BUILDING & ENGINEERING SERVICES ASSOCIATION
RESPONSE TO THE APPG FOR EXCELLENCE IN THE BUILT ENVIRONMENT INQUIRY INTO SUSTAINABLE CONSTRUCTION AND THE GREEN DEAL

1. Summary

1.1. The recession is undoubtedly affecting sustainability in construction, with clients and contractors cutting back where they can get away with it. The simple answer then is to put in place stricter regulations that raise the standards for across the board sustainability measures.

1.2. While most of the current sustainability focus is on energy and carbon saving measures, building design needs to take into account the climatic conditions being brought about through climate change, particularly water harvesting and recycling and, conversely, resilience to flooding.

1.3. However, regulations are only beneficial to society if they are enforced. Past and present, the Building Regulations, despite being upgraded every two years, are not actively enforced. Enforcement responsibility lies with Building Control Officers who are employed by local authorities. At times of reduced central government funding to local authorities, it is not surprising that recruitment and training of such officers is on a downward spiral and the resources devoted to enforcement of valuable requirements has declined.

1.4. Hence B&ES would like to see regulations that are more focused on end results and less prescriptive on a line-by-line basis. This would offer more flexibility to those in the construction chain, while ensuring that the end product would deliver specific savings and benefits, with regular inspections to ensure these are achieved year-on-year.

1.5. B&ES would also like Government to provide more fiscal incentives to encourage investment in energy efficiency measures, both for domestic and non-domestic buildings. We particularly hope that the Treasury will maintain the current reduced VAT rate of 5% for energy efficiency products. A change to the 20% rate would add significant costs to retrofit projects conducted under the Green Deal and seriously impact on its long-term viability. We have attached at appendix A a recent letter we have sent on this subject to the Chancellor of the Exchequer with regard to his Autumn Statement.

1.6. More specifically with regard to the Green Deal, while it is too late to simplify the very complicated structure that is now in place, we very much hope Government will reconsider its decision not to provide direct communication on Green Deal to consumers. By leaving all communication to Green Deal providers, consumers are in danger of being left confused, suspicious and apathetic to the benefits of installing

[1] *B&ES State of Trade Survey – 6 month period to June 2012, published July 2012*

BUILDING & ENGINEERING SERVICES ASSOCIATION
Esca House
34 Palace Court
London W2 4JG
T 020 7313 4903

www.b-es.org

cost-effective energy efficient measures and vulnerable to spurious claims and ill-performing systems .

We note that the inquiry asks two general questions and three that are more specific. In the order that the questions are asked, our responses are as follows:

2. Is sustainability suffering in the recession?

2.1. The anecdotal evidence across our industry is that sustainability is indeed suffering. The reason is very straightforward. Architects and consultants will usually put forward far-reaching, innovative and sustainable projects to clients. These often go far beyond the requirements of the Building Regulations.

2.2. In difficult economic times, clients are frequently looking to spend as little as possible on new building projects and so they will look to cutback costs where they can. The first things to go after planning approval has been given are often the high-end sustainability features that can turn an 'ordinary' building into a 'green' building; so, items such as heat pumps, solar thermal and PV are often taken from the specification and replaced with 'regular' products that meet the bare minimum planning and Building Regulation requirements.

2.3. This feedback from one of our members to our most recent 'State of Trade' survey may be indicative:

"The green agenda slipped as soon as the economy became a problem."

2.4. The B&ES State of Trade survey asked all the membership to describe clients' attitudes to green buildings. The responses of our largest members (over £16.5m turnover, therefore representing most of the UK's largest building and engineering contractors) are therefore of considerable significance[2]:

50% said the majority of clients are very interested to some extent in having green buildings.

40% said a minority of clients are very interested in green buildings.

25% said lip service is only paid by most clients.

2.5. This feedback suggests that there may be far more rhetoric than commitment from clients with regard to sustainability issues. In our view greater regulation, whether in the form of 'sticks or carrots' will be needed to drive sustainable construction forward.

3. What more can be done to promote green construction in public and private sector building projects?

3.1. Integration of the contractual process with technical elements is key to the building and maintenance of fully sustainable buildings.

[2] A few respondents gave more than two answers, hence the total adds up to over 100%.

3.2. However, in B&ES's view, integrated projects are still the exception rather than the rule, though we anticipate that in the longer term, as the construction industry comes out of recession, increasing pressure to deliver better value for money alongside energy savings will gradually change the market.

3.3. Green (sustainable) measures need to be integrated into building design. A Climate Change Risk Assessment commissioned by Defra earlier this year suggests that British buildings will face the triple threat of overheating, flooding and water shortages as we head deeper into the 21st century.

3.4. We hope to see more of a shift towards accounting for 'whole life' costs and emissions of a building, taking into account not only energy use but also water consumption and waste disposal and moving into the environmental impact of a building's occupants. There is already a move in this direction. Contractors have a longer term role to play than previously with some change of emphasis to life-time performance, with a requirement for them to install, commission and maintain systems (rather than 'fit and forget').

3.5. The construction industry has a wide range of technologies available to take on the range of environmental challenges we are facing. For example, rainwater harvesting; living roofs and solar shading which can keep buildings cool; heat pumps which can run on cooling option for more of the year; underfloor heating which can easily be switched to cooling. These measures are already available but particularly at a time of recession, clients will often go for the immediate low-cost option, ignoring the energy and cost saving benefits that can accrue in the medium term.

3.6. In our view there are two broad answers:

Firstly, there needs to be more of a regulatory requirement for buildings to conform to higher environmental standards. For example, Part L of the Building Regulations is changed every two years as part of the plan to deliver carbon reductions, but Government does not ensure that the regulations are enforced.

B&ES maintains it would be preferable if regulation were less line-by-line specific and more focused around an end goal: for example, a specific annual level of energy consumption or carbon emission. In other words: *'This is what you have to achieve. We don't mind how you do it as long as you do. And we will come back at the end – for every project – to check that you have achieved it.'*

Secondly, we would like to see more in the way of fiscal incentives for environmental measures. B&ES welcomes the fact that Government has been able to create a £860m fund to subsidise renewable heating, the overall aim being to grow the market by an ambitious 700 per cent by 2020 with an estimated 110,000 commercial installations being supported in that time.
Nevertheless, the way in which Government has reacted to the overspend on FiTs and subsequently changed the payment terms has dented the construction industry's confidence.

[3] *http://www.environmentcentre.com/rte.asp?id=15*

3.7. In essence, whatever policies Government decides upon, whether for fiscal incentives or Building Regulations (where the key problem is non-enforcement), it needs to commit to them for several years and not move the goalposts.

4. Evidence of best practice of sustainable construction in the built environment - and how this could be repeated?

4.1. We would recommend that, APPG members consider the comprehensive range of case studies provided on the website of the Sustainable Planning and Purchasing Centre [3], which was set up with European Regional Development Funds as a one-stop-shop for the sustainable construction industry. It was run by a partnership of organisations from the UK, Belgium and the Netherlands. The project supported developers, designers and architects, SMEs in the construction sector, local authority planners, decision makers and suppliers of renewable technologies and services.

4.2. B&ES would would like to see support from Government to put in place a similar project to develop and document best practice in sustainable construction across the UK.

5. Barriers to sustainable construction - what is holding the industry back and how could this be improved?

5.1. As stated initially, the **general economic climate** engenders a culture of cost-cutting and short-term focus.

5.2. **Lack of enforcement of the Building Regulations:** Buildings account for nearly half of the UK's emissions, yet the Regulations, so carefully consulted on and written by Government, are not actively enforced by Building Control Officers at local level. This is not the case when it comes to Health and Safety. The Health and Safety (Fees) Regulations 2012 place a duty on the HSE to recover the costs of carrying out its regulatory functions. These include inspections, investigations and taking enforcement action in cases where material breaches of health and safety law are found. In our view, it would be beneficial to put in place a similar system to ensure compliance with Building Regulations, which would require investment in recruiting and training more and better qualified Building Control Officers.

5.3. **Lack of integrated design/integrated teams** involved in delivering building services – building designers, specifiers, operators, manufacturers and installers need to work more closely together in order to deliver environmental benefits. **BIM modelling** is one welcome way of helping to achieve this, helping put in place collaborative processes on projects to enhance the whole life performance and value of buildings. However, the recent NBS BIM survey showed that 21% of construction professionals were neither aware of nor using BIM. With Government requiring BIM to be used on all public sector projects from 2016, it is important that government and the construction industry work closely to communicate the benefits of the technology right across the supply chain.

6. Progress on sustainable homes - too much too fast?

6.1. The Code for Sustainable Homes, first introduced in 2006, has undoubtedly 'raised the bar' for housebuilders, though its existence and benefits are still little known , or perhaps mainly disregarded, by housebuyers. B&ES noted that the Sustainable Development Commission, before it was closed down by Government in March 2011, lobbied for the standard to be extended to cover existing homes. Given the inadequacy of most of the UK's housing stock and the low pace at which new homes are being built, B&ES supports this call to Government.

6.2. But, we question how well committed some housebuilders are to meeting the Code's requirements.

This is illustrated by a recent case study from a B&ES expert. (Appendix B).

7. The Green Deal – is the policy the right one? What can be done to ensure take up?

7.1. The Green Deal has the potential to be the biggest programme in UK history for improving the energy efficiency of both domestic and non-domestic buildings. However, there are a number of fundamental problems to be overcome:

7.2. First is the need to ensure that individual engineers meet the competence criteria for carrying out Green Deal work. Every single installer will have to take further training in order to meet the competences required and there are currently few courses available to train them. The industry supports the initiative, in principle, but many employers, including many B&ES members, are waiting to see how things pan out. The difficulty is that the competence criteria have been set in line with new national qualifications. As a result, everybody measured against the requirements of PAS 2030 will need to take further training before they can be approved.

7.3. PAS 2030, the 'publicly available specification' for existing buildings, which provides the quality standards to which all Green Deal funded measures must be installed, covers boilers, controls, insulation, warm air heating systems, flue gas recovery systems, lighting, heat pumps, solar thermal and PV, biomass boilers, CHP and wind. It sets out the installation processes, the management of those processes and the quality of the service provided to the customer before, during and after the installation. This is to ensure that installations meet customer expectations and achieve the 'Golden Rule' that the energy savings cover the cost of repaying the Green Deal loan. The Department for Energy and Climate Change (DECC) depends on the PAS to guarantee the standards required by the Green Deal Code of Practice and as a good practice benchmark for installations.

7.4. A further point is that metering and monitoring equipment, that would help consumers calculate whether the system is operating correctly and how the

golden rule is being met, is not covered by the Green Deal and therefore cannot be installed. Clearly it should be.

7.5. It will be ironic if the Green Deal does not meet the Government's expectations as there is considerable private sector money available to fund the scheme, with large private sector organisations such as Marks & Spencer; B&Q and others having given it their full commitment. The Government has also announced a £7m loan will be made to the Green Deal Finance Company to start off initiatives and there will be ongoing support from the UK Infrastructures Fund that has been established to underpin £40bn of public sector work.

7.6. Although this is very welcome, our concern is that there is no benefit in having this level of funding when there is set to be a very narrow supply chain capable of delivering the projects.

7.7 Furthermore, even if the criteria issue is rectified, a contractor could still get into difficulties with the practical application of a Green Deal project. For example, if he comes across an onsite problem such as asbestos or if a boiler needs to be re-sited because of a previously hidden problem with a wall, he will have to go back to the Green Deal provider to approve the changes.

7.8. This could mean a substantial delay or even the householder being without heating or water until the person or organisation providing the funds has re-assessed the application. It seems the system has been set up to protect the funding providers and not the consumer.

7.9. The Government's intentions are welcome but its structure for Green Deal shows a lack of understanding for how building engineering projects progress. BSI is already working on the extension of PAS 2030 to make it applicable in non-domestic buildings and that is also welcome. However, it is important to get the fundamental structure right initially so that any future extension of the scheme has a chance to be successful.

7.10. Broadly, B&ES is concerned that the complicated way in which Green Deal is structured, compounded by a complete lack of consumer communication from Government about the scheme, threatens its prospects for success.

7.11. This is a great pity as the Green Deal has the potential to create thousands of jobs and help everyone lower their energy bills.

B&ES December 2012

BUILDING & ENGINEERING SERVICES ASSOCIATION
Esca House
34 Palace Court
London W2 4JG
T 020 7313 4903

www.b-es.org

From the Chief Executive
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B&ES BUILDING & ENGINEERING SERVICES ASSOCIATION
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Rt Hon George Osborne MP
Chancellor of the Exchequer
HM Treasury
1 Horse Guards Road
LONDON SW1A 2HQ

21 November 2012

Dear Mr Osborne

FISCAL INCENTIVES FOR ENERGY EFFICIENCY

I am writing ahead of your autumn statement on 5 December.

B&ES is the UK's leading trade association for building services engineering businesses, representing the interests of over 1500 firms. B&ES has a leading role in the development of sustainable building services engineering, of which energy efficiency is a key aspect. Research we have taken amongst our members shows that 77% of them are involved in sustainable contracting while a sizeable number are currently or soon to be involved with the Government's Green Deal programme.

Against this background, may I ask you to consider putting more fiscal incentives in place to encourage energy efficiency?

As a starting point, I hope your statement will include a commitment to maintain the current rate of 5% VAT for energy efficiency products, given the European Commission's request for the Government to amend UK legislation to bring VAT on energy-saving materials in line with other products. Such a change would add significant costs to retrofit projects conducted under the Green Deal and seriously impact on its long-term viability. I hope you will continue to stand strong against the EC on this.

I should also like to express the support of B&ES to the Association for the Conservation of Energy's cross-industry campaign to back the proposal by the Committee on Climate Change in its 2012 Annual Progress Report, for Government to introduce a range of fiscal and economic incentives. We particularly support the recommendation for an extended and increased Landlord's Energy Saving Allowance to incentivise early improvements to the private rented sector, before the introduction of the minimum energy efficiency standard in 2018.

Lastly, I refer to the recent report 'Jobs, Growth and Warmer Homes' published by Consumer Focus, which advocates using funds generated by carbon taxes to fund long term energy efficiency retrofit schemes for the fuel poor. Not only would this take the majority of households out of fuel poverty, it would create jobs throughout the UK, improve UK energy security and allow fuel bill savings to be recycled into the wider UK economy.

I hope you and your officials will give the report's recommendations serious consideration in the context of your statement and next year's Budget.

Yours sincerely

BLANE JUDD
Chief Executive
Building & Engineering Services Association
Esca House, 34 Palace Court, London W2 4JG
Direct 020 7313 4902 blane.judd@b-es.org www.b-es.org

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CASE STUDY

- The apartment block has a centralised gas boiler plant but there are no heat meters fitted in individual flats as required by Part L of the Building Regulations. The gas bill is therefore divided on a square metre basis and there is no incentive to make individual energy savings.
- It is a mixed private and social housing apartment block. There are no Code 3 for Sustainable Homes certificates issued for the private homes certificates for private flats. These have been issued for the social housing properties only.
- Residents have no access to electricity or water meters so cannot monitor their consumption.
- Heating controls are unhelpfully located in an airing cupboard and facing into the cupboard, meaning users have to lean over equipment to view at an angle of 45 degrees.
- The ventilation controller is also sited in the airing cupboard. This means to switch on kitchen ventilation, residents have to leave their kitchen to switch it onto boost. The Domestic Ventilation Guide requires "switching should be provided locally to the spaces being served ie. bathrooms and kitchen. Provision of a single centrally located switch is not sufficient and will result in the fan being left in the inappropriate modes of operation".

Our expert summarises:

"The building lacks a holistic and coherent design, evident with the location of meters and in other areas such as the door entry system and window system that cannot be cleaned without access with a cherry picker. Though brand new, the building is not a well-designed Code 3 Sustainable Home but actually comprises a series of products assembled at the lowest cost. It is not surprising therefore that it will neither meet energy targets nor work as a cost efficient home."

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