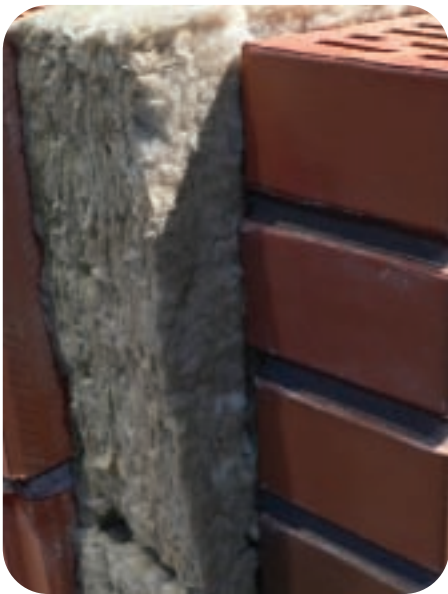
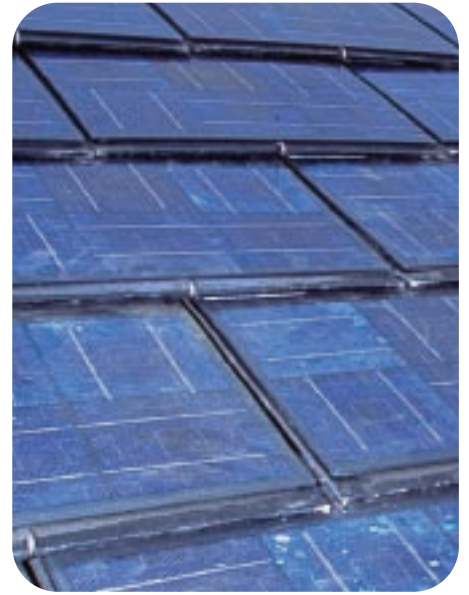


Use of Renewable Energy Systems

Historic Buildings and Conservation Areas



Introduction

This booklet is prepared for those residents living in a conservation area or a listed building who are considering installing renewable energy measures to their homes.

Climate change is a key environmental challenge today. Energy used in our homes contributes almost half of all carbon emissions in Haringey. The council encourages all residents to take steps to use energy wisely and to consider the use of renewable energy technologies in their homes.

Living in a conservation area or a listed building means that you need to pay attention to the special character of your property when considering energy conservation and use of renewable energy.

Below you will find information on appropriate ways to install renewable energy systems without impacting upon the special character of your property.



Council's Role

Haringey Council is committed to significantly reducing the Borough's carbon emissions and to increasing its usage of renewable energy. Unlike fossil fuels (gas, oil and coal) energy from renewable sources – such as the sun – does not produce carbon emissions when used to generate power.

The council is also committed to conserving the borough's historic environment, preserving and enhancing the character and appearance of its conservation areas and the special historic and architectural interest of its listed buildings. When the historic environment is well cared for it improves the built environment and enhances community life by giving a sense of place, and promoting civic pride.

Conservation Areas and Listed Buildings

Conservation areas are areas of special historical or architectural interest which have a character or townscape that it is desirable to preserve or enhance. In conservation areas, the view of a building from the public realm is considered the primary concern, to ensure that the streetscene is preserved as well as the quality of the architecture.

Buildings which are included on the national register of Buildings of Special Architectural or Historic Interest are protected by law. As such a listed building may not be extended or altered, internally or externally, in any way which may affect its special character, without Listed Building Consent being approved by the local planning authority.

For information on conservation areas and listed buildings in Haringey please contact the Design and Conservation Team on telephone 020 8489 1479.

Use energy wisely

Before deciding to install a renewable energy system, investigate whether the energy efficiency of your property can be improved by simple measures such as:

- Installing additional loft insulation
- Installing additional insulation underneath floorboards
- Installing secondary glazing to existing single glazed windows
- Draught proofing windows and doors
- Installing flue dampers in open chimney flues
- Upgrading roof-lights
- Upgrading your boiler, heating controls and hot water cylinder

The following can also make big reductions to your energy use and fuel bills:

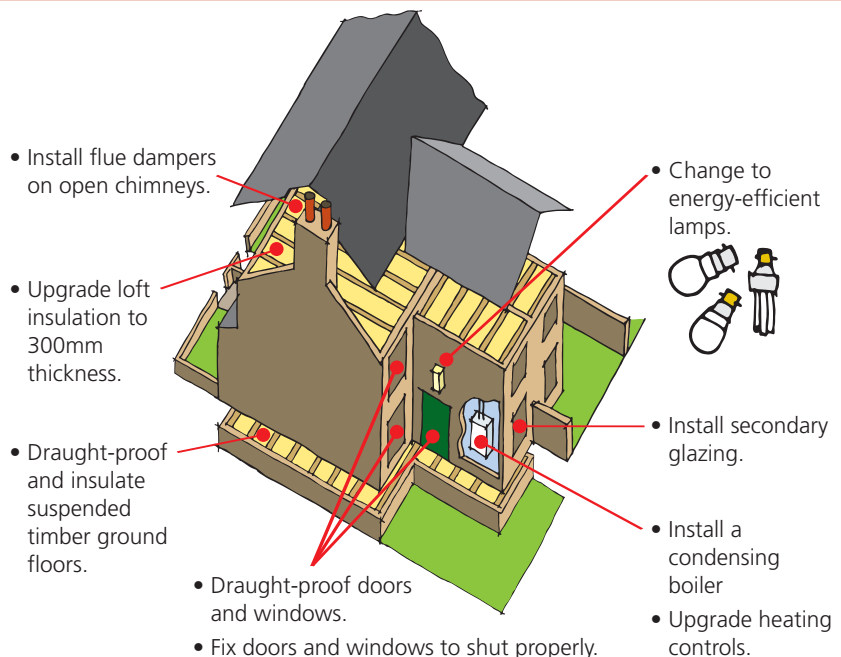
- Using energy efficient light bulbs
- Turning off all appliances that are not in use and not leaving them on standby settings
- Checking that your central heating is not programmed to heat the house while you are not there
- Using heavy curtains over single glazed windows, and ensuring all curtains are closed at night
- Switching to 'green' utilities suppliers
- Fitting individual heating controls to each radiator and only heat the rooms you use



Additional information on how to increase the sustainability of your home is available in council's 'Greening Your Home' guide, available via our website at www.haringey.gov.uk/greening

To find out how your property performed in the Home Heat Loss surveys conducted in 2000 and 2007, view our interactive maps at: <http://www.haringey.gov.uk/index/housingandplanning/housing/housingadvice/homeheatloss.htm>

Options to increase energy efficiency and reduce the carbon emissions of your home. Before considering whether to install a renewable energy system, take these effective and cost efficient measures.



Renewable Energy Options

Solar Energy Systems

There are two main types of solar energy system:

- Solar systems for heating water; and
- Photovoltaic cells that convert light energy into electricity.

Solar Hot Water Systems

Solar hot water systems work by using the sun's energy to preheat water entering a conventional hot water system. To maximise solar exposure, solar panels should ideally be installed on south-facing roofs, or be able to be angled to face due south.

When visible from the front of a property, solar panels are generally considered to have a negative impact upon the character of historic buildings and conservation areas. Therefore you need to consider whether there is an appropriate south-facing roof space where the solar system will not be visible from the public realm, as shown in the diagrams throughout this booklet.

Photovoltaic Cells

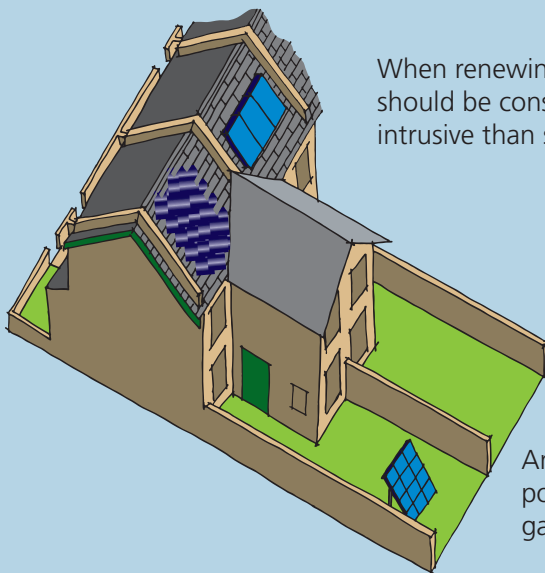
Photovoltaic (PV) cells use the sun's energy to generate electricity, and require only daylight, not sunshine, to work. This means that the positioning of PV cells is more flexible than for solar hot water panels, which usually require a south-facing location to absorb adequate heat. Whilst PV cells will generate more electricity if positioned facing the sun, they may still be a worthwhile investment for non south-facing roofs. We recommend you discuss the positioning of PV cells with the manufacturer to ensure appropriate installation that maximizes your investment.

There are now photovoltaic 'tiles' on the market which are less visually intrusive than older-style photovoltaic systems and solar hot water panels. They can be designed to blend in with existing roof tiles, and may therefore provide an ideal solution to home owners wishing to install renewable energy systems in historic homes and conservation areas.

Wind Turbines

To work efficiently, wind turbines require a smooth, steady air flow. This means that the performance of a turbine is dramatically affected by the local terrain. Any trees or buildings in the path of the wind will drastically reduce the available energy, and create turbulent conditions which increase wear and tear on the turbine. For these reasons wind energy potential can be low in most urban areas. If you do wish to install a wind turbine you will need to ensure that it does not interfere with the appearance, fabric or structure of your historic home.

Photovoltaic tiles are less visually intrusive than solar hot water or photovoltaic panels on historic buildings.



When renewing roof covering solar tiles should be considered, as they are less visually intrusive than solar panels.

An alternative may be to position the solar panel in the garden, away from the building.

Installing Renewable Energy Systems – What to Think About

In most cases, the installation of renewable energy systems to reduce carbon emissions requires the fixing of equipment to the historic fabric of the building. In order to avoid harm being caused to a historic building or conservation area, a number of matters need to be considered.

Key questions to consider about the proposed installation

Has it been designed specifically and sensitively to the building?

Will it harm the historic integrity and/or fabric of the building?

Will it cause demonstrable harm to the character or appearance of the building or conservation area?

Will it be visible from the public realm?

Is the building structurally capable of withstanding the imposed and dynamic loads?

Planning Permission and Listed Building Consent

Owners of listed buildings and properties in conservation areas please be aware that:

- Planning permission WILL be required for any renewable energy device mounted on the roof of a building within a conservation area.
- The installation of renewable energy devices to listed buildings WILL require listed building consent.

Positioning the System

The most important thing to think about is where you position the renewable energy system.

It is important to make sure that the system works effectively. It is also vital to consider its visual effect on the external appearance of the building.

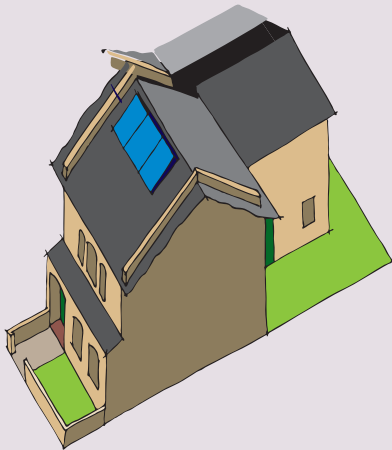
When deciding on the position of the system, you should take into account its effect on neighbours, the public and the environment. Any alteration to the roof that can be seen from any normal vantage point on the ground will affect the external appearance of a building. Consider whether it is possible to install ground mounted equipment. For solar systems think about making use of roof slopes that face away from roads and paths at the front of your property, or use parts of roofs that are hidden by parapet walls.

Using the example of solar hot water panels, the following pages contain diagrams to assist you in correctly positioning your system.

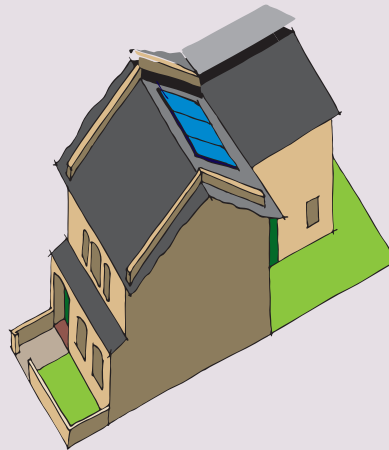


Positioning solar hot water panels on historic buildings – what to think about

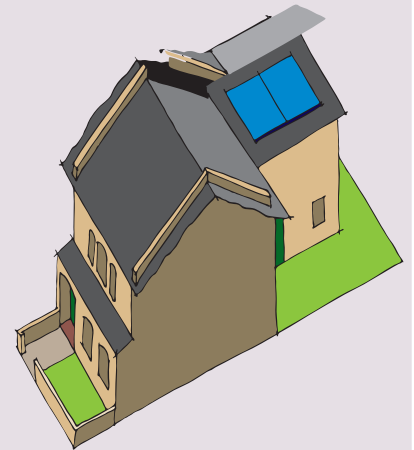
In conservation areas and on listed buildings panels must not be visible from roads.



Solar hot water panels are visible from roads.





Solar hot water panels are not visible from roads.




Solar hot water panels are not visible from roads.

Plan views

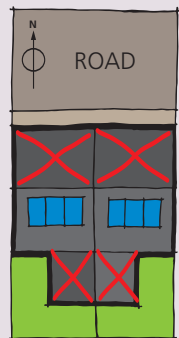
 Solar hot water panels shown on due south facing roof slopes.
Note: solar hot water panels should be kept below roof line.

 Solar hot water panels may be installed on slopes facing south of east or west

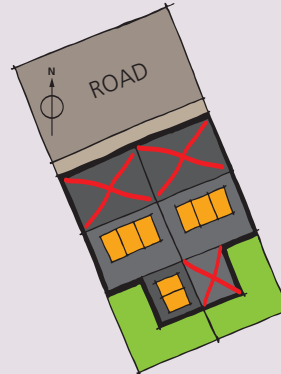
 Solar hot water panels not appropriate on these roof slopes

Solar collectors work well on any inclined surface facing south of east or west with the optimum output when due south.

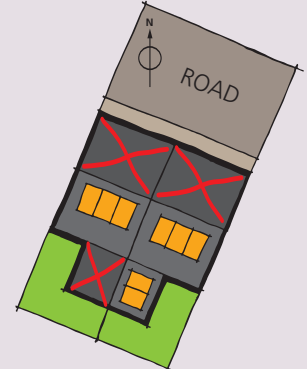
North facing houses



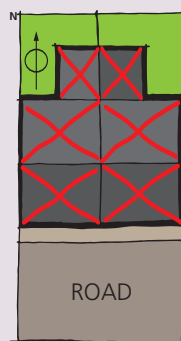
North west facing houses



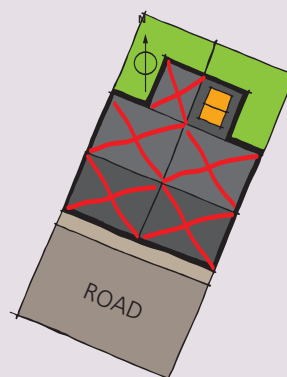
North east facing houses



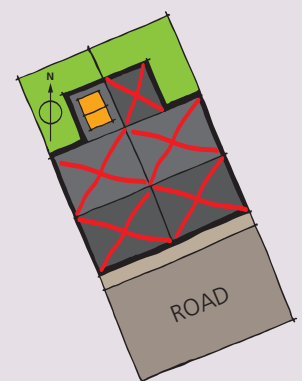
South facing houses



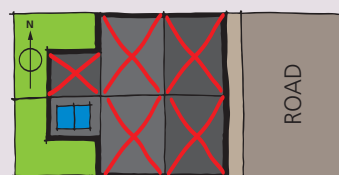
South west facing houses



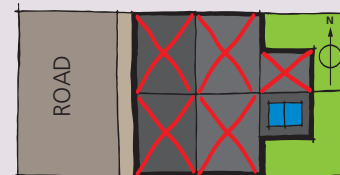
South east facing houses



East facing houses

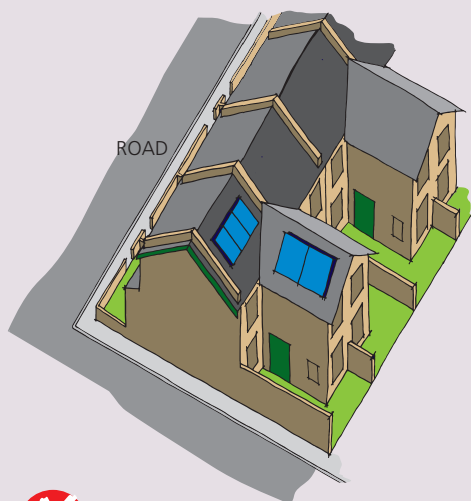


West facing houses

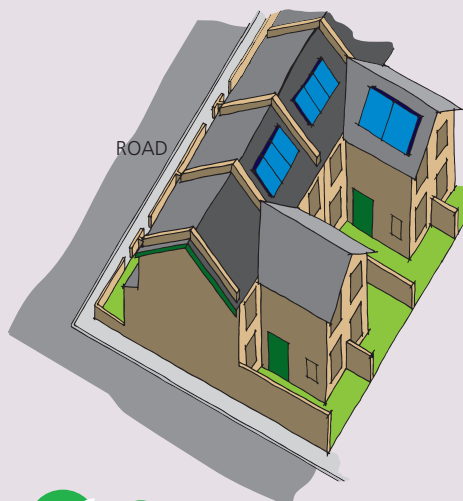


Positioning solar hot water panels on historic buildings – End of terraces

For houses at the end of terraces, panels must not be visible from roads.



Solar hot water panels are visible from roads.



Solar hot water panels are not visible from roads.

Plan view

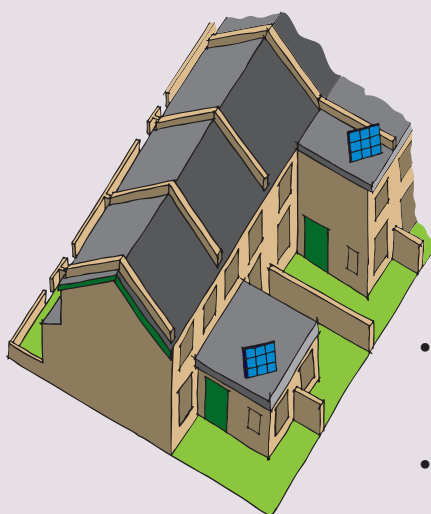


■ Solar hot water panels shown on appropriate roof slopes, subject to orientation. Note: solar hot water panels should not be visible from roads.

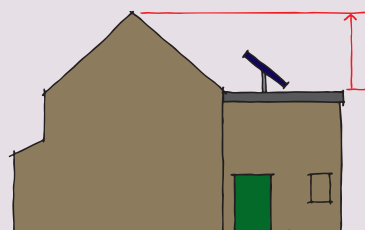
✗ Solar hot water panels not appropriate on these roof slopes.

Positioning solar hot water panels on historic buildings – Flat roofs

Solar hot water panels must not protrude above main roof line.



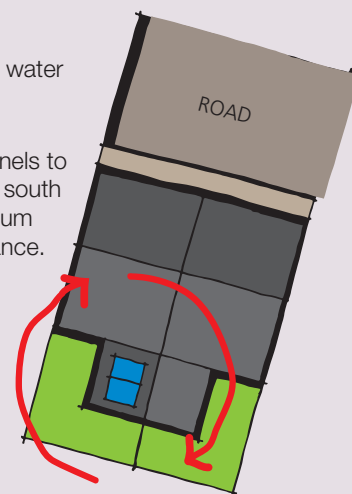
Solar hot water panel must not protrude above main roof line.



Plan

■ Solar hot water panels.

Angle panels to face due south for optimum performance.



- Flat roof positioning offers more flexibility as it is less dependent on the orientation of the building.
- A flat roof offers the opportunity to frame-mount the solar hot water panel and angle it to suit the local conditions.
- Position panels at 45° and facing due south for optimum performance.

Structural Implications

You also need to consider the structural implications of the proposed installation on the building. Are the wall or roof timbers strong enough to withstand the weight of the renewable energy system? What are the additional loadings being imparted on the building? Is there a requirement for any structural modifications?

Your Surroundings

For renewable energy systems to work efficiently, you also need to take account of your surroundings. For solar technologies you should consider whether there are any structures that cast a shadow on the location you intend to install the renewable energy system.

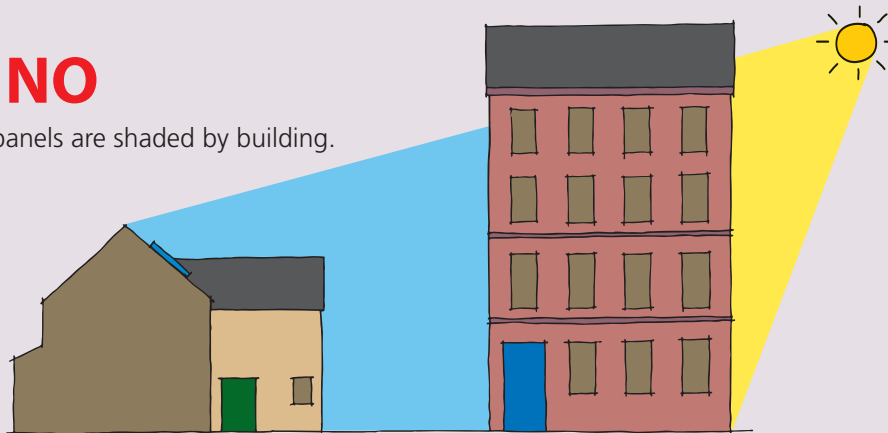
Impact of surroundings on efficiency of solar panels.



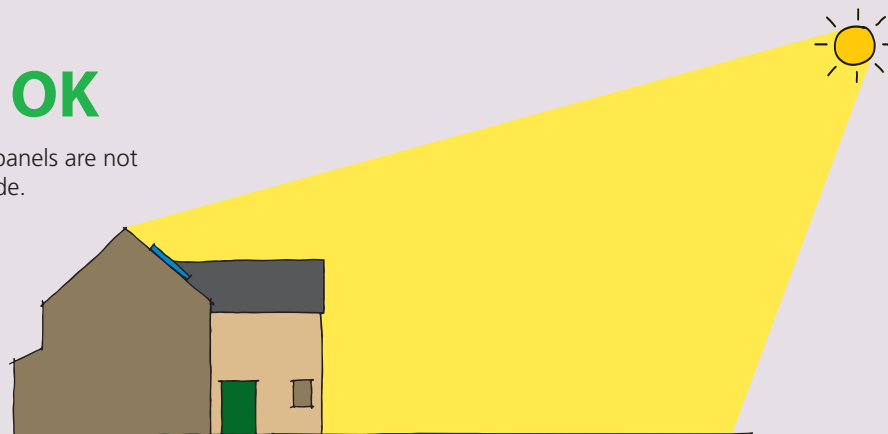
Solar panels are shaded by trees.



Solar panels are shaded by building.



Solar panels are not in shade.



Solar panels function best when placed in direct sunlight, away from obstructions that might cause shade e.g. tall trees and neighbouring buildings.

In Summary

Principles for Renewable Energy Installations to Listed Buildings

The installation of renewable energy devices will require listed building consent.

Any application for renewable energy on a listed building should ensure that:

- Any technology will not cause harm to the appearance of the building;
- There is minimal intervention with the fabric of the building; and
- All works are reversible.

For further advice and guidance, please contact the Design and Conservation Team on telephone 020 8489 1479.

Principles for Renewable Energy Installations to Buildings in Conservation Areas

Planning permission will be required for any device mounted on the roof of a building within a conservation area.

Any application for renewable energy within a conservation area should ensure that:

- The installation does not project above the main roof line; and
- Does not impact upon the appearance of the property when viewed from the public realm.

Further Information

www.bre.co.uk The Building Research Establishment. Advice on integrating renewable energy into buildings. Tel: 01923 664000

www.cat.org.uk The Centre for Alternative Technology. Books, leaflets and fact sheets on all aspects of solar energy. Tel: 01654 705950

www.climatechangeandyourhome.org.uk English Heritage portal. Information on energy saving, climate change and the historic environment.

www.energysavingtrust.org.uk Energy Saving Trust. Free impartial advice on reducing your home's carbon emissions.

www.helm.org.uk/server/show/nav.9255 HELM and English Heritage project on renewable energy, climate change and the historic environment.

www.londonclimatechange.co.uk The Green Homes Advice Service. Information and advice for Londoners on how to reduce your carbon footprint, available grants, and links to the Green Concierge Service.

www.lowcarbonbuildings.org.uk Low Carbon Buildings Programme. Information on microgeneration of renewable energy, and the Phase 1 householder grants scheme. Tel: 0800 915 0990

www.nationalinsulationassociation.org.uk The National Insulation Association. For information on insulation and installers. Tel: 01525 383313

www.solarforlondon.org.uk Solar for London. A London based initiative aimed at bringing solar hot water systems to London homes. Tel: 020 7089 6989

Frequently Asked Questions

Do I need Building Regulations approval?

Before installing any renewable energy systems to a house, check with council's Building Control Service to see if the works require approval under the Building Regulations. Building Control can be contacted via email to building.control@haringey.gov.uk or by telephoning 020 8489 5504.

What information do I need to provide to council?

Submit detailed drawings and photographs to show the nature of the building and what you intend to do. To help the planning officer visualize the impact on the external appearance of the building, you could draw the position of the installation on a photograph.

Is there funding available?

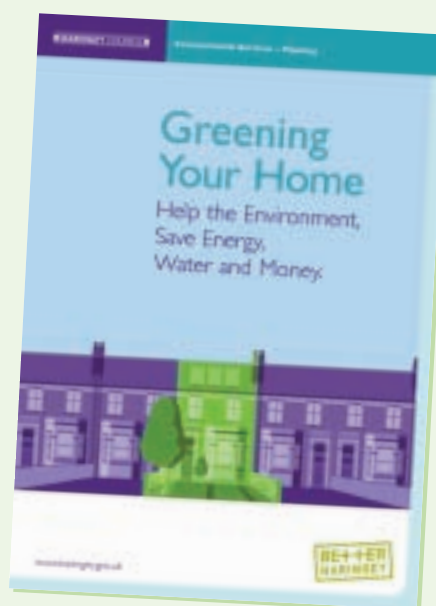
The government's Low Carbon Buildings Programme offers grants of up to 50% of the cost of installing a range of renewable energy systems such as solar hot water panels and photovoltaics. Further information can be found at www.lowcarbonbuildings.org.uk or by calling 0800 915 0990.

What is meant by 'the public realm'?

The public realm means outdoor areas that have unrestricted public access. When considering impacts of renewable energy installations on the appearance of conservation areas and listed buildings, references to the public realm are concerned with the front aspects of a house which face a public road or path.

What else can I do to make my home greener and more energy efficient?

Haringey Council has published a 'Greening Your Home' guide which includes information on a range of energy saving measures. Copies of the guide are available via the council website at www.haringey.gov.uk/greening.



Cutting demand for energy is as important as finding alternative means of generation. Before deciding whether to install a renewable energy system, make all possible energy-saving measures to your home.



Diagrams by:
Oxley Conservation: Historic Buildings
Consultancy

Shqip



Kjo broshurë është përgatitur për ata rezidentë që jetojnë në zonë të konservuar apo në ndërtesë të listuar (mbrojtur) e që janë duke konsideruar instalimin e masave të energjisë së ripërtëritshme në shtëpinë e tyre. Për një kopje në gjuhën tuaj, ju lutem shënjeni ✓ kutinë, plotësoni formularin dhe dërgojeni tek adresa e mëposhtme me postim falas.

Polski



Niniejszy informator przeznaczony jest dla osób zamieszkających w rejonach lub budynkach objętych ochroną konserwatorską, które rozważają zainstalowanie w domach urządzeń wykorzystujących energię ze źródeł odnawialnych. Kopię informatora w języku polskim można otrzymać, zaznaczając tę opcję poniżej, wypełniając druk i przesyłając go na podany bezpłatny adres.

Français



Ce livret est prévu pour les résidents qui habitent une zone protégée ou un immeuble répertorié qui souhaitent installer des mesures d'énergie renouvelables dans leur logement. Pour en obtenir un exemplaire dans votre langue, veuillez cocher la case, compléter le formulaire et le renvoyer à l'adresse en port payé ci-dessous.

Soomaali



Buugyarahan waxa loo diyaariyay dadka deggan mandaqadda la ilaaliyay (conservation area) ama dhisme la diiwaangeliyay (listed building) ee raba inay gurigooda ku xidhaan tamarta la cusboonaysiiyo. Si aad u hesho koobbi luqaddaada ku qoran, fadlan calaamadi sanduuqa, buuxi foomka oo ku soo jawaab cinwaanka boostiisu lacag la'aanta tahay ee hoose.

Kurdî Kurmancî



Ev belavok ji bo wan niştecîhên ku li herêmeke parastinê yan avahîyeke listkirî rûdinin û ku li ser raman dikin ku li malên xwe tedbîrên enerjîyê yê nuh bistînin hatiye amadekirin. Heke hun kopîyeke bi zimanê xwe dixwazin, ji kerema xwe qutîkê îşaret bikin, formê tije bikin û ji navnîşana posta bêpere ya jêrîn re bişînin.

Türkçe



Bu broşür, koruma alanı kabul edilen bir bölgede ya da tarihi bina kabul edilmiş bir binada yaşayıp konutlarına yenilenebilir enerji kurmayı düşünen sakinler için hazırlanmıştır. Broşürün Türkçe kopyasını edinmek için lütfen kutucuğu işaretleyin, formu doldurun ve aşağıdaki ücretsiz posta adresine gönderin.

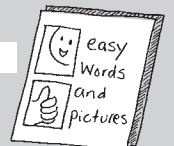
Please tell us if you would like a copy of this Historic Buildings and Conservation Areas brochure in another language that is not listed above or in any of the following formats, and send the form to the Freepost address below.

In large print

On audio tape

In Braille

In another language, please state:



Name:

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Address:

Email:

Please return to: Historic Buildings and Conservation Areas FREEPOST RLYE-ELRG-ASSB, 6TH Floor, River Park House, 225 High Road, London N22 8HQ

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