Sustainable Development Commission

The Response of the Sustainable Development Commission to the Code for Sustainable Homes

6th March 2006

The Sustainable Development Commission welcomes the opportunity to comment on the Code for Sustainable Homes. We strongly believe that the Code has an important role to play in signalling the continuing improvement of building regulations, thus providing builders with a clear long-term direction for action. The Code standards must be high enough to deliver real progress towards sustainable development the house-building industry. We view the Code for Sustainable Homes as the first of a number of steps under the umbrella of the Code for Sustainable Buildings, and urge that it is followed swiftly by a Code for Sustainable Existing Homes. We would also support the development of non-domestic building standards.

Background

The Sustainable Buildings Task Group (SBTG) was commissioned by the Deputy Prime Minister and the Secretaries of State for Defra and DTI, following the 2003 Better Buildings Summit, to identify ways in which industry and government can work together to promote sustainable development through better environmental performance in the built environment.

The SBTG report[1] included recommendations to improve the resource efficiency of buildings. Its central recommendation was that the Government develop a single national standard for sustainable buildings: the Code for Sustainable Buildings. The SBTG recommended that this be based on the Building Research Establishment's BREEAM (BRE Environmental Assessment Method) suite of tools that are already established as the industry standard to target, assess and demonstrate the environmental performance of buildings. The EcoHomes method (the homes version of BREEAM), is currently used to assess around 30,000 homes per year.

The Government[2] welcomed the recommendation to develop a Code for Sustainable Buildings, recognising that a level playing field on standards is needed across industry and would allow for a consistent and comprehensive way to measure environmental performance. The Government announced that ODPM, with support from DEFRA, DTI and OGC, would take the lead for Government in developing the Code and establishing the Senior Steering Group, to which the Sustainable Development Commission was invited.

References to the Code for Sustainable Buildings in the ODPM 5 year plan[3], the UK Government Sustainable Development Strategy[4], and the Labour Party Election Manifesto[5], all demonstrate the Government's high level support, including its commitment to use the Code as the standard for publicly funded new homes.

The Government is currently consulting on proposals for a Code for Sustainable Homes (CSH). The Sustainable Development Commission sees this as the first element under the overarching framework of the Code for Sustainable Buildings. **We therefore encourage the Government to outline the timetable for introducing future versions of the Code including existing homes, and non-domestic buildings where public procurement can drive change in the environmental performance of buildings.**

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[1] Sustainable Buildings Task Group (2004) *Better Buildings, Better Lives*, London
[2] http://www.dti.gov.uk/construction/sustain/govres.pdf (July 2004)
[3] Office of the Deputy Prime Minister (2005) *Sustainable Communities: Homes For All*, ODPM Five Year Plan, London
[4] HM Government (2005) *Securing the Future*, London
[5] Labour Party 2005, *Britain Forward not Back* 2005 Manifesto

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Context

The Government is developing the Code for Sustainable Homes as a component of its sustainable communities agenda. Key environmental challenges, including climate change, water stress, materials use and waste, must be tackled if the proposed step change in housing supply is to be realised sustainably. Buildings have impacts during construction, operation and demolition. The CSH needs to establish performance standards for homes that will ensure their life cycle impacts will be kept within environmental limits, whilst contributing to a healthy and just society. The CSH is a fundamental driver in this respect, ensuring that improved standards are cost effective and ensure the 'polluter pays', encouraging dialogue and participation in development of standards, and basing decisions on sound scientific evidence.

Building Regulations are the main way to establish building performance standards. This regulatory framework sets standards for the health and safety of people in and around buildings, and the conservation of fuel and power. The Sustainable and Secure Buildings Act (2004) enables the Government to extend the Building Regulations to cover sustainable development. The Sustainable Development Commission has now advised the ODPM on how to implement this Act.

The SBTG recommended that the Code be used to signal future regulatory standards. We welcomed this proposal, as it would reduce cost and uncertainty for industry and ensure that standards and methodologies are tested before being written into regulation. It would also allow the industry to prepare itself for each transition to higher standards and encourage consumers to demand higher standards. We are concerned that there is no reference to the use of the **Code for Sustainable Homes to signal actual future standards for regulation, and urge the Government to commit to this**.

However, the CSH consultation document does make reference to the CSH signalling a new approach for Building Regulations based on voluntary compliance. There is currently widespread concern about poor levels of compliance with parts of the Building Regulations. We are not aware of any evidence that a voluntary standard will result in higher rates of compliance, whilst we are aware that the Building Regulations have consistently proved a successful and cost effective means of driving up standards[6]. **A statutory baseline must be maintained, with proper enforcement, and used to raise standards across the whole industry.**

Voluntary standards have a role in delivering market transformation in the house building industry. There is consensus across government that some regulatory standards need to improve over time, to reduce carbon emissions and improve resource use, so the CSH should set higher standards than are required through regulation. Through this means, new techniques and economies of scale for technology production can facilitate the transition to increasing regulatory standards. **This means the CSH needs to set standards above the Building Regulations baseline**.

The CSH is only one element in a framework of policies to deliver higher environmental performance in housing. The UK Government Sustainable Development Strategy shows that change needs to be catalysed by initiatives to encourage, enable, engage and exemplify. The CSB is vital to this policy structure:

- by exemplifying achievement;

[6] HM Government 2005, *Government Response to the House of Lords Science and Technology Committee report on Energy Efficiency*

- by engaging with the building industry and consumers on the basis of a strong regulatory framework;
- by encouraging the mainstreaming of improved techniques and technologies; and
- potentially using incentives to overcome barriers where they exist.

SDC Proposed Amendments to the draft CSH

Code relationship to EcoHomes

The structure of the Code is to be based upon the BRE's EcoHomes method. However, the consultation document currently proposes a Code that is a poor imitation of EcoHomes. This consultation includes significantly less detail on compliance methodologies for the CSH standards than already exist for compliance with EcoHomes. We are concerned that the CSH will result in a 'watered down' version of EcoHomes, despite the fact that EcoHomes is currently accepted as an industry standard.

The Sustainable Buildings Task Group (SBTG) did identify several weaknesses with the current EcoHomes method:

- There is too much flexibility in EcoHomes currently, and minimum standards in certain key areas must be specified, particularly resource efficiency criteria (energy and water efficiency, waste and use of materials).
- The Code should be closely tied to Building Regulations. Some redefinition of the BRE standards will therefore be necessary if it is to form the basis for the CSB, setting the base level marginally above Building Regulations, and the highest level at current advanced practice.

We propose that the CSH should be based on a revised version of EcoHomes (2006) but with non-tradability between elements, to address the particular issues identified by the SBTG and to incorporate post-completion checking. We consider that this method is well established and would provide the best way forward in terms of delivering sustainable development outcomes.

For the rest of this section we focus on the detail of what is proposed within the Government's consultation document:

- The CSH proposal lacks any detail on the standards required for Code Level 3, the public procurement standard. We are concerned that Code Level 3 may not be comparable with the 2006 version of Ecohomes Very Good, as would have been required by English Partnerships this summer, had the draft Code not been issued. **We recommend that the Government release, as soon as possible, full details of the compliance requirements, costs and benefits of the public procurement standard so that the proposals can be fully evaluated, particularly against what would have been Ecohomes 2006 Very Good standard.**

- A firm commitment to the launch date for the CSH, allowing sufficient time to consult further on key points, would help to reduce uncertainty and allow the industry to plan ahead.

- The scoring system for the CSH has yet to be determined and this is a key area where stakeholders should be engaged especially if parts of the process are subjective. We

consider that the weighting should be based on a scientific process, developed in a transparent manner. We consider that if this is not undertaken, this will be a serious and central flaw to the Code. **We recommend that Government engages key stakeholders in the development of the scoring system.**

- The proposed approach would allow full tradability between any of the elements of the Code above Code Level 1. The SBTG report specifically recommended incremental *non*-tradable standards for energy, water, materials and waste are set for the higher compliance levels. **We recommend that these incremental fixed standards are developed and made available to key stakeholders prior to the launch of the Code.**

- We welcome the level of ambition in setting the Code Level 5 at 'zero carbon'. Following the recommendation for incremental fixed standards above, we would like to see aspirational fixed standards in Code Level 5 for water and waste at least. **We consider that the Code should signal medium-term standards for regulation, at least for carbon emissions, for 2010, 2015, 2020 (up to carbon neutral) at least in order that industry can safely plan and invest to meet the requirements.**

Post Construction Check

We welcome the commitment to a certification of compliance being dependent on a post-construction check. This is a constructive way to improve compliance with the standards across the industry.

Star Rating

The consultation document describes the 'star rating' system for communicating the CSH-rating of a home to the market. We support a simplified approach but consider that the EcoHomes Pass/Good/Very Good/Excellent ratings are currently satisfactory and are well understood in the industry. **We recommend that the full information on environmental performance is made available to prospective purchasers to satisfy demand for this information[7].**

'Space and Place'

Some of the greatest reductions in environmental impact may be achieved through interventions in community infrastructure – including for energy, waste, water or transport[8]. Initial discussions about the CSB[9] suggested that standards would be developed to relate to spatial scales of the 'building', 'space' and 'place'.

The Code consultation document notes that 'The Code deals principally with the sustainability of the home and associated aspects of the development. It does not deal with the sustainability of the location as this is largely a land use planning issue.' As such, the proposals for the CSH do not currently include land use or transport standards, although these are included in the EcoHomes method.

We are aware that WWF and BRE are developing regional Sustainability Checklists with funding from the ODPM. These Checklists are a useful discussion tool that are encouraging and

[7] WWF, HBOS, Cabe research http://www.wwf.org.uk/news/n_0000001276.asp
[8] BioRegional 2004, *Enabling One Planet Living in the Thames Gateway*
[9] ODPM 2004, *First Draft Outline of the CSB* Paper for Senior Steering Group Meeting

enabling planning authorities to discuss sustainability issues with developers, issues covered include housing standards and the wider built environment, provision of services and transport.

However, the checklists themselves will not ensure that land use for residential developments meets required sustainability standards. We are not satisfied that Code compliant homes will be delivered to ensure they are in the most sustainable sites. Therefore, as the CSH is currently drafted, this would be a retrograde step. **We recommend that the CSH includes land use, density, proximity to services and transport standards.**

CSH Minimum Standards and Additional Code Points

Energy

We recommend that 'Energy efficiency (Conservation of fuel and power)' standards should be re-titled 'carbon emissions' as the highest standards achievable are likely to rely on some form of low and zero carbon technology as well as energy efficiency. This is in line with a recommendation from the Sustainable Buildings Task Group.

As the consultation document notes, the UK climate is likely to change significantly by even 2030, and further within the expected lifetime of homes. The standards must protect households from overheating (effects can vary from discomfort to dangerously hot) without relying on energy-intensive domestic air conditioning. **Stringent standards are required to design-out overheating for the projected lifetime of the building.**

We welcome the proposed update to the Building Regulations Part L 2006, and the improvements that this will make to new build standards. However, it is important that the minimum standard for carbon within the CSH exceeds the new Part L requirements, as recommended by the SBTG.

We welcome the standards in the government's Best Practice Programme, on which the Energy Saving Trust has recently consulted, and support their use as fixed carbon emissions standards for all Code levels. **We recommend that the minimum standard for carbon is raised to at least 5% above Part L standards. Code standards for carbon should be expressed as % above Part L and absolute kgC/m^2/year in order that Code ratings can be compared with the Home Condition Report energy labels.**

It is not clear whether the 'zero carbon' standard refers to zero carbon from energy uses controlled under Part L of the Building Regulations (heating, fixed lighting, cooling) or including carbon emissions from any subsequent energy use for appliances occupants install. **We recommend that the zero carbon standard should ensure that homes achieving this standard will be responsible for zero carbon from ALL energy use within homes.** This will require an up to date database to be developed to assess average energy consumption from appliances, and guidelines to be produced on the level of microgeneration that should be installed on all homes to supply this demand.

Water

The proposed standards would secure water savings of less than 20% although savings of at least 20% compared with average new build consumption are considered possible at zero extra cost. No methodology is given for house builders to make sure that they comply with the new standard, which will make it difficult for them to plan ahead. However, the standard

for 125l/h/d appears to relate to only internal water use, whereas we consider that this should be for total household water use, including external. **We recommend increasing the water saving standards for the minimum Code level, establishing fixed standards for higher levels, and publishing the compliance guidelines for water efficiency methodology as soon as possible and before the Code is launched.**

We are unable to comment on the standards for Surface Water Management because no methodology is given for the compliance requirements for this element. However we are concerned that the Minimum Standard requires peak runoff rates will be no worse than the 'original' conditions for the development site, when this could have been an impermeable surface prior to development. **We recommend that peak runoff rates should be no worse than conditions on an undeveloped site.**

Construction Site Waste

Construction Waste Management – there is insufficient detail on the requirement to sort and recycle waste on site. **We recommend that a score is developed based on % waste diverted from landfill.**

Construction Site Impacts – there is insufficient detail on these requirements. A standard monitoring and reporting format should be listed, or the best practice policies named. Sourcing of site timber should set at the same requirement level as under the 'Materials' section.

Considerate Constructors – insufficient detail of the requirement. **We recommend that this credit is based upon achieving a set score within the Considerate Constructors Scheme.**

Household Waste

The minimum standard for household waste is based on the British Standard (BS5906), which requires that a total of 0.8m^3 external waste storage is provided and sets further requirements for apartments. However, further detail is required to assess the implications of the proposals for recycling of household waste. **The minimum standard should be increased to include a requirement for internal and external storage of recyclable waste, and additional fixed standards at higher code levels established.**

Materials

We consider that Government should continue its efforts to find ways to develop materials standards that will improve sustainable outcomes, within the legal framework of the EU procurement directives.

An important function of the Code is to anticipate increasing minimum legal requirements. In order to promote a 'closed loop' of materials use in construction (reducing the negative environmental impacts of sourcing virgin materials and managing construction waste), **we propose that the Code could usefully pilot the Design for Deconstruction[10] methodology to facilitate end of life deconstruction and reuse of materials and elements**. This includes a requirement to develop an inventory of materials used that could be combined with the Materials 'minimum standard' requirement. **We also recommend that the Code includes**

[10] CIRIA 2004, *Design for Deconstruction Report* C607

requirements to follow the Demolition Protocol[11] on sites where there is material available from local demolition that may be used in new construction.

Code Delivery

Despite its many advantages, the BRE EcoHomes scheme has not achieved significant penetration of the private house building sector. Encouraging take up of the CSH in the private sector is a priority. The proposals state an aspiration that it should be applied to 'all new homes in England', and we suggest ways to achieve this in both the public and private sector below.

We welcome the commitment that, once the Code is launched, all new homes built with funding from Housing Corporation, English Partnerships, ODPM's housing growth programmes and the Regional Development Agencies will meet Code Level 3, so long as this Level is sufficiently ambitious. At the moment it is not clear to us, that the standard is sufficiently ambitious, as outlined above.

Such coverage could represent at least 22% of new homes (based on total 150,000 homes built per year of which 31,500 Code-compliant by the Housing Corporation and 2,000 Code-compliant by English Partnerships). However, Housing Corporation funding agreements mean that homes they fund will not be required to meet the Code until 2008, and will instead meet EcoHomes 2005 'very good' standard.

To maximise uptake of the Code, we recommend:

- **a commitment to set the Code Level 3 as a condition on sale of land from public sector for housing;**
- **a commitment to apply Code Level 3 on all Housing Market Renewal homes that are constructed with public funding; and,**
- **a study to review potential incentives (fiscal and other) to stimulate uptake of the Code in the private sector.**

The Government has suggested that uptake of the Code will be partly driven by demand from the public, which we support. The Code should then be actively promoted to the public so that Code labelling becomes a proxy for quality. **We recommend that Government develops a strategy for public engagement in the Code, using market research to inform design of labelling and promotion.**

We note that there is no mention in the consultation of the process of using and implementing the CSH. We would recommend that Government develops a package of advice on 'how to achieve Code Level 3 or above' for bodies procuring publicly funded homes. This could follow the positive example of recent guidance on EcoHomes[12] and include additional detail on the financial benefit of including CSH requirements early in the design process, using a sustainable design adviser, and case studies of recently achieved Code standards.

For consultation on future parts of the Code for Sustainable Buildings it may be useful for ODPM to host stakeholder events to make sure that the industry and other key stakeholders are fully engaged.

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[11] Institute of Civil Engineers 2004, *The Demolition Protocol*

[12] Sustainable Homes, Housing Corporation 2006, *Ecohomes: Achieving Very Good*

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Future Code Stages

Evaluating Progress

To ensure that the Code meets its objectives, regular review of the Code is required, to include take-up, whether the Code is delivering 'sustainable' outcomes (in terms of reduced carbon emissions, resource consumption or waste generation) and whether the Code standards need to be revised. **We recommend that Government develops a strategy for evaluating Code outcomes over the next 5 years.**

It may be appropriate to effectively pilot the Code on a series of developments in its first two years of operation in order to capture evidence of usability, costs and outcomes that can feed back into evaluation.

Future Versions: Code for Sustainable Existing Homes

We welcome the proposal for a Code for Sustainable Homes. In our view this is a first step under the banner of the Code for Sustainable Buildings, and we look forward to future versions of the Code being developed. Our immediate priority is for a separate Code for Sustainable Existing Homes to be developed. Existing buildings represent the vast majority of the housing stock, and are responsible for the majority of resource use.

This new Code should set challenging new carbon, water and waste standards to measure performance of existing stock and set standards for improvements. The Code for Sustainable Existing Homes should be used to establish standards for refurbishment or retrofit of owner occupied, social and private rented homes, and could be linked to financial incentives. The Code for Sustainable Existing Homes should be used as the public sector procurement standard on programmes including social housing upgrades, and the refurbishment of the majority of homes within the Housing Market Renewal programme.

A Code for Sustainable Existing Homes should cover:

- reducing the carbon emissions from homes by setting standards for the optimal thermal efficiency of the building envelope (wall, loft, floor and glazing insulation values), heating system and controls in line with standards for new homes (with guidance appropriate to different house types, as in the Government's current Best Practice advice);
- incorporating good practice for water conservation in bathroom and kitchen improvements and external works;
- making sure that materials used in repair and refurbishment works have low environmental and health impacts, and are sourced responsibly;
- minimising waste generated during repair and refurbishment works and re-using or recycling waste materials where possible;
- applying best practice in the provision of space for separation and storage of household waste.

The Code for Sustainable Existing Homes could be based on the BRE's Ecohomes XB (existing buildings)[13] This standard is currently being trialled by the Housing Corporation.

The forthcoming Home Condition Report, which will be delivered as part of the Home Information Pack will include an energy rating. **We recommend that the proposed Code for**

[13] www.bre.co.uk

Sustainable Existing Homes be integrated into the Home Condition report to widen the advice to home movers on actual resource use, the potential for improvements and advice on available grants.

The Government currently uses the 'Decent Homes' standard for housing, which establishes standards for fitness, reasonable state of repair, modern facilities and services and degree of thermal comfort[14] The Government is committed to making all social housing 'decent' by 2010. But the Decent Homes standard has so far missed the opportunity to significantly reduce carbon emissions from the existing social housing stock. **We recommend that the Government's standard for social housing includes a wider range of resource efficiency objectives, based on the proposed Code for Sustainable Existing Homes.**

The 'split incentive' where, for example, landlords invest in energy efficiency and other measures, but tenants benefit in the form of lower fuel bills, is a barrier to improving resource efficiency in the private rented sector. Private rented homes, which comprises 10% of total housing, have the poorest energy rating of the total stock. For the majority of landlords, rental income is secondary because they own only one or two properties, and are therefore unlikely to invest heavily in improving properties without significant encouragement. Government has proposed the introduction of a 'green landlord scheme' to incentivise landlords to invest in whole house energy efficiency, however information on this scheme made readily available across the landlord community, and interest in it is therefore slight. **We recommend that the Green Landlords Scheme incentivises resource efficiency for private rented properties based on the proposed Code for Sustainable Existing Homes.**

In other sectors where there is significant capital investment in the built environment by the public sector, for instance in schools and health buildings, it may be appropriate to establish a Code version for these buildings. This will ensure there is a single national standard, that has been Government-approved, for raising sustainability standards. Established BREEAM standards already exist for both schools and health buildings, and their effectiveness should be re-considered in the light of the development of the Code.

Stakeholder Engagement

Government's engagement with industry and wider stakeholders in the development of standards such as the Code is vital in ensuring the most appropriate outcome that will be acceptable to all.

The SDC looks forward to further engagement through the Senior Steering Group for the Code, with an expectation that this body should be involved in the evaluation of consultation responses, the Code launch and its implementation and evaluation of outcomes.

Further, we consider that Government should engage more widely with stakeholders (including the industry) through the next year as it launches and implements the Code. This is vital to optimise the outcomes of the Code implementation, and will also provide a good source of feedback to inform revisions and development of future versions.

The Sustainable Development Commission is willing to work with the Government to address the concerns we raise regarding the proposals for a Code for Sustainable Homes.

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[14] ODPM 2004, *A Decent Home - The definition and guidance for implementation*

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