

Action on Climate Change: Proposals for Improving the Energy Performance of Existing Non-domestic Buildings: Workshop

Report of workshop held 22nd September 2008

Contents

1/	Executive summary	p2
2/	Introduction	p3
3/	Overview of event	p3
4/	Presentations	p4
5/	Break out session 1 Feedback on proposals	p6
6/	Break out session 2 Strategic issues	p12
7/	Conclusion	p17
8/	Acknowledgements	p18
9/	Biographies and participants	p18

1/ Executive Summary

Within the strategic context of the Scottish Government's proposal to achieve an 80% reduction in emissions by 2050, this workshop was convened to engage stakeholders in discussing the government consultation on proposals to improve the energy performance of existing non-domestic buildings.

With representation from a broad range of perspectives, the key themes of the workshop included: a welcoming of the debate; an emphasis on behavioural change; concerns over enforcement with lack of financial and skill resource; the challenges associated with information and benchmarking and varying views on the value of asset-based ratings; a call for leadership and simplicity of approach.

2/ Introduction

Scotland has great ambitions to address the many challenges of climate change and sustainability. The government's proposal to achieve an 80% emissions reductions target by 2050 demonstrates a level of global leadership, setting an international standard which has challenged other governments to commit to similar ambitions.

Our built environment, which overall contributes more than 50% of our annual emissions in the UK, is therefore in the spotlight. Designing zero carbon buildings now and in the future will be important, but it is in addressing our existing building stock that the real challenges and urgency lies. Only 1%, on average, of our existing stock is replaced every year. This stock represents buildings of all types, vintages, build qualities, cultural value, locations. Therefore how we design, plan, deliver, finance and operate these substantial and essential improvements is laden with complexity, but opportunity as well.

It is with this understanding, and a strong desire to move this discussion forward with many talented and committed professionals working across the non-domestic buildings sector that Thirdwave, Built Environment Forum Scotland and the Association for the Conservation of Energy designed, hosted and facilitated this working session. We hope that what follows proves useful to furthering the evolution of all of our thinking both here in Scotland and beyond. We would like to thank all our attendees for the openness with which they addressed this discussion and to Sust. The Lighthouse for supporting the event.

Courtney Peyton, Thirdwave
Jo Robertson, Built Environment Forum Scotland
Chas Booth, Association for the Conservation of Energy

3/ Overview of Event

This workshop took place on 22nd September 2008, at the Lighthouse in Glasgow and was attended by fifty-five people from a diverse range of organisations - these are listed at the end of this report.

It was arranged to provide stakeholders with an opportunity to discuss the content of the recently published Government consultation 'Action on Climate Change: Proposals for Improving the Energy Performance of Existing Non-domestic Buildings'.

The purpose was to both inform participants of the Government's proposals, and stimulate discussion on the proposals and wider strategic issues. Responding to a set of presentations, participants engaged in two break-out sessions, the first considering questions relating to the presentations, and the second encouraging participants to discuss the issues in the context of a series of strategic themes.

4/ Presentations

4.1/ Gavin Peart, Assistant Head of Building Standards – Strategy, Directorate of the Built Environment, introduced the Government’s current proposals for improving the energy performance of existing non-domestic buildings.

The current consultation takes forward a number of the proposals made in the 2007 Sullivan Report ‘A Low Carbon Building Standards Strategy for Scotland’, including the development of practical performance standards for existing buildings; the introduction of legislation to require all owners of non-domestic buildings to conduct a carbon and energy assessment and produce a programme for upgrading; the empowerment of local authorities or similar public bodies to check such assessments; the publication of guidance and the encouragement of owners to implement recommendations arising from assessments; and that primary legislation be sought to allow Scottish Ministers the opportunity to extend the provision and type of Energy Performance Certificates to Assessments of Carbon and Energy Performance (ACEPs).

Key issues for the consultation cover: whether primary legislation should be sought; whether provision for Energy Performance Certificates (EPCs) should be extended; whether asset ratings should be complemented with operational ratings; scope for sub-metering; whether building owners should be required to draw up, and then implement, action plans; options for traditional and historic buildings; scope for enforcement.

4.2/ Professor Phil Banfill, Heriot Watt University, gave an overview of the impacts of existing buildings and future energy scenarios, introducing TARBASE (Technology Assessment for Radically Improving the Built Asset Base) – a research project which aims to define technological intervention strategies and exemplars for reducing the CO2 emissions from existing domestic and non-domestic buildings by 50% by 2030.

The presentation outlined some non-domestic trends in relation to office and school buildings. In summary, sets of interventions can reduce CO2 emissions by 70% from a 2005 baseline level but they are costly with very long payback periods. Non-regulated energy use can determine the efficacy of regulated measures (internal gains); on-site generation can make only a small contribution to CO2 emissions reductions; and schools are likely to overheat in Scotland. The key message is that we need mitigation and adaptation.

4.3/ Chas Booth, Parliamentary Officer at the Association for the Conservation of Energy, commented on policy approaches and implications.

The presentation welcomed the proposals, but questioned why EPCs should be extended, queried the scope – which do not encompass all existing buildings; and noted the significance of operational ratings (the energy performance of identical buildings varying).

Finance will be needed if building owners are to be compelled to undertake action plans for upgrading - this issue is currently missing from the document and there is concern that compulsion without financial support will create a backlash.

Other items that are not covered in the consultation were identified as: permitted development rights for micropower; balance trading; planning rules to invest in existing buildings; building regulations: consequential improvements and better enforcement to achieve 6m tC UK-wide by 2020. It was questioned – is the Government leading by example?

4.4/ David Somervell, Energy & Sustainability Manager at the University of Edinburgh, gave his personal comments on practical delivery issues.

The presentation, which examined the University of Edinburgh as a case study, highlighted the importance of an holistic approach to infrastructure investment. Concerns were expressed with the consultation proposals, in particular over the value of an asset-based rating for existing buildings; and responsibility for implementation resting with the Building Standards Division.

5/ Break out session 1: Feedback on proposals

5.1/ Feedback on presentations

Participants were invited to give feedback on the presentations received. The general thoughts on the presentations recognised that the intentions of the government proposals are reasonable, but there was scepticism over whether they would achieve the desired intention. Some felt that the 80% reduction target is unachievable. Key issues relate to operation and funding and these may be clarified with more joined up working by the Government bodies. The subject area is vast, and, as is often the case, the devil will be in the detail.

Participants expressed surprised at the prospect of imminent replacement of EPCs by ACEPs. It was commented that practitioners are not used to implementing EPCs yet - the proposals might best be seen as a continuation and roll-out of EPCs.

There was concern expressed over the effect of legislative requirement – will this result in organisations just achieving the minimum required? Will organisations engage positively if the only apparent motivating factor is because they are required to do so?

There was a general view that Local Authority Building Standards Departments are not the appropriate vehicle for enforcement of ACEPs and EPCs and that a body with a more strategic position was required.

A key issue emerging from the presentations was the impact of occupant behaviour; assessment of building performance must also include actual occupant impacts. The TARBASE results usefully showed the possible impact of lighting and small power control interventions alongside the range of building fabric interventions and renewable technology introductions.

5.2/ Scale of challenge and necessary change appreciated by organisations/clients?

Participants were asked whether they felt that the scale of the challenge and necessary change is appreciated by their organisations and clients. In response, it was felt that while those with an interest have an understanding of the scale of the challenge, there is little understanding of EPCs by the vast majority.

Many owners, including public bodies like universities, have a very low level of knowledge and understanding of the issues related to their buildings, or of how to deal with those issues. Collating the information on building performance across a large estate (Local Authorities for example) will be costly, complex and logistically difficult. This begs the question; will EPCs actually impact on the performance of these buildings?

There is a need for partnership working between sectors – actions can't just be the responsibility of Building Standards because the decisions are not just technical. There is real concern over current segmentation.

5.3/ 'Can we achieve the significant carbon emission reductions we need from non-domestic buildings by relying on the current measures and support available?'

Participants clearly felt that the status quo was well short of being adequate. New approaches are necessary – but it was noted that there are many existing mechanisms and policies and new approaches should be properly integrated with these.

5.4/ What mechanisms, policies and approaches would best support your organisation?

Government targets - awareness: The 80% reduction figure was queried – is this realistic or too ambitious? Some were not aware as to whether this figure applies to the sector as a whole or is the target for every building. Others noted that buildings and their operational impacts are directly impacted upon by a range of key determining factors in responding to this target including: population increase; financing initiatives; airport expansion.

Alignment of initiatives required: What would best help organisations to change? Participants identified that there are already many initiatives that are intended to address climate change that do not harmonise and instead present conflicting targets for organisations. There is a need for government to address the confusion of the existing initiatives and bring them into alignment.

Behavioural change: Education of building owners and occupants is the single most important measure organisations can take. The disconnection between owners and tenants is a concern. Who benefits from investment is critical to uptake – models and leases that share the benefits are likelier to encourage owners and occupiers to make changes to assets, operations, behaviour. To be effective the approach must find ways to effect change through organisational culture, rather than hope to achieve change by enforcement.

Behaviour change examples such as incentives (eg grants), awards and benchmarking (year on year improvement and sector benchmarking clubs) were suggested as more effective mechanisms which would encourage organisations to adopt energy improvement initiatives as part of their social responsibility strategy. The Carbon Trust has a key role in education but so do other organisations in clarifying how these actions relate to their own organisational goals. It will be necessary to ensure that information and guidance is provided at scales that are understandable / relevant.

Responsibility/leadership: It was felt that Building Standards Departments are not well located within Local Authorities in terms of the field of operations and expertise of staff. In general there was felt to be a poor fit between the compliance regime needed for energy improvement of buildings and the proposal that this should be a responsibility of Building Standards Departments.

Part of the concern noted by various participants was the belief that the building standards, particularly in regard to energy performance of design, are not met in building delivery because of failures in how standards are administered by government. It was also felt that critical responsibilities such as for the safety of buildings and people would lead to energy performance having a lower priority within the work programmes of Building Standards Departments.

A different model is required for delivery and comparisons were drawn with the DDA legislation and how compliance is managed (an asset but also operational issue).

Participants also identified conflict between responsibilities of Planning and of Building Standards. A good example is the introduction of the Merton rule. It raises the question of who should drive on-site renewable requirements or energy efficiency targets that go beyond those required in law. A suggestion of an alternative lead body to the Buildings Standards Division for this area of regulation was to make its overarching co-ordination a responsibility of the Scottish Environmental Protection Agency (SEPA). This would be more akin to the Environmental Protection Agency (EPA) in the USA which has similar responsibilities.

It was strongly felt that it would be inappropriate for Local Authorities to act in a regulatory role, especially as this would lead to inconsistency of approach and in some cases to poaching of non-ring-fenced resources for other purposes. SEPA was thought to be an acceptable choice of regulator.

Incentives as opposed to enforcement: a carrot needs to be placed on the end of the stick, e.g. high or markedly improved scores on EPCs used to determine business rates etc; applications meeting still forthcoming energy standards having their building warrant costs waived. Applying the 80/20 rule can drive a lot of improvements in efficiencies.

Enforcement alone simply isn't the key; incentives must be provided, positive reinforcement is essential. It was noted that there is a lack of resource within Building Standards Departments to ensure enforcement. Universities and similar establishments are in the public eye, and have to produce published reports, which is part of their incentive for this sort of activity.

Finance / investment: Where is the finance to support the proposals? There must be greater focus on what ultimately are the benefits to the private sector / developers if the intention is to get them to invest in improvements (even those with perceived short payback periods). Mechanisms could include tax breaks, but might also be based on the operational value (turnover) to the owner.

Grants should be available where owners/occupiers have to do more than others, e.g. owners of historic buildings. VAT needs to be balanced across new build or refurbishment, business and non academic.

The idea of people having access to interest-free loans was well received, allowing funds to be raised to start the ball rolling: not just for SMEs, but for larger concerns as well. There was concern that the costs of

implementation will be particularly high for smaller bodies (e.g. installation of heat meters and infrastructure costs are significant).

Baseline information: There is a need for baseline information on the energy use of buildings – on both asset and operational ratings. It was queried whether this is to provide a snap shot – or continual process of assessment.

There is a need for more sophisticated assessment tools. It was felt that Display Energy Certificates / Operational Rating (as being used to implement the EPBD in England and Wales) is useful for portfolio operators as this provides a year-on-year comparator. Asset assessments are more useful for buyers comparing assets or those comparing holdings within portfolios. Post Occupancy Evaluations of new builds could also provide useful data as to operational impacts in real terms. Further work is required on defining energy in use, metering, services used etc.

Part of effective benchmarking for current and future strategic and policy decisions would hinge on establishing a central database for all energy data collected through EPCs/DECs for new and existing, non-domestic (and domestic). At present this is not available .

Compliance and consents: Difficulties arise when some interventions need to comply with standards but don't require a building warrant. This means relying on surveyors to determine compliance. Replacing this with 'approved certifiers of construction' would allow a more robust approach. There is a need for cost effective methods to prove that upgrades have taken place. Slightly outside the brief, it was suggested that in terms of embodied energy, planning consent could be required for demolition – the idea of a 'chain of custody' for materials was raised.

Legal status: Certification of energy performance is already statutory for some bodies via the EPCs (for public buildings and other buildings at time of lease or sale). Certification of all non-domestic building stock would only happen if it was a statutory obligation, but there would probably be a considerable reaction against this from owners, etc.

Mechanisms: Other than those stated above, carbon budgets (which organisations are beginning to set for themselves) are expected to have a direct impact. The introduction of Carbon Reduction Credits will also have a significant impact.

Information/guidance: Some participants perceived a lack of pragmatic guidance. Could scheduled improvements be run through a system on a similar basis to an ISO? While the Carbon Trust has management guidelines which can help guide participants, there are gaps that limit uptake. Any system to effect change would only work if there was readily available advice, assistance and support.

Maintenance regime drivers: When operating large portfolios, there are continuous maintenance regimes, but these are not driven by building regulations. Sometimes an element is introduced on environmental improvement, but this tends to fall into the category of an added extra. When these regimes are driven by economics (either capital or revenues - which is almost always the case), this impacts on improvement strategies.

Use and operation levels: The way a building is used is central to achieving improvements in the use of energy. The use and operation of a building needs also to be taken into account in deciding an appropriate level of energy performance.

Occupancy levels can change rapidly which will impact on operations, layout, system demands and energy consumption. This may be heightened by consolidations and cost cutting exercises due to credit crunch and concerns about a recession.

Design/layouts: Commercial landlords need to produce commercially attractive floorplates to attract tenants. This can have a direct impact on energy use and both asset and operation based assessments. There could be benefit in Building Standards getting more involved in the earlier stages of development, through to ultimate assessment of asset and operations ratings.

Whole life costing: All stakeholders need to think about the whole life cycle of buildings – those with large portfolios are doing this more now than in the past. Private Finance Initiative PFI can and should help to deliver this but doesn't. Buying a property should be like buying a car, i.e. consider how much it costs to run not just cost to purchase.

Schools were referred to as a missed opportunity - the brief for delivering the asset held no real cross over to energy performance. There is real need for Government bodies to share, to move from their statutory functions to provide better regulations to cover what a school requires in terms of energy savings and further community use.

Inspection cycles: It was felt that 10 year inspection cycles were far too long, and that 5 years might turn out to be the norm, but that it could be even more frequent at the start of the process, when the most immediate changes were likely to be made.

Expertise to implement: Experience shows that there are not enough consultants to deal with EPCs, so extending this much further will make this even more of a problem. EPCs must be in place for the identified public sector buildings early in the New Year, and be available to process for buildings being sold or let. Despite this it seems that the majority of those affected have yet to get up to speed.

Ownership of buildings: The complexity of ownership can make this issue difficult – different parties will be motivated differently and therefore have differing views on investment in carbon reduction technologies.

Using existing buildings: It is important not to underestimate the risk inherent in existing buildings – there are legacy issues to consider, many of which you can never 'fix'. There should be a preference for using existing buildings rather than building anew, however there are many perceived (desirability) and real (fiscal, flexibility, adaptation to changing building standards) issues that inhibit these choices. Wider values come into play when dealing with historic buildings - architectural value and cultural values - which go beyond listed buildings.

With regards to historic buildings some felt that the 80% cut was not possible. Heating was a big issue, along with intermittent use, and managing ventilation and moisture appropriately. For some, the existing stock was the problem with CO2 emissions - changes can be more readily made to newer buildings.

Valuation: RICS valuations drive misunderstanding of value – in a standard office building the inclusion of air condition is seen as an asset and increases the perceived value and therefore the quoted and marketed charges. Location and climate are key influencers.

6/ Break out session 2: Strategic Issues

6.1/ Integration with other areas of policy (e.g. Climate Change Bill)

Areas of policy overlap include the following:

Sustainable Communities Initiative
Scottish Planning Policy (National Planning Framework, local plans)
Firm Foundations – Housing policy
Scottish Climate Change Bill
Skills policy
Enterprise policy, in particular business competitiveness
Government efficiency saving agenda
Single Outcome Agreements / local authorities
Business rates

Participants agreed that it was crucial to overcome the structural and strategic barriers to enable greater synergy between complementary policy areas. A lack of communication was seen as a key barrier. Implementation issues are particularly challenging for smaller organisations.

The environment and climate change is currently a 'hot topic' – how do we sustain this interest?

Perceived problems with the issues set out in the consultation paper include the following: finance - a major barrier - need access to longer-term finance; short-termism: tax breaks for organisations, enhanced capital allowance extensions; the need to join up the 'asset vs operational' debate; legal recourse – if a building is marketed as A rated, it should be in practice.

Government needs to lead by example: e.g. only procure A and B rated buildings and upgrade current buildings. This might also help Government gain a better understanding of the challenges faced in the wider economy. This agenda needs higher priority – we are getting better but it's still not integral to our other work.

Is the consultation on the right scale?: We need to aim higher. A regulatory stance works if people buy in. Incentivisation is essential. Do we have accurate data on which to base our policy making? It is essential to capture data on buildings in a form that is easy to interrogate.

Current consultation process: It will be important to scrutinise consultation returns – is there enough time to do this? If changes in legislation through this consultation are incorporated into the Climate Change Bill at stage 2, will there be enough time for appropriate level of scrutiny? We need to urgently address emissions from buildings, but we need to ensure we get it right. The onus is on all of us to ensure the consultation is robust and receives as many good quality responses as possible.

6.2/ Financial delivery mechanisms

Plethora of mechanisms – need to target: There is a proliferation of various support mechanisms that are too complicated, too diverse, not well publicised and change too quickly. There is no clarity or consistency of message.

It is not possible to discern from the mechanisms available what the intended target in Scotland is. Support for micro-generation, for example, suggests a lack of understanding or focus. There is a requirement to establish clarity of what currently exists by reviewing current support mechanisms, to establish whether there is conflict or overlap. This would then inform the establishment of a more strategic structure.

Opportunity: Non-domestic is an opportunity area; this sector will respond to mechanisms like tax reduction incentives.

Incentivisation: Action must be compulsory but the inducement must be carrot rather than stick, change must be incentivised and rewarded rather than enforced.

Leadership: Where is the leadership coming from? Who is currently supposed to be leading this area?

Target: The support regime must be simple and easily understood. It must concentrate on two or three target areas, for example lighting, small power and metering. It must reward compliance. There must be a very small number of mechanisms available that can be applied to a wide variety of situations.

These mechanisms must be funded in a realistic way; there must be the level of funding that appropriate assessment of the market dictates. There is no advantage in establishing support mechanisms that are quickly oversubscribed.

6.3/ Technical Interventions Required

Participants considered that barriers to the market place would include planning regulations, data compatibility and availability (for example there is lack of data on wind availability). There was discussion on the application of regulations and how to promote best options and practices, for example information provided by the Energy Saving Trust.

It was felt that contractors are not being proactive enough in promoting BRE listings, unlike the MGCS (micro generation certificate scheme) down south. BREEAM was considered a very expensive tool for existing buildings, with high input and cost at planning stage. It was suggested that Scotland have its own sustainability tool, which would take into account our climate and rural settings.

Participants discussed a hierarchy of improvements, ranging from reducing load, to insulating, to recovery. There is a need for experienced and well trained staff to enable such improvements to be made, and for the process to be simple.

Sub-metering needs to be embedded into regulation. It was noted that interim measures may ultimately be inefficient and that it is easier for long term owners to react to long term incentives. It was noted that in order to meet targets it may be necessary to change the use of the building. Occupancy rates are very significant and it may be necessary to specify appropriate levels in, for example, letting accommodation.

6.4/ Operational Impacts While Transforming Stock

Value of asset based EPCs in reducing energy consumption:

The main focus of the conversation related to the issue of reducing the energy consumption/ emissions levels of the existing stock and the impact of EPCs. There was a heated debate about whether or not asset based EPCs would be of any value in terms of reducing energy consumption.

Refurbishment vs new build: The conversation also touched on whether it was worth refurbishing or not, and the issue of new building being an easier way of achieving targets was also raised. This included discussion on the disruption of decanting – offices, colleges, etc., and if new premises were not ready on time; how do we deal with existing building populations? There needs to be an inbuilt contingency to ensure that disruption is minimised. In order to meet targets in terms of its own sustainability plans, Fife Council will have to go down route of changing the way they do things (how? – e.g. travel plans).

Benchmarking: Benchmarking does not suit all building types equally well. The National Trust for Scotland, by way of example, has around 1600 buildings – and although they are trying to benchmark, no benchmarks exist for some of their building types or for how they are currently used. How does one benchmark a church that is not in use as a church for example? What is the embodied energy in such a large stock? Fife Council also has around 1600 buildings, which it is attempting to benchmark. They are also looking at issues surrounding staff behaviour and incentivising behavioural change. The need to benchmark AND monitor improvement and change was raised, along with the need for support funding and investment to implement improvement.

Asset-based EPCs: Different views were put forward. An asset based rating is useful in order to benchmark buildings against one another. However there was a concern that Asset Based EPCs will not incentivise improvement. Some felt that without monitoring and targets, Asset based EPCs will be an expensive waste of time. There is a need for more, and better, benchmarks and to monitor improvement. This would lead to more discussion / arguments for and against Asset-based (it's a start) and Operational (clearly cost issues) EPCs.

Incentives and support: To incentivise improvement the whole issue needs to be taken to board level. Government also needs to show encouragement. It is possible to encourage owners and occupants to do more than the basics if they have incentives and support for delivery. Incentives could include:

Grants – low interest loans/ funding

Better co-ordination of activity across Government Departments

Other EU countries (such as Germany) are requiring upgrades, e.g. boiler replacement at 15 years and offering energy efficient advice – and low and no interest loans for mandatory improvements to domestic and non-domestic properties.

Contingency for Business Continuity: Local Authorities will need to make fundamental shifts in the way they do business – need time to adapt.

Timescale: Some interventions need to go through Building Standards – this has a time implication.

Database – comparator information: example: Universities in the East and West are developing a database of actual energy use. This will allow them to see where they are compared with each other. Their energy use could be transformed to Carbon/ CO₂ and this would indicate useful saving potential.

Carbon value: If we were to measure and cost our buildings in terms of their Carbon content rather than economic value, would we be so quick to demolish them?

6.5/ Historic Buildings: Challenges and Opportunities

Conflicts - legislative: If the implementation of energy efficiency proposals were to become statutory, then care should be taken that this is complementary to existing historic building and conservation area protective legislation rather than at odds with it.

Conflicts - technical: Improvements in energy efficiency may be detrimental to other aspects of historic buildings, e.g. reduced ventilation can lead to rot. The principle of relaxation, already practiced for historic buildings (e.g. DDA, fire regulation, etc.) must extend to these proposals.

Conflicts - values: The Sandford Principle should apply in cases of conflict with significant aspects of a historic building.

Embodied energy: It is essential that whole-life-costing is part of the equation, otherwise the system will become skewed and could end up doing the opposite of what is intended, e.g. by using imported materials because they are not considered in Scotland's emissions target.

EPCs: EPCs were considered to be a 'blunt instrument', in dealing with 'heavyweight' historic buildings. We need more advanced models for traditional buildings, which are not like-for-like comparable to modern ones.

Financial incentives: Financial incentives are required for the extra cost of sensitive interventions to historic buildings, on the basis that the additional costs are a benefit to society as well as to the individual. Harmonisation of VAT for the repair of historic buildings would lead to fewer being demolished, which would be an environmental benefit.

Historic definition: 1919 is a useful tool, but later (or earlier) buildings of a non-traditional construction can also be significant. The definition of a 'historic building' should be based on significance; the date should be a rule-of-thumb guide.

Expertise: There may be a shortage of consultants with the breadth of expertise to produce good Statements of Significance.

Landscapes: The setting, group value and cultural landscape context of buildings may need to be taken into account: buildings need to be looked at in their context.

Management: Proposals for interventions to historic buildings should follow the principles of the conservation management planning process. They need as much thought as other interventions in buildings we value.

Regulator: Whoever the regulator is, they should have access to suitable levels of expertise and advice on historic building conservation, ideally through embedded in-house staff.

Significance: Needs to be identified and defined in any plans for change to historic buildings, but this in turns requires knowledge and expertise.

Use: The function of a historic building needs to be taken into account in terms of its energy efficiency.

6.6/ Skills to Move Forward

Skills held in Building Standards Departments: It was noted that that this is more than a Building Standards responsibility and that much wider engagement within the Local Authority will be required. For example, Building Standards Departments do not hold the data on change of tenancy and ownership which is the trigger for EPCs and they don't regard their departments as the appropriate place for data collection. Building Standards Departments don't have experience of handling a complaints system for introducing and enforcing compliance.

The new proposals were likened more to the compliance requirements of the Disability Discrimination Act, rather than the role that is within the expertise of Building Standards Officers. Building Standards Officers would require additional training focused on working with people (current training and expertise lies in interpretation of standards and enforcement of regulation).

Issues relating to leadership and responsibilities were discussed – who would be responsible for ensuring compliance: Local Authorities? Procurator Fiscal? Generally it was felt that EPCs are not a mechanism that sits well with Building Standards Departments. The EPCs were not thought of as an effective mechanism for driving change and there would need to be a broader engagement across the Local Authority to make a difference.

7/ Conclusion

Addressing Scotland's existing building stock in terms of heightened energy (and environmental) performance will be essential to taking significant steps towards the 80% reduction of emissions target by 2050 put forward by the Scottish Government.

The task is enormous but there are firm foundations of understanding and technical expertise that Scotland can draw upon in taking this momentous step.

Many participants with many skill levels must pull together if this is going to happen in a timely, efficient, cost-effective, positive way. The proposition is too complicated and the need too great to risk resentment or backlashes by the public if the sticks vastly outweigh the carrots.

But alongside carrots (and sticks) participants need better and regularly updated information and leadership. If the Scottish Government takes forward many of the ideas put forward in this consultation it will have taken a large step forward in both vision and leadership.

If the audience of attendees at this event can reflect a reasonable cross section of the stakeholders to be engaged in advancing these practices there is clearly willingness, understanding and commitment. Hurdles of cost, information, roles and responsibility can be overcome where such will and leadership exist.

This early exploration and discussion of the consultation and surrounding issues was felt to be very successful by the participants, organisers and sponsors. We hope that this report will prove useful to those responding to the consultation and attempting to effect real improvements to our existing building stock, as we face the substantial challenges of the coming years.

8/ Acknowledgements

The workshop was jointly facilitated by Built Environment Forum Scotland (BEFS) (with support from Historic Scotland), Thirdwave and the Association for the Conservation of Energy (ACE), and sponsored by Sust. at The Lighthouse.

Thanks go to everyone that participated in the workshop, and in particular to Lori McElroy (Sust.), Gavin Peart (Scottish Building Standards), Professor Phillip Banfill (Heriot Watt University); Chas Booth (Association for the Conservation of Energy); and David Somervell, (University of Edinburgh), for the presentations; Courtney Peyton (Thirdwave) for chairing; and Richard Atkins (SEDA), Robin Burley (BEFS), Chas Booth (ACE), Lori McElroy (Sust.), Kate Hendry (Sust.), Anna Beedham (Sust.), Malcolm McRobert (Thirdwave), Courtney Peyton (Thirdwave), Jo Robertson (BEFS), Robin Turner (BEFS), and Anne Wilkinson (BEFS) for administration and facilitation of the event.

9/ Biographies and participants

9.1/ Biographies

Courtney Hyde Peyton, Thirdwave

As a founding director of sustainability consultancy Thirdwave, Courtney shaped much of the focus of the company's work around built environment issues. Her MSc (1996) examined the relationship between conservation and sustainability as approaches to the management of the built environment, including consideration of policy, current practice, materials and methodologies. Thirdwave continues to champion the cause of addressing the qualitative, commercial and financial opportunities which can be realised by imbedding sustainability thinking into investment, planning, design and procurement strategies and by working at trans-sectoral levels to achieve buy-in and delivery. She has since 2006 been a Director of BEFS, with particular responsibility for its sustainability agenda.

Lori McElroy, Sust. The Lighthouse

Lori McElroy directs the Scottish Government funded Sust. Programme at the Lighthouse in Glasgow. Her career spans over 20 years in provision of design support to built environment design professionals. Before joining Sust., Lori was Technical Director of the Energy Design Advice Scheme in Scotland from 1988 – 1998 and Director of the Scottish Energy Systems Group at the University of Strathclyde from 1998 – 2004.

Sust. is funded by the Scottish Government and based at Glasgow's Lighthouse, to promote excellence in sustainable design in support of the Scottish Government's core strategic objectives and national outcomes by providing appropriate design support and information to clients, designers and construction teams to facilitate delivery within the context of emphasising the role of better environments in improving people's lives.

Gavin Peart, Scottish Building Standards

Gavin has been involved in building standards for thirty years. Twenty-two years of that time was with Local Authority Building Standards, both in a city authority and a semi-rural authority as a hands-on building standards surveyor. In 2001 he joined the Scottish Government in the Building Standards Division and has contributed to the drafting of the Energy Standards in Building Regulation. He is currently Assistant Head of Building Standards Division.

Professor Phillip Banfill, Heriot Watt University

Phil is a materials scientist who has been professor at Heriot-Watt University since 1995. His research interests cover materials and energy use in buildings, as well as being course leader of Heriot-Watt's MSc in Building Conservation Technology and Materials.

Phil is currently leading TARBASE, a consortium of eight institutions in a four year research programme to deliver technological solutions which will allow a radical step change to policies and programmes designed to reduce the carbon footprint of the existing UK building stock.

To achieve a 50% reduction in carbon emissions by 2030 requires radical action to be taken on the UK's existing built assets, since at least 75% of the building stock that will be present in 2030 is already in existence. The unique feature of this consortium project is its focus on existing buildings.

Chas Booth, Association for the Conservation of Energy

Chas is parliamentary officer for the Association for the Conservation of Energy (ACE). He joined ACE in 2005 from Sustrans, the sustainable transport charity. He has worked in both the Scottish and European parliaments following a MA (Hons) in Social Policy and Politics at University of Edinburgh. Until recently Chas lived in Slateford Green, Scotland's only car-free housing development.

David Somervell, University of Edinburgh

David trained as an architect at the Edinburgh College of Art. He has been involved in energy policy issues since that time and joined the University of Edinburgh in 1989 where he continues in his role as Energy and Sustainability Manager.

He characterises his role as Greening the Campus and has encouraged continuous improvement both at Edinburgh and across Higher and Further Education in the UK through his leadership roles in the Environmental Association for Universities and Colleges. Despite the doubling of student numbers and research activity since 1990 the University has reduced its absolute carbon dioxide emissions by 31%. David is proud to say that the University now operates three Combined Heat and Power (CHP) schemes, the most recent of which provides tri-generation capacity.

9.2/ Participants

Architectural Heritage Society of Scotland
Association for the Conservation of Energy
Association for the Protection of Rural Scotland
Bennetts Associates
Building Standards Advisory Committee
Built Environment Forum Scotland
Coatbridge College
Cross Party Group on Climate Change
CrossReach
East Renfrewshire Council
Falkirk Council
Fife Council
Heriot Watt University
Langside College
Midlothain Council
National Trust for Scotland
North Lanarkshire Council
Royal Incorporation of Architects in Scotland
Royal Institution of Chartered Surveyors in Scotland
Royal Town Planning Institute in Scotland
Scottish Ecological Design Association
Scottish Funding Council
Scottish Government (Building Standards Division)
Scottish Government (Greener Scotland Directorate)
Scottish Government (Historic Scotland)
Scottish Government (Regeneration Division)
Scottish Renewables
Scottish Civic Trust
Scottish Stone Liaison Group
Stirling Council
Stirling University
Stow College
The Lighthouse
Thirdwave
University of Edinburgh
University of West of Scotland
West Lothian Council
Windsave
3D Reid Architects