roof, blade diameter and noise that such installations should be permitted development and would not require planning permission.

If your building is listed you will need Listed Building consent to attach a wind turbine to it. The Council has a policy of protecting Listed Buildings and would not normally give consent for this type of development but there may be other ways of meeting your needs e.g attaching the turbine to a non-listed building in the grounds or on a pole in the garden so it is always worth seeking advice from the Council's Conservation Officer.

Single wind turbines or a small number of turbines serving single homes or small groups of homes and/or businesses may be allowed providing there is no adverse effect on the landscape or residential and recreational amenity.

The Guidance

Solar Hot Water Systems

2.26 Two main types of solar hot water collector are available: Flat plate and evacuated tube. In both systems water or an antifreeze mixture travels through the collector picking up heat from the sun and then passing through a copper coil in the hot water tank. Solar panels work best when located in direct sunlight on a sloping roof. Care needs to be taken to make sure that the panels are not overshadowed. A well designed system can provide between 50 and 70% of a household's annual hot water with the peak period being between May and September. In the winter the water can be fully heated to the required temperature using a conventional boiler.

Solar PhotoVoltaic Systems

2.27 These consist of semiconductor cells which are connected together to form a panel which is usually attached to a roof or wall that faces within 90 degrees of south. Panels can also be mounted on freestanding support structures on the ground. Cells are also being developed which can be incorporated into roofing materials, cladding and glazing. When sunlight shines on the cells a current is produced and electricity is supplied to the property via an inverter. Surplus electricity can be sold back to the local distribution network.

Uttlesford Guidance 6

Planning permission is not normally be required but if you are planning to install solar panels or PhotoVoltaic Panels you should check with the planning department first.

Planning permission may be required if the panels change the shape of the roof or are raised more than a specified height above the roof slope - normally 150mm.

If the building is listed, listed building consent will be required. The Council would not normally grant listed building consent unless the panel can be placed on an inconspicuous roof slope. An alternative may be to mount the panels on a frame in the garden or on a non listed building e.g garage within the grounds of the property.

If the building is in a Conservation Area but not listed the panels should be placed in a location which is not visible from the street.

The Council will encourage developers to consider using solar PV panels as part of the external walls as an alternative to decorative cladding in steel-framed commercial buildings.

Biomass

2.28 Biomass or wood burning systems use pelleted or chipped wood. They differ from other renewable energy sources because although they release carbon dioxide (CO₂) when they are burnt, but this is equal to the carbon absorbed when the tree was growing so the

The Guidance

process is essentially carbon neutral. In order for biomass to be a truly renewable energy source though the fuel must come from a sustainable source i.e. the wood is replanted and it should be used close to where it was grown. Wood burning stoves and boilers are available in any size depending on whether they are required to heat one room or the whole building. They can achieve efficiencies of 80-90% and can be used in homes and commercial buildings. Some types of appliances can be fed automatically from an external store.

Uttlesford Guidance 7

Planning permission is not normally required for biomass stoves or boilers if they are within a building.

If there is an external flue this may require planning permission. Issues such as smell, noise and air pollution will be considered when determining an application. If the building is listed, listed building consent will be required for the flue.

Storage space for the fuel can be an issue. For some automated systems the store or hopper needs to be next to the boiler. Where large loads are being delivered there needs to be room for the delivery vehicle to unload directly into the store.

Combined Heat and Power

2.29 To be viable Combined Heat and Power (CHP) plants require a relatively large and constant demand for heat so they are well suited to larger mixed developments which have a substantial energy demand during the day e.g. supplying businesses and schools. A CHP plant burns a fuel source to generate electricity with an engine or turbine from which the waste heat is recovered and piped as hot water to heat buildings. They may also provide chilled water for cooling by the use of absorption chillers. CHP plants can use fossil fuels but ideally they would use biomass such as woodchip or biogas from domestic green waste or silage.

2.30 Greatest efficiency is achieved when CHP is used to serve a number of local buildings or different uses as part of a community heating scheme. The system would normally be designed, financed, built and operated by an Energy Services Company (ESCO) which would take responsibility for metering and billing etc once the developer has sold the properties and moved off site.

2.31 Micro CHP is a new system developed to provide central heating, water heating and electricity for individual houses or small groups of less than 5 homes. In this case a micro CHP replaces the traditional domestic boiler. This could also be used for small commercial buildings.

The Guidance

Uttlesford Guidance 8

The Council will encourage developers to provide CHP in residential and mixed use developments and for developments such as hotels where there will be substantial demands for heat and hot water throughout the day, all year round.

Heat Pumps

2.32 Heat pumps work by extracting heat from a source outside the building and concentrating it to heat the home. This heat can come from the ground, the outside air or even a nearby body of water. Heat pumps are electrically driven and are normally most efficient when the increase in temperature is minimised. They work well with underfloor heating systems which operate at lower temperatures. Heat pumps are best used with a well insulated new build property or an existing dwelling undergoing major refurbishment. They are particularly well suited to homes in areas that do not have access to mains gas.

Ground Source Heat Pumps:

2.33 The ground is at a stable temperature of 11-12 degrees C all year round at a depth of just a few meters. The ground heat collector is sunk in a horizontal trench or a vertical borehole.

Air Source Heat Pump:

2.34 This consists of an outdoor unit with a fan which draws heat from the air outside the building. They are cheaper to install than ground source heat pumps but these lower costs may be offset by the variability in air temperature.

Water Source Heat Pump:

2.35 This consists of either a closed loop or open loop system. A closed loop is a pipe that is submerged in a river, lake or canal or installed in the form of a vertical bore into a groundwater body. An open loop draws the water directly from an aquifer before it is discharged into a separate well or returned to surface water.

The Guidance

Uttlesford Guidance 9

For ground source heat pumps because the heat collector is buried in the ground planning permission is not required if it is within the grounds of the building. You may require a licence from the Environment Agency so you should contact them early on.

If you are planning to put an air pump on the outside of the building and the building is listed you will require Listed Building Consent. If the building is not listed contact the Planning Department for further advice.

Modern Methods of Construction (MMC)

2.36 There are different types of MMC but basically the term covers construction where the whole house, or parts of it are prefabricated off site in modules or panels which are then assembled on site. Houses built using MMC typically require less energy to heat because of increased levels of insulation fitted in the walls and roof and less air leakage from the building. Because they are made in a factory there is less on-site construction waste. Caution has been expressed by some about certain types of MMC. Because the houses are mass produced, if problems do subsequently come to light large numbers of homes could be affected.

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The Council will support the use of MMC where there is evidence that the method to be used is suitable for the site and type of housing to be built.

4. Offsetting Emissions

2.37 The Environment Committee on 13 March 2007 agreed to pursue a policy of requiring contributions by way of a S106 agreement for every tonne of projected annual CO₂ emissions resulting from a new development. The contributions would then be used to fund grants and incentives to encourage householders to invest in energy saving and renewable energy measures to reduce green house gases from existing homes in the district. The policy framework for this approach will be developed through the Core Strategy and Development Control DPD.

The Guidance

3 Appendices

Appendix 1 - Sources of Advice and Information

<p>Sources of Advice and Information</p>
<p>Uttlesford District Council</p> <p>Energy Efficiency Officer -Tel: 01799 510511</p> <p>Conservation Officer - Tel: 01799 510462</p> <p>Planning Policy - Tel: 01799 510461</p> <p>General Planning Advice- Tel: 01799 510617</p> <p>www.uttlesford.gov.uk</p>
<p>British Waterways</p> <p>Tel:0207 985 7200</p> <p>www.britishwaterways.co.uk</p>
<p>Carbon Trust</p> <p>Tel: 0800 085 2005</p> <p>www.carbontrust.co.uk</p>
<p>Energy Saving Trust</p> <p>Tel: 0800512012</p> <p>www.energysavingtrust.org.uk</p>
<p>The UK Heatpump Network</p> <p>Tel: 01923 664500</p> <p>www.heatpumpnet.org.uk</p>
<p>Renewables East</p>

Appendices

Sources of Advice and Information

Tel: 01603 591415

www.renewableseast.org.uk

British Wind Energy Association

Tel: 0207 689 1960

www.bwea.com

Publications

Uttlesford District Council

Uttlesford Local Plan Adopted 2005

Supplementary Planning Documents

Home Extensions

Replacement Dwellings

Accessible Homes and Playspace

Urban Place Supplement

www.uttlesford.gov.uk

Department for Communities and Local Government (DCLG)

Planning Policy Guidance Notes

PPS1 - Delivering Sustainable Development

PPS22 - Renewable Energy

www.communities.gov.uk

DTI

Review of Sustainable Construction 2006

www.dti.gov.uk

Sources of Advice and Information

English Heritage

Historic Environment and Local Management website for guidance notes on:

Biomass Energy and the Historic Environment

Climate Change and the Historic Environment

Wind Energy and the Historic Environment

Micro wind generation and Traditional Buildings

Energy Conservation in Traditional Buildings,

www.helm.org.uk

Appendices