

Sustainability labelling within building standards



RESPONDENT INFORMATION FORM

Please Note this form **must** be returned with your response to ensure that we handle your response appropriately

1. Name/Organisation

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3. Permissions - I am responding as...

Individual

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Group/Organisation

Please tick as appropriate

(a) Do you agree to your response being made available to the public (in Scottish Government library and/or on the Scottish Government web site)?

Please tick as appropriate Yes No

(b) Where confidentiality is not requested, we will make your responses available to the public on the following basis

Please tick ONE of the following boxes

Yes, make my response, name and address all available

or

Yes, make my response available, but not my name and address

or

Yes, make my response and name available, but not my address

(c) The name and address of your organisation **will be** made available to the public (in the Scottish Government library and/or on the Scottish Government web site).

Are you content for your **response** to be made available?

Please tick as appropriate Yes No

(d) We will share your response internally with other Scottish Government policy teams who may be addressing the issues you discuss. They may wish to contact you again in the future, but we require your permission to do so. Are you content for Scottish Government to contact you again in relation to this consultation exercise?

Please tick as appropriate Yes No

CONSULTATION QUESTIONS

1. Background

Buildings that are designed more sustainably have positive impacts on the potential for sustaining human wellbeing, whilst minimizing carbon dioxide emissions and reducing the use of finite resources. For a building to earn a sustainability label, it must demonstrate that a wide range of factors have been considered in its design, and that these factors are achieved in its construction.

Section 7 intends to make sustainable design within reach of all new buildings and not just belong to a niche market. Demanding sustainability standards are encouraged to be taken up by those who opt to demonstrate their green credentials by complying with upper levels.

Sustainability labelling aims to encourage consistency between planning authorities that use supplementary guidance to promote higher measures of sustainable construction in their areas. By making reference to this standard, local aspirations can be met by selection of clear national benchmarks.

Consultees are encouraged to respond on any aspect of the proposals but Scottish Ministers would welcome comments specifically on the issues that have been targeted. It is recognised that a 'yes' or 'no' is not always a satisfactory answer to the question. Consultees are therefore encouraged to add comments to expand their opinions, particularly when they disagree with the approach proposed.

1. Do consultees think the introductory text in section 7.0 adequately describes the aims, the scope and the terminology? Yes No

Comments

Aims

We fully support the introduction of sustainability standards for Scottish buildings. We note that mandatory sustainability standards have been a feature of domestic buildings in the rest of the UK since 2008 and the creation or adoption of an up-to-date standard in Scotland is therefore long overdue.

We note that for non-domestic buildings existing commercial standards are in operation, e.g. CfSH/BREEAM/LEED, and has been supported by local authorities by it being required by their planning policy guidance (for example the Glasgow Plan 2, policy DES2).

We query how the sustainability label created by the Scottish Government differs from the commercial product assessment products, such as CfSH/BREEAM/LEED, and whether it is not advisable (in terms of environmental performance, cost to government and business efficiency) to adopt existing, proven methods of assessment?

We welcome a consistent approach across planning authorities to simplify the planning process.

Scope

In our opinion the sustainability label seems to disregard much of the elements of sustainability as well as environmental performance. The missing elements from the standard are:

- Ecology & biodiversity;
- Land use;
- Transport;
- Community; and
- Economic sustainability.

Terminology

Certification – the lack of detail and defined responsibilities here are very concerning. Will the SBSA be entering into similar agreements as the creation of EPCs? What assessment will Certification Schemes have to go through? What confidence do we have that design will be delivered in accordance with legislation? Will there be stages of certification through design/delivery?

2. Approach

Section 7 would be a new section of the technical handbooks containing a single standard that is mandatory for all building warrant applicants when proposing new buildings in Scotland. To comply with standard 7.1 there would need to be a label of a specified level of sustainability fixed to the building, in a similar way that an EPC needs to be fixed; for example in meter cupboard or utility space. The entry level, known as 'bronze' would be compliance with all the other standards, therefore the standard does not pose an additional burden on development. Only if an applicant chooses to aim for a higher level would there be a potential impact on the costs of building.

2. Do consultees consider that this approach offers a sensible and practical route to enable the building standards system to further the achievement of sustainable development in Scotland? Yes No

Comments

While we wholeheartedly support and applaud the creation of sustainability standards for Scotland, we disagree that a bronze award could be made to a project compliant with law and for no additional cost.

We support the use of a rating system that is publicly displayed on all buildings.

3. Scope and balance

Building Standards Division of the Scottish Government has explored what aspects of the design and construction of domestic buildings related to sustainable development would be appropriate within the optional upper higher levels of sustainability. The aspects defined aim to be pertinent at the building warrant stage of development process when applicants are looking at the details of buildings. They aim to be broad, covering not only energy and carbon. They address issues that can be fairly controlled and simply verifiable within the building standards system, so they tend to be directed towards technical environmental performance issues of design. The eight aspects are:

1. Carbon dioxide emissions
2. Energy for space heating
3. Energy for water heating
4. Water use efficiency
5. Optimising performance
6. Flexibility and adaptability
7. Wellbeing and security
8. Material use and waste

3. Are consultees content that the defined aspects for domestic buildings reflect a balance of sustainability issues that can be delivered by the building standards system? Yes No

Comments

We recommend that development commits to achieving certain standards of performance at the planning stage and then demonstrated by an updated assessment at the building warrants stage.

We note that setting upper level standards that can be met by all developments means that developments endowed with an excellent location, or perhaps design, may not receive recognition they deserve.

We recommend that the rating system is expanded to address enhancement of ecology, biodiversity, the use of land, provision of sustainable transport links, community enrichment and economic sustainability.

We note the standard stops short at further detail aside from carbon dioxide emissions standards. Given that the BREEAM suite of assessment standards runs to nine types of building with the option to create a bespoke assessment for unusual buildings, we recommend that a new assessment method is not devised given the cost to the Scottish government and industry.

4. Levels and names

The bronze level is a building that complies with the 2010 standards. The next two upper levels, called silver and gold, have been defined for domestic buildings and the criteria to meet the upper levels in an aspect are intended to be fixed once defined. This should avoid regular redefining of baselines and subsequent confusion. But the system will have room to grow because a third upper level is identified as platinum, although this level has not been fully defined.

To achieve a bronze star level a new building must include some low or zero carbon generating technology ['LZCGT'] within the compliance calculation. This links with the obligations of local authorities' under Section 72 of the Climate Change (Scotland) Act. It is the existence of an LZCGT that differentiates bronze star from the bronze level. In practice buildings to a bronze level that do not have LZCGT will often have a higher fabric specification than a bronze star level building because they do not exploit a generating technology that could be used to offset higher heat losses through the building fabric in the carbon compliance calculation.

4a. Do consultees think the naming of the levels is clear and appropriate? Yes No

4b. Do consultees agree with the principle of fixing the levels within the aspects? Yes No

Comments

We support the creation of distinct levels within the standards to recognise developments committing to more sustainable construction or greater environmental performance.

We fully support the recognition of developments that include decentralised generating technologies.

We recommend that a building design complying with law is labelled appropriately. A bronze award indicates a level of performance greater than the routine or bare minimum.

We recommend that the levels are not fixed but are reviewed every two years to remove credit being awarded to projects for building practice that has become routine. Note that earlier versions of BREEAM gave credit for buildings that banned smoking and for using compact fluorescent lighting.

5. Methodology and label

In order to move towards a more sustainable model of design and construction, a holistic approach is proposed. Together with the desire to keep the process simple and avoid bureaucratic procedures, this broad thinking has informed how an applicant would reach an upper level. Only once all the aspects comply with the upper level criteria would the overall higher level be awarded. No scoring or trade-off would be allowed. The design of the label still allows credit to be clearly illustrated in an individual aspect that has been verified as compliant with an upper level. Proposed coloured labels for domestic and non-domestic buildings are below and are at **full size (A4) in the first annexes of the domestic and non-domestic consultation guidance.**



5a. Are consultees content with the method of reaching the upper levels? Yes No

5b. Are there any comments to be made on the design of the label? Yes No

Comments

Keeping the process simple and avoiding bureaucratic procedures is likely to create a significantly 'dumbed down' standard which is poorer in ambition and effect than the rest of the UK.

We agree that some aspects of the assessment must be mandatory to reach the higher levels.

We note that setting upper level standards that can be met by all developments means that developments endowed with an excellent location, or perhaps design, may not receive recognition they deserve.

We strongly support the creation of a visible label for display on all new buildings. We note that the label appears to only represent the design of the building at the warrants stage of development, i.e. all features may not be installed in the constructed building.

6. Conversions

The system of the optional upper levels has been designed for new domestic buildings. However it is recognised that when considering sustainable development it is often a good option to re-use or revitalize the existing building stock of our towns, cities and smaller communities. Building Standards Division does not propose to offer sustainability labelling to conversions at this stage however applications for verifiers to assess the criteria of the upper levels of sustainability, in some if not all of the aspects, in relation to an existing building converted into dwellings could be explored.

6. Do consultees consider a similar sustainability label should be made available for existing buildings that are dwellings following conversion? Yes No

Comments

We recognise that the improvement of existing building stock is the biggest challenge facing the reduction of Scottish carbon dioxide emissions. A UK government sponsored scheme to improve the energy performance of existing buildings, be it as part of the 'New Green Deal' or other incentive scheme, would attract criticism and be a missed opportunity if projects were to neglect sustainable design.

We recommend that a scheme for existing buildings, and especially dwellings, be created to promote investment in green technologies and produce better buildings for Scotland.

7. Contents of upper levels in the aspects for domestic buildings

Aspect of Carbon dioxide emissions

The labelling system's optional upper levels should balance the aspects of sustainable design and should not be overly carbon focussed. The 1st aspirational level (silver) beyond minimum standards sets a 45% reduction in carbon emissions for dwellings compared to 2007 standards. The Sullivan Report¹ recommendation of 60% features as the 2nd aspirational level (gold). A 3rd upper level (platinum) in this aspect would be net zero carbon.

7a. Do consultees agree that to treat 'sustainability in the round', the proposed upper levels in the critical aspect of carbon dioxide emissions are appropriate? Yes No

Comments

We agree that the labelling scheme should be a holistic appraisal of the environmental performance of the dwelling and not be similar to an EPC.

We note that the low or zero carbon technology list omits the use of waste heat. We feel this is unfair and does not recognise the significant investment involved in the connection to a district heating scheme. We also would like clarification on what is defined as 'low emission sources' to feed CHP engines.

Aspects of energy and water (resource use)

The energy for space heating aspect sets backstops to ensure that a dwelling's fabric and form are designed efficiently regardless of the fuel source for heating. The water use efficiency and energy for water heating aspects combine the following: lowering use of water and energy through a simple fittings based approach; and a renewable contribution to heated water via tried and tested technologies such as solar water heating. The optimising performance aspect offers an opportunity to standardize the role that giving appropriate and targeted information to occupants can play in increasing the chances of efficient operation. Feedback and communication with occupants is important in raising awareness of consumption. Model guidance and display devices should show how to make the best of the dwelling's design and any technologies included.

¹ 'A Low Carbon Building Standards Strategy for Scotland',
<http://www.scotland.gov.uk/Topics/Built-Environment/Building/Building-standards/publications/sullivan>

7b. Do consultees consider these aspects together offer a straightforward approach to encouraging a more efficient use of energy and water resources?

Yes No

Comments

We note that putting new energy standards into a sustainability labelling scheme will be perceived as unusual given the historic development of Section 6. We recommend that all performance is referenced back to Section 6 and that Section 6 is updated to adopt an energy efficiency standard in addition to carbon dioxide limits.

We warmly welcome the introduction of standards to encourage and improve the water efficiency of developments in Scotland and commend the use of the existing product labelling scheme.

We recommend that full smart metering on gas and electricity be introduced as part of the Silver level, not the Gold level and note that this will become mandatory as the technology is phased in across the UK.

We note that a walk-through by a person with passive design knowledge may deliver little value to the project or home owner. We would prefer that the in-use energy performance is fed back to the local Building Control Officer, or Standards certification body, for dissemination to industry design groups.

Aspects of Flexibility and adaptability; and Well-being and security

Since 2007, Scottish building regulations have incorporated demanding regulations that increase accessibility and the varying needs of occupants for all new dwellings. As a next step in the aspirational upper levels of sustainability, the proposed focus is on lifestyle issues that are relevant for all. Homes should support patterns of more sustainable communities thus the defined aspects encourage conditions for occasional home working plus stronger considerations of daylighting and outside space in the design of new buildings. The issues of acoustic privacy and of home security are also addressed.

7c. Regarding the upper level proposals on flexibility and adaptability, do consultees support the general approach to focus on design issues that are relevant to the wider public rather than the needs of particular groups?

Yes No

Comments

Flexibility & Adaptability

We welcome the identification of a home office being required for sustainable new housing. We recommend the storage space standard being adopted as part of the silver level.

Well-being

We note that the proposed guidance differs markedly from the Code for Sustainable Homes guidance which will lead to confusion from suppliers and consultancies operating across borders.

Security

We recommend that existing schemes are named within the guidance, such as the Secured by Design scheme, and that credit is given to developments that work with a Police Architectural Liaison Officer.

7d. Are the calculations for daylighting in the silver and gold aspects simple enough to easily verify; and meaningful enough to encourage better daylighted spaces in homes? Yes No

Comments

We agree that the calculations are simple enough to easily verify. We recommend that reference is made to CIS studies as well as CIBSE Lighting Guide 10: Daylighting and BS 8206 Part 2.

We note that the daylighting calculation only meaningfully applies under the Gold Standard and recommend that to encourage better daylighted spaces the standard is extended to the Silver Standard. Furthermore we recommend that the conditions are extended to bedrooms as these are often converted for use as a home office/study.

Aspect of Material use and waste

The following matters related to material use in buildings were investigated in forming the proposals:

	Propose for 1 st upper level	Propose for 2 nd upper level	Flag as possible for 3 rd level
Sustainable materials including embodied energy			√
Responsible sourcing of materials			√
Recycled materials			√
Waste of the built form		√	
Provision for solid waste material recycling during use	√		

Sorting waste is an activity that occupants can make everyday contributions towards. It helps balance the technical design focus of many of the other aspects because it is part of an adaptive solution to a sustainable future. Reducing wastefulness of the built-form through encouraging demountable construction offers a practical route towards sustainable development via a long-life, loose-fit approach. The environmental, sustainable or ethical sourcing of materials is too complex at present to be simply verified at building warrant stage, but it is envisaged that the platinum level offers the ability to increase the scope for this aspect. Subject to European Construction Products Regulations, a third aspirational upper level could contain proposals (details to be determined) on the embodied energy of construction components, the responsible material sourcing, or the use of recycle.

7e. Are consultees content with the evolutionary approach proposed for defining aspects within the material use and waste aspect? Yes No

Comments

We recognise that the measurement of the sustainability of building materials is complex but are surprised by the lack of guidance offered to improve the sustainability of materials specified.

We recommend referencing the Green Guide to Specification and using this to create a system to reward developments for more sustainable procurement.

We recommend that the provision of storage space for recyclates in flats/apartments is included within the Bronze level.

8. Non-domestic buildings

Defining measurements of sustainability that can be competently verified within the building standards system for non-domestic buildings presents a greater challenge due to these buildings' relative variety and complexity. Building Standards Division intends to progress work on defining upper levels of sustainability in non-domestic buildings in due course. At the outset of the standard it is proposed that as well as the baseline 'bronze' there will be a 'bronze star' level to recognize the inclusion of a LZCGT and link to the obligations of local authorities' duty under Section 72 of the Climate Change (Scotland) Act 2009.

Aspect of Carbon dioxide emissions

For non-domestic buildings the only upper levels defined are in the aspect of carbon dioxide emissions. The criteria make reference to the recommendations of the Sullivan Report with the 1st aspirational level (silver) at a 50% reduction in carbon emissions compared to 2007 standards and the 2nd aspirational level (gold) being a 75% reduction. A 3rd upper level (platinum) in this aspect would be net zero carbon. The presentation of the label would clearly show whether applicant complies with an upper level in this aspect.

8a. Do consultees view this approach for non-domestic buildings as clear and useful at the outset of the proposed section 7? Yes No

8b. Do consultees agree that the proposed upper levels in the aspect of carbon dioxide emissions only, for non-domestic buildings are appropriate? Yes No

Comments

We recommend that the Building Standards Division makes use of the existing knowledge, investment and experience of existing sustainability standards such as The Code for Sustainable Homes, LEED and BREEAM. We welcome the adoption of sustainability standards that have been a planning policy requirement for many local authorities.

We feel that the creation of new Standards will require an ongoing commitment and budget for the SBSA as they devise, revise and manage a system which already exists in the private sector. We recommend that existing standards are used to improve performance with the SBSA being the body that reviews certification schemes and takes a strategic role to offer advice to local planning authorities.

Though existing certification schemes may include measures that are of perceived low value to construction in Scotland, we would expect the SBSA to lobby for the alteration, or adaptation, of these schemes for the Scottish market.

We note that the 'Zero Carbon' UK government aspiration for buildings is not mentioned by the SBSA. We regard this as essential to give these types of building the credit they deserve. The 100% reduction of regulated and unregulated emissions should be seen as the pinnacle of carbon efficient building design. We recommend that the Standards are extended to include for these special and internationally important buildings.

9. Proposed revision to model form to apply for a building warrant.

Appendix A of the partial Regulatory Impact Assessment (RIA) contains a proposal for a revised model form that would be used by all applicants for building warrant. The model form has been amended to include the sustainability standard rather than a separate form being created. A text box has been added that allows applicants to indicate if new buildings have been designed to achieve any of the optional upper levels as defined in the section 7 guidance. This should allow verifiers to focus their procedures relevant to section 7 on submitted plans and specification information where it is requested.

9. Do consultees consider this revised model form is a clear way for applicants to indicate their design proposals with regards to section 7? Yes No

Comments

The form is clear and simple to complete but does not capture the developments that partially achieve the standards of the higher levels. This information could prove useful in the future revision of the standards and will indicate how dwellings incorporate sustainable features.

General

Do consultees have any other comments on the proposals?

Comments

The position our institution has adopted is:

- We strongly support the creation of a government-backed standard to measure the sustainability performance of buildings. Given that England and Wales have had the Code for Sustainable Homes since April 2007, Scotland has lagged behind the rest of the UK in terms of environmental performance;

- We have serious concerns that the Scottish Building Standards Agency, their commercial partners and Scottish business will be able to create and operate a credible 'world leading standard' at a cost acceptable to the Scottish Government/taxpayer;

- We disagree that buildings should be awarded for designing to minimum legal standards;

- We propose the adoption of a Code for Sustainable Homes for Scotland as a pragmatic approach to environmental labelling and see the following benefits of this approach:

- Lower overall cost burden to the Scottish Government;
- Increased ability of Scottish business (consultants, contractors and manufacturers) to export goods and services to England, Ireland, Northern Ireland, Wales and Europe;

- A more robust/refined and credible assessment method would be introduced.