

The Welsh Housing Quality Standard

1. Introduction

The Welsh Housing Quality Standard (WHQS) aims to provide a common target standard for the physical condition of all housing in Wales. The Assembly Government expects all social landlords in Wales to adopt the standard and to devise realistic programmes for bringing all of their properties up to it by 2012.

This guide explains the energy efficiency elements of the WHQS. It focuses on how housing providers can maximise the energy efficiency opportunities of meeting the WHQS and minimise costs in the long term. The guide explains:

- The energy efficiency related requirements of the WHQS.
- How to assess the compliance of individual homes with those requirements.
- How to assess the stock-level implications, including costs, of meeting the energy efficiency requirements of the WHQS.
- How to identify opportunities to improve the overall energy efficiency of your housing stock when making improvements to meet the standard.
- The importance of adopting a strategic approach to energy efficiency.

2. Energy efficiency in the WHQS

There are seven requirements of the WHQS, one of which is that homes must be 'adequately heated, fuel efficient and well insulated'. This requirement aims to ensure that homes can be kept warm and free of condensation dampness at an affordable cost.

The eradication of fuel poverty is a strategic priority for the Welsh Assembly Government. Under the WHQS, landlords are expected to do whatever they reasonably can to minimise the cost of heating homes to a comfortable level.

Full guidance on the WHQS is available from the Welsh Assembly housing webpages [here](#)¹. This guidance was produced in November 2003 and was current at the time of updating 'Energy efficiency the guide'. However, new guidance is being produced and will be available within the next few months.

To comply with the WHQS, homes must achieve a minimum SAP energy rating. (The current guidance is based on SAP98 but revised guidance will be produced in spring 2007 and will update minimum SAP energy ratings to SAP2005.) These vary according to the floor area of the property, as outlined in the table below:

Floor area - m ²	SAP 98 energy rating
Up to 35	58
36 to 40	59
41 to 45	60
46 to 50	61
51 to 55	62
56 to 60	63
61 to 70	64

¹ <http://new.wales.gov.uk/topics/housingandcommunity/housing/social/whqs/toolkit/objectives/wag/workable/standards/?lang=en>



71 to 80	65
81 to 90	66
91 to 100	67
101 to 110	68
111 to 120	69
Over 120	70

Further information on energy ratings can be found in the 'Housing stock assessment' chapter of ['Energy efficiency the guide'](#)¹.

In addition to the SAP rating, all cost effective opportunities to upgrade the thermal and ventilation requirement of a home must be taken. This includes ensuring that:

- Heating systems are fuel efficient, reasonably economical to run and capable of heating the whole house to a comfortable level.
- Doors and windows do not cause severe draughts, and the main entrance door does not open directly into the living room.
- The hot water cylinder is insulated.
- Loft insulation is at least 200mm, and that all tanks and pipes in the loft space are lagged.
- Steps are taken to minimise the risk of condensation. For further information see the 'Dealing with condensation, dampness and mould' chapter from ['Energy efficiency the guide'](#)².

There are no specific requirements in the WHQS for wall insulation but this may be needed to meet the minimum SAP energy rating, especially in hard to treat homes (eg those without cavity wall construction and/or loft space).

The labour costs and disruption to tenants that are involved with many property improvements mean that you should try to incorporate improvements to insulation levels at the same time as other improvements to the homes, even if this is not currently required to meet the WHQS. In particular, this should include:

- Cavity wall insulation where feasible.
- Improved insulation to flat roofs and sloping ceilings when roof coverings are being replaced.
- External wall insulation if walls are to be re-rendered.
- Internal wall insulation if properties are to be fully refurbished internally.
- Floor insulation if ground floors are being replaced.

3. The WHQS and fuel poverty

Achieving a SAP rating of less than 70 is not always sufficient to ensure that homes will provide affordable warmth for their occupants or eliminate the risk of condensation dampness in a property. In order to meet the targets in the Welsh Assembly Government's Fuel Poverty Commitment for Wales, it is likely that a higher standard will be required some time after 2012.

Further information on tackling fuel poverty is available in the 'Delivering affordable warmth' chapter of ['Energy efficiency the guide'](#)³.

¹ www.energysavingtrust.org.uk/housingbuildings/localauthorities/theguide/.

² www.energysavingtrust.org.uk/housingbuildings/localauthorities/theguide/.

³ www.energysavingtrust.org.uk/housingbuildings/localauthorities/theguide/.



4. Assessing the compliance of individual homes

Assessing the compliance of individual homes with the WHQS is a two-stage process.

Firstly, you need to establish if the property currently fails the standard due to the lack of an efficient heating system or inadequate insulation. There is no specific definition of efficient heating for the WHQS. Essentially, a home is likely to fail to meet the standard if the answer to at least one of the following questions is "yes":

- Is the home heated solely by individual room heaters?
- Is the heating system more than 20 years old?
- If the home is heated by mains gas, oil or solid fuel-fired central heating, is the annual seasonal efficiency of the heating system 60 per cent or less? (You can check the efficiencies of specific boilers on the SEDBUK [website](http://www.sedbuk.com/)¹).
- If the home has a loft space, is there less than 200mm of loft insulation?
- Does the property have an uninsulated hot water cylinder (where applicable)?
- Are the doors and windows draughty?
- Are there persistent problems of condensation dampness?

The second phase of assessing compliance with the standard is to check the energy rating once measures have been installed. An energy audit would also help to identify what further improvements would be required to meet the standard.

From a landlords' perspective, the priority will be to identify those homes which do not meet the standard.

If you have a database of your stock's energy characteristics, it should be easy to interrogate the data relating to heating system, fuel type, loft insulation thickness and wall insulation thickness and to identify homes which do not meet the required standard. Assuming you have data on floor area, you should be able to identify which homes fail to meet the SAP energy rating criteria.

If you do not have an energy database of your stock, you will need to collate the information from other sources. These could include rent or servicing databases for heating system and fuel type and installation records for insulation. Gathering this data for comparison with the WHQS provides an ideal opportunity to establish a stock energy database.

You may need to survey some of your housing stock, particularly to confirm whether uninsulated properties do have cavity walls and loft spaces. To maximise cost effectiveness, you can combine this survey activity with other stock surveying or visits to the property (eg when servicing the heating systems).

5. Assessing the stock-level implications of meeting the WHQS

Any homes that fail to meet the WHQS will need to be included in programmes to install new heating systems and insulation before 2012.

There are three stages in the development of a programme to meet the energy efficiency aspects of the WHQS:

a) Stock assessment

Stock assessment entails the collation and analysis of detailed stock information to identify those properties that fail to meet the standard (or will fail by 2012 because of aging heating systems). Social landlords were required to

¹ www.sedbuk.com/.



submit an initial assessment in 2002 to establish the current state of the housing stock relative to the standard. This used the best available information, much of which could have been from a desktop exercise and the knowledge of key technical staff.

The development of a housing stock energy database is recommended so that individual properties requiring improvements can be identified and progress towards achieving the standard can be monitored. Further information on stock databases can be found in the 'Housing stock assessment' chapter of ['Energy efficiency the guide'](#)¹.

The stock assessment falls into four stages:

- Identification of properties without 200mm of loft insulation, draught sealing to doors and windows and/or insulation to hot water cylinders and pipes.
- Identification of properties without efficient heating.
- Identification of properties with persistent problems with condensation dampness.
- Identification of homes that will fail to achieve the energy rating criteria of the WHQS even when efficient heating and all applicable insulation measures have been installed. This will require energy audits of each property type or the use of a stock energy database.

b) Cost estimation

Once you have identified the required improvements, you should estimate the total cost of these improvements so that financial resources can be secured.

It is probably easiest to consider the costs of the insulation and heating improvements separately.

Insulation

Once you have identified the stock under consideration, the estimation of costs for insulation is generally straightforward, as costs are fairly standard according to the property type. The costs of insulation per dwelling from previous contracts can be used to help with these estimates.

Subsidies for cavity wall insulation and loft insulation are currently available from energy suppliers through the Energy Efficiency Commitment (EEC). Further information on EEC can be found in the 'Energy Efficiency Commitment' chapter of ['Energy efficiency the guide'](#)².

You may also be able to obtain funding from the Home Energy Efficiency Scheme (HEES and HEES Plus). Further information on HEES and HEES Plus can be found in the 'Sources of funding for energy efficiency' chapter of ['Energy efficiency the guide'](#)³.

Heating system Improvements

For heating system improvements, you should appraise the options available for those homes without full central heating (or with old or inefficient systems).

In terms of capital costs, the cheapest option is likely to be electric storage heaters however this option will result in relatively high fuel costs for tenants and relatively high carbon dioxide emissions. Therefore, electric storage

¹ www.energysavingtrust.org.uk/housingbuildings/localauthorities/theguide/.

² www.energysavingtrust.org.uk/housingbuildings/localauthorities/theguide/.

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heaters are unlikely to contribute to the achievement of targets other than the WHQS (eg carbon reduction or affordable warmth targets). Again, there is the risk that higher WHQS standards after 2012 will be more difficult to meet for homes heated by electricity. It could well be a false economy to go for the cheapest capital cost option.

You should review the heating options for your stock taking into consideration factors such as:

- The availability of mains gas.
- Capital costs.
- Maintenance costs.
- Future replacement costs.
- Sustainability issues (eg flexibility to switch to renewable fuels, environmental impact).
- The provision of affordable warmth.

Heating options considered should not be restricted to conventional gas central heating as the standard allows for other similarly efficient heating systems to be adopted, eg community heating and ground source heat pumps. For further information on these systems, see the 'Community heating and CHP' and the 'Integrating renewable energy technologies' chapters in ['Energy efficiency the guide'](#)¹.

Other

For homes that still fail to meet the standard after improvements have been made, a package of further improvements will need to be defined and costed. Installing modern high efficiency boilers and heating controls may be the simplest way of achieving an improved energy rating. However, many of the homes that continue to fail to meet the standard are likely to have electric or solid fuel heating.

Alternatively, you could consider providing internal or external wall insulation or the insulation of flat roofs and sloping ceilings, especially if other refurbishment work is likely to be required.

There may also be other options for improving the energy efficiency of homes to meet the WHQS, eg double glazing (which can also help to meet the noise insulation requirements of the standard) or renewable energy technologies such as solar water heating. Heat recovery ventilation may also be an option if there are persistent problems of condensation dampness.

c) Development of an investment programme

The investment programme is likely to fall into four phases.

Loft and hot water cylinder insulation and draught sealing should be installed as quickly as funds allow, since costs may be lower for larger contracts and there are likely to be capital cost reductions on heating systems installed after insulation.

A programme of heating system improvements should prioritise those homes with the most expensive to run heating systems and those where the maintenance costs are high (eg due to persistent condensation dampness). The age of heating systems may also need to be taken into account.

Additional improvements required to achieve the energy rating criteria will need to be linked together with improvement works that are to be carried out to the homes in question. For example, external insulation will be

¹ www.energysavingtrust.org.uk/housingbuildings/localauthorities/theguide/.



much more cost effective if carried out when re-rendering or cladding of the external walls is required to maintain the condition of the property.

You should also consider cavity wall insulation, where this is feasible. This will minimise the requirement to install additional measures and will help you to take advantage of funding available from EEC. Whilst this additional insulation may increase the capital funding required in the short term, it is a cost effective improvement measure and reduces the risk that properties will have to be improved a second time if higher standards are imposed after 2012.

Your investment programme should be flexible and responsive to changes, with annual reviews based on updated information on the stock.

6. Opportunities for improving overall energy efficiency

Housing management organisations have other obligations in addition to meeting the WHQS. These include the provision of affordable warmth for tenants. Meeting the WHQS will not necessarily provide affordable warmth to all tenants. There is therefore a case for improving homes to meet a specific affordable warmth target; this is likely to require a target SAP rating of at least 80.

By setting yourself an energy rating target, you can then carry out a strategic assessment of the energy efficiency and heating options that will meet that target across your stock. Your strategic assessment would seek to answer:

- What options will we have for supplying heat, hot water and electric power for our homes in (say) 2020?
- Which options are robust against rising fuel prices and uncertain availability?
- What are our preferred options?
- How do we get there from here?
- How much will it cost?

An assessment could be carried out on a sample of typical property types that represent the range of properties in the stock. A programme of improvements would then be developed. This would achieve a significantly higher standard than WHQS and would also help you to prioritise those homes which fall below the standard for improvement before 2012.