

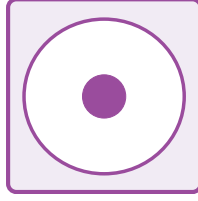
A Guide to Wakefield and District Housing's Energy Efficient Homes



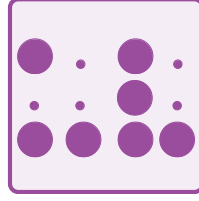
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French

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Kurdish

ئەم بەلگەیه ههروهه به زمانهکانی که، به چاپی درشت و به شریتی تهسجیل دەس دهکهویت

Polish

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Punjabi

ਇਹ ਦਸਤਾਵੇਜ਼ ਹੋਰ ਭਾਸ਼ਾਵਾਂ ਵਿਚ, ਵੱਡੇ ਅੱਖਰਾਂ ਵਿਚ ਅਤੇ ਆਡੀਓ ਟੇਪ 'ਤੇ ਰਿਕਾਰਡ ਹੋਇਆ ਵੀ ਮੰਗ ਕੇ ਲਿਆ ਜਾ ਸਕਦਾ ਹੈ।

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Urdu

درخواست پر یہ دستاویز دیگر زبانوں میں، بڑے حروف کی چھپائی اور سننے والے ذرائع پر بھی میسر ہے۔



Phone: 0845 8 507 507 - Text Relay calls are welcome.
Calls to OneCALL may be recorded for training purposes.



Email: communications@wdh.co.uk

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Why is it important to have energy efficient homes?

Wakefield and District Housing (WDH) is committed to tackling climate change by becoming a carbon neutral company by 2016. A vital part of this is ensuring our properties are equipped with the latest technology to help tenants and residents live in an environmentally friendly way.

We have embraced the Government's Code for Sustainable Homes (CSH) initiative for existing and new build properties which has been created to help cut carbon emissions in the UK by 80% by 2050. We have already improved and built a wide range of properties which are helping to reduce carbon emissions to protect the environment.

Energy efficient homes must make improvements in the following key areas:

Energy and CO2 Emissions.

Water.

Materials.

Surface water run-off.

Waste.

Pollution.

Health and wellbeing.

Management.

Ecology.

There are certain requirements for properties to be given a CSH level and this technical information is detailed at the end of this brochure.



What energy efficiency initiatives does WDH offer?

We have a wide range of initiatives aimed at addressing the key areas (opposite) which are already available in our modernised properties and in our new build homes.

Improving existing properties

We are improving our existing properties as part of our improvement programme works. The following information highlights just some of the energy efficient features that are being installed:



Condensing boilers

We are replacing existing central heating systems with 'A' rated condensing combi boilers saving tenants around £110 a year on their energy bills.



Double glazing

We are installing UPVC double glazing in our properties, which can help to cut heat lost through windows by half, resulting in savings of up to £100 per annum. Not only does it help to reduce heat loss, it also helps to reduce noise and condensation.



Cavity and loft insulation

We have undertaken a scheme to top up loft insulation to all our properties, in partnership with npower.

This scheme will provide properties with insulation to increase their thermal efficiency.

This will have a positive effect for tenants, their homes will be warmer, fuel bills will be reduced, helping reduce fuel poverty.

New Build Properties

In addition to the features in our modernised properties, our new build programme includes much more. These include the following:



Ground source heat pumps

We have installed a number of ground source heat pumps in a number of our properties to provide a renewable form of water heating. They provide properties with up to 90% of their energy requirements and reduce carbon.



Air source heat pumps

We have installed a number of air source heat pumps which use outside air as a heat source or heat sink. A compressor, condenser and refrigerant system is used to absorb heat at one place and release it at another. It uses some of this heat to provide hot water or household heating.



Photo voltaic solar panels

We are installing solar PV panels onto new build properties to help achieve Code for Sustainable Homes Level 4. Solar PV panels are located on the roof of the property, and capture the sun's energy

which then convert the sunlight into electricity, which can be used to run household appliances and lighting. Solar PV systems can result in savings of up to £150 per annum on electricity bills as well as putting electricity into the national grid.

Retrofitting WDH's existing stock

Nearly 30% of the UK's carbon emissions are generated from existing housing stock and the Government has targets of reducing these carbon emissions by 80% by 2050. Therefore, it is vital that we need to cut emissions from our existing properties.

In addition, the Government has launched a new initiative called EcoHomes XB (Existing Buildings), which is an assessment tool to help with improving the environmental performance of existing stock through planned and small scale maintenance programmes.

As part of this we have already undertaken a survey of our properties to see how we can improve their ecological and energy rating. As part of this we have identified a key challenge of installing difficult to fit technology and the associated costs.

The results are being used to inform our comprehensive programme of retrofitting work.

An advanced programme of retrofitting will start in 2012 and will include:

- Installation of Photo Voltaic (PV) Roof Panels.
- Insulation of solid wall construction properties.
- Conversion of solid fuel district heating schemes to sustainable non fossil fuel energy.
- Installation of Smart meters.
- Provision of air source and ground source heat pumps.



What types of energy efficient homes does WDH offer?

We have already built solid foundations towards delivering sustainable homes for the future. Below are just a few examples our Code for Sustainable Homes (CSH) new build properties and the Levels that have been achieved.



Code 3

Key Features

- High levels of insulation.
- Solar water heating pumps.
- Zenex GasSaver.

Our Code 3 properties boast solar water heating panels installed to pre-heat the hot water feed to the high-efficiency, central heating boiler and a Zenex GasSaver. This can save tenants up to 50% on water heating bills and reduces CO2 emissions by up to 85%.

It works by recycling flue gas heat that is normally wasted and expelled into the atmosphere - significantly reducing gas consumption and optimising the delivery of hot water. This reclaimed energy is stored in the unit and used to preheat incoming cold water, therefore improving overall domestic hot water efficiencies.

More detailed technical information can be found on page 14.

The location of all energy efficient homes can be found on our website www.wdh.co.uk

Code 4



Key Features

- Photo voltaic solar panels
- Insulated block construction.

Our Code 4 properties use traditional brick and insulated block construction which has been combined with a wide range of renewable energy technologies which include photo-voltaic, solar panels to generate electricity. The panels are located on the roof of each property and capture the sun's energy and turn it into electricity.

Code 6



Key Features

- Grey water recycling.
- Photo voltaic solar panels.
- Efficient ventilation system.
- High tech display information.

We are currently working, in partnership with Bramall Construction, on the largest social CSH level 6 scheme in the UK. The properties will all be packed full of the latest energy efficiency technologies. These include grey water recycling, photo voltaic (PV) for each property and a 'Nuairé' mechanical ventilation system with heat recovery with up to 92% efficiency to minimise heat loss while introducing fresh air and ventilation.

In addition, an Energy Centre will be provided as part of the scheme which contains rooms with display information for educational purposes to help tenants and residents to live in a carbon neutral way, a key consideration for CSH6.

Welcome to ...

the Glasshoughton centre

for healthy living, learning and leisure



What are WDH's plans to help tenants and residents to be more efficient?

Help and advice

Embracing change can be difficult for some people and to help tenants do things differently we offer a wide range of energy support and advice for them. As part of this we provide regular energy saving tips in our publications such as our tenant newsletter and on our website.

Roadshows

In addition, we hold regular energy efficiency roadshows which tour the district to give tenants useful information on how they can be more energy efficient and save money on their utility bills.

Training

Later this year, as part of our Code 6 Parkdale development, we will be offering tenants intensive training to give them the know-how so they can live 'everyday eco lives' when they move into their new homes.



Technical information

Each level of the code sets out mandatory minimum standards in CO2 emissions which are outlined below.

Code Level	Minimum % reduction in carbon emission rate over building regulation standards
1	10%
2	18%
3	25%
4	44%
5	100%
6	'Zero carbon'

The remaining eight categories in the code, consider a wide range of other site specific issues which are calculated using a system of weighting and credits.



All levels

Each level of CSH must have a minor negative or neutral change to the ecology of an area. There are specific requirements for all levels.

All materials are scored on their environmental impact and the responsibility of their sourcing.

All new build sites are required to reduce the amount of surface water run-off and in flood risk areas, the ground level of buildings must be above the flood levels.

All new build sites also have to reduce nitrous oxide emissions and look to reduce their global warming potential, both in construction and in end use. This can be achieved by producing a Home User Pack for residents, complying with the Considerate Constructor Scheme during the works phase and applying Secured by Design principals.

Specifics of the Codes

For each of the codes, there are additional environmental features that are required. In reality, levels 1 and 2 were just a slight extension of building regulations. Therefore we have focused on delivering level 3 and above. Details for these can be found overleaf.

Code for sustainable homes	Level	Comments
Energy/CO2 reduction	Level 3	25% reduction of carbon dioxide emissions. Could be achieved by: <ul style="list-style-type: none"> • UPVC double glazing • energy efficient lighting • provision of a home office • cycle storage
	Level 4	44% reduction of carbon dioxide emissions. <ul style="list-style-type: none"> • As above plus • Installation of a renewable technology (ground source heat pump, wind turbine, solar panels or photovoltaic panels (PVs))
	Level 5	100% reduction of carbon dioxide emissions. <ul style="list-style-type: none"> • As above plus • UPVC triple glazing • Increase in techniques to improve air tightness of walls
	Level 6	Carbon neutral <ul style="list-style-type: none"> • As above plus • Installation of a further renewable technology to offset the carbon dioxide that is produced to heat the homes
Materials	All levels	All material are scored on their environment impact and the responsibility of their sourcing
Surface water run-off	All levels	All new build sites will be required to reduce the amount of surface water run-off and in flood risk areas. The ground level of buildings to be above the flood levels

Code for sustainable homes	Level	Comments
Water	Level 3	Usage limited to 105 litres per person per day. This can be achieved by: <ul style="list-style-type: none"> • Flow restrictors to taps and showers • Reduced capacity baths • Low toilet flush • Water butts
	Level 4	<ul style="list-style-type: none"> • As above
	Level 5	<ul style="list-style-type: none"> • As above
	Level 6	Usage limited to 80 litres per person per day. <ul style="list-style-type: none"> • As above plus • Grey water toilet flush
Waste	Level 3	This can be achieved by Site waste management plan in place and implemented Household waste storage, properties to accommodate all refuse collection/ recycling both now and in the future
	Level 4	<ul style="list-style-type: none"> • As above
	Level 5	<ul style="list-style-type: none"> • As above plus composting bins
	Level 6	<ul style="list-style-type: none"> • As above
Pollution	All levels	All new build sites will have reduced nitrous oxide emissions and will look to reduce their global warming potential, both in construction and in end use
Management	All levels	This can be achieved by <ul style="list-style-type: none"> • Producing a home user pack for residents • Compliance with considerate constructor scheme during works phase • Secured by design principals applied

Code for sustainable homes	Level	Comments
Health and well being	Level 3	<p>All new build sites will look to improve the health and well being of the residents. This can be achieved by:</p> <ul style="list-style-type: none"> • All properties to comply with minimum daylight factors • Sound insulated higher than required in Part E of the building regulations • Provision of private outdoor space that is accessible to disabled people
	Level 4	<ul style="list-style-type: none"> • As above
	Level 5	<ul style="list-style-type: none"> • As above
	Level 6	<p>Usage limited to 80 litres per person per day.</p> <ul style="list-style-type: none"> • As above plus • All 16 points of the lifetime homes criteria are adhered to
	Ecology	Level 3
Level 4		<ul style="list-style-type: none"> • As above
Level 5		<p>Minor or major enhancement to the ecology of the area</p>
Level 6		<ul style="list-style-type: none"> • As above





Vision

to create confident communities

Mission

to inspire, transform and promote excellence

Values

to be creative, inclusive and work with integrity

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delivering promises, improving lives