

4. Please indicate which category best describes your organisation

(Tick one only)

Executive Agencies and NDPBs	<input type="checkbox"/>
Local authority	<input type="checkbox"/>
Other statutory organisation	<input type="checkbox"/>
Registered Social Landlord	<input type="checkbox"/>
Representative body for private sector organisations	<input type="checkbox"/>
Representative body for third sector/equality organisations	<input type="checkbox"/>
Representative body for community organisations	<input type="checkbox"/>
Representative body for professionals	<input type="checkbox"/>
Private sector organisation	<input type="checkbox"/>
Third sector/equality organisation	<input type="checkbox"/>
Community group	<input type="checkbox"/>
Academic	<input type="checkbox"/>
Individual	<input type="checkbox"/>
Other – please state... Leading new home build warranty and Insurance	<input checked="" type="checkbox"/>

CONSULTATION QUESTIONS

1. Are the vision and objectives as set out in sections 19 and 20 appropriate for Scotland's Sustainable Housing Strategy? Please answer Yes or No and provide fuller explanation if you wish.

Yes No

The proposals appear to cover the key points although it could be argued they are optimistic as transforming markets, even in the longer term, will present a considerable challenge for the physical built environment and require major cultural change from building designers and constructors. The outcome will require occupants to change how they use, work and live in buildings, often asking them to live and use homes in ways that are not natural to them and run contrary to their previous experiences.

2. What do you think are the main barriers that prevent home owners and landlords from installing energy efficiency measures?

There is considerable cost associated with an effective energy efficient retrofit scheme and consequently if this programme of retrofit work is being considered with no public subsidy who will fund it?

Retrofitting the installation of these measures into existing homes and buildings will present considerable disruption and inconvenience to the occupants and owners of buildings.

There is a great deal of apathy from homeowners who as intimated in the consultation document prefer to invest in superficial improvements such as kitchen upgrades rather than in improving the fabric of the building.

For new build homes there is an added capital cost that the purchaser is not willing to pay as purchasers generally are not convinced of the derived benefits. New homes are already built to high standards of construction and energy efficiency and there is currently growing concern about new homes "overheating" and as they are being built to ever tighter standards of air tightness there must be provision for adequate and continued ventilation.

For products and systems that deliver energy improvements there is a concern that their performance will degrade over time even with the proper maintenance and therefore the home or building will not remain at its initial designed energy efficiency capability.

As previously intimated ventilation needs to be adequately provided and little research has been undertaken into the performance of Mechanical Heat Ventilation Recovery Systems (MHVR's). Among the conclusions of the Zero Carbon Hub interim report "Mechanical ventilation with heat recovery in new homes" are that design and installation standards for these systems are critically linked to performance, for example the performance of these systems is adversely affected by the length condition and form of the extract ducting. Recent media attention highlighted the high cost of running

these systems incurred by tenants of a Scottish Housing Association albeit this was down to a lack of understanding on how to use them.

NHBC research has demonstrated that there is a performance gap between how systems and products perform in practice compared to their in use performance as their output data is often based on tests undertaken in a “factory “environment. This gap can result in up to 50% lower performance of these systems when installed than was envisaged at design stage (up to 75% lower according to Joseph Rowntree Foundation) and can therefore have significant impacts on how energy efficient homes actually are when compared to the design expectation.

The latter performance gap will have an adverse effect on the “golden rule” referred to under the Green Deal and consequently reliance on home owners and occupants of buildings benefiting from cost savings arising from installed energy efficiency measures (which theoretically could be used to fund the installation of these energy efficiency measures) cannot be fully relied on.

As the leading provider of insurance and warranty to the new home sector in the UK NHBC has concerns about the introduction of innovative and new building techniques where these have not been properly assessed or tested by independent organisations to determine their suitability for their intended function.

Being recognised internationally in the new home warranty sector NHBC is aware of catastrophic building failures in British Columbia, Canada and in New Zealand in the early 2000’s when new and untried building materials were introduced to the local housing market in these countries.

Lack of insurance backed protection and warranty to provide consumer protection and comfort to mortgage lenders.

Today’s homeowners are less likely to accept the responsibility for ongoing maintenance of their homes, however that is a pre requisite of many of the systems being considered to achieve energy efficient improvements and to provide ventilation.

3. Please explain any practical solutions and/or incentives to overcome any barriers you have identified.

A good public education programme would be a good start and reference to the NHBC’s Foundation research library could be helpful. For example the Foundation report NF40 indicates the importance to homeowners of saving money through adopting energy efficiency measures (as opposed to saving the planet). If there were locally based exemplars within communities of homes constructed with energy efficient measures these could be utilised to demonstrate the benefits of, for example savings on fuel bills, and highlight any concerns or inconveniences to help make people more receptive.

It must be accepted that retrofitting is not the best solution for all homes with

older properties listed properties and properties of historic interest being particularly difficult to improve with potential improvements possibly breaching planning legislation.

Funding is critical and although there are incentives for Zero Carbon Homes the future proposal to reform stamp duty could be adapted to recognise tax relief on bandings of homes that meet certain levels of energy efficiency.

Consider the energy “performance gap” at design stage and factor this into the design to ensure the design delivers its intended levels of energy efficiency. To take account of how products are performance tested and the extent of degradation of performance over time there may be a requirement to add a “weighting” resulting in a degree of “over design” to ensure systems and components perform as initially expected.

By reference to existing and proposed research projects consider how MVHR works in practice and take the appropriate measures again at design stage.

Ensure that any systems or innovative building components and techniques are subjected to third party scrutiny and are acceptable to the warranty and insurance sectors to ensure the end user benefits from consumer protection.

4. Given Scotland’s diverse range of housing, what support is needed to enable people to get energy efficiency measures installed?

Simplistically this will be reliant on good quality advice delivered by trusted independent professionals, with works being carried out by trusted trades people and installers, backed up with guarantees on products/ systems, quality of work and that the promised energy savings are delivered in practice and over the timescales stated.

Initiatives like the Microgeneration Certification Scheme (MCS) should be promoted and supported more widely and expanded to refer to the levels of predicted energy savings.

Given the diversity of housing types across Scotland consideration could be given to developing a publication that would list typical house types and construction and propose appropriate energy efficiency measures for each type.

5. (a) What specific issues need to be addressed in respect of improving energy efficiency in rural areas, particularly more remote or island areas?

There is a concern that the extended use of micro generation equipment in remote areas may ultimately not be beneficial to the home owner or occupant. As previously intimated most of these systems require regular maintenance and will degrade over time.

For example NHBC is currently aware of growing evidence of poor

performance of heat pumps across the UK so what may seem like an attractive option, particularly for homes off the gas grid, could in reality result in homes being significantly under heated and lead to increased fuel bills.

5. (b) How should these be addressed?

Although additional research will yield further information on micro generation equipment and as it becomes more popular it might become simpler to repair and maintain it but currently this remedial work requires skilled operatives.

In remote and rural areas it is more difficult to procure the services of skilled specialist trades people, especially with the experience and competence necessary to maintain and or repair micro generation equipment as the demand for this work is currently low.

Consequently a greater focus should be given to significantly improving the energy efficiency of the building fabric, potentially above the minimum regulatory requirements and avoid the use of micro generation plant and equipment.

6. Taking into account the models and funding sources outlined in section 1.20-1.37, what role might local authorities and other agencies play in bringing about a step change in retrofitting Scotland's housing?

No comment.

7. What role should the Scottish Government play in a National Retrofit Programme?

No comment.

8. What role could the devolution of additional powers play in achieving more retrofit?

No comment.

9. What further action is needed to achieve the scale of change required to existing homes?

Certainty on the "golden rule" with some form of redress being available to home owners if the golden rule does not deliver.

Develop a comprehensive consumer education programme, and encourage retrofit through a positive marketing campaign.

Develop a register of some other system of approved and trusted professional advisors and promote the MCS scheme.

Ensure detailed records are retained and sample auditing of systems in use is undertaken to measure value for money and ease of use, using the information to either change or promote activity going forward.

10. How can we make sure a National Retrofit Programme maximises benefits to all consumers (for example, older people, those from ethnic minorities, those with long term illness or disability)?

It may be that the local authority seeks to prioritise the retrofit programme in their area to identify occupants who are more vulnerable due to age, illness or impairment. Translated documentation into the home language of ethnic minority groups and bespoke educational road shows may have to be developed.

11. (a) Should the Scottish Government consider whether a single mandatory condition standard (beyond the tolerable standard) should apply to all properties, irrespective of tenure?

Yes No

11. (b) If so, how would that be enforced?

There is a logical argument for setting such a minimum standard for the private rented sector to ensure that the rented property is fit for purpose especially as it is a commercial commodity. This approach however must be balanced and could be linked into the current legislation used to monitor the condition of houses in multiple occupancy.

The imposition of a minimum standard in the private sector may meet with some resistance as it removes individuals' choice and it could be better received if it was not mandatory but encouraged through education programmes as previously referred to and supported with some grant funding.

If made mandatory for the private sector it will be difficult to enforce and could result in imposing financial hardships on individuals who are unable to meet the cost of improvement. It may also slow and or stop housing transactions as homes with some form of repair notice hanging over them are difficult to sell and their value will naturally fall.

12. (a) In box 6 we identify a checklist for maintaining a quality home. Do you agree with our proposed hierarchy of needs?

Yes No

12. (b) If you think anything is missing or in the wrong place please explain your views.

I think we should reverse points 3 and 4. It's not appropriate for consideration of ventilation to follow other measures. Good ventilation is essential for indoor air quality and controlling condensation (refer to Zero Carbon Hub Mechanical Ventilation with Heat Recovery in New Homes www.zerocarbonhub.org)

It should be made clear that the employment of a specialist chartered surveyor or registered trades person maybe required if the homeowner is lacking the competency and or confidence to carry out the matters listed.

13. Should local authorities be able to require that owners improve their properties, in the same way they can require that they repair them? For example, could poor energy efficiency be a trigger for a work notice? Please answer Yes or No and provide further explanation if you wish, for example on how this might work.

Yes No

It is recognised that the existing stock requires the most significant energy improvements but often improvements are not being carried out because of affordability issues, and whilst improvements to the original stock should be encouraged the service of improvement notices should be a vehicle of last resort.

If an improvement notice is used it should be supported with some form of subsidy to the home owner as it would be imposed by Government and could be seen to be contrary to natural justice as it could be argued that it is not detrimental to the health of the occupant or the building .

14. Should local authorities have a power to enforce decisions taken by owners under the title deeds, tenement management scheme or by unanimity? For example, should they have explicit powers to pay missing shares of owners who are not paying for communal repair work, in the same way they can for agreed maintenance work ? Please answer Yes or No and provide further explanation, if you wish.

Yes No

On the understanding that these step in rights are not implemented where the owners are not paying for valid reasons e.g. poor or faulty workmanship or poor property management.

It is assumed that the majority of owners will be in favour of paying and that this type of action would only be considered if a minority of owners were prohibiting the work from progressing, e.g. if there is a unanimous agreement between all owners not to proceed this cannot be used as an enforcement tool.

The statement suggests that the owners who may not be paying had earlier agreed to pay and consequently if this is the case any deposits they have lodged with the property factor should be taken account of in settling any alleged debt.

If funding the payment of communal management and repair work the local authority should ensure it is reimbursed its cost with applied interest by setting a charge against the property ensuring that it cannot be sold without the alleged debt being repaid.

15. Should local authorities be able to automatically issue maintenance orders on any property which has had a work notice? Please provide further explanation if you wish.

Yes No

Yes as once the building has been improved by the repairs carried out under the works order it will require to be maintained to ensure it does not fall back into disrepair, resulting in another works order being required.

Alongside a programme of educational information on the importance of maintenance it should encourage property owners to maintain their property in a good condition.

16. Should the process for using maintenance orders be streamlined , and if so, how? Please answer Yes or No and provide further explanation, if you wish.

Yes No

No comment –this is an administrative process and should naturally be as efficient as it can be.

17. Should local authorities be able to: a. issue work notices on housing affecting the amenity, and b. require work such as to improve safety and security on properties which are outwith a Housing Renewal area? Please answer Yes or No and provide further explanation if you wish.

Yes No

Are works that are deemed to be of a safety nature not already allowed for under the Building Scotland Act which allows notices to be served for dangerous buildings?

Likewise under the Civic Government Scotland Act 1982 the local authority can issue repairs notices, so not sure what new powers this will introduce that are not already provisioned for.

18. Should local authorities be able to issue repayment charges for work done on commercial properties, in the same way they can for residential premises? Please answer Yes or No and provide further explanation below, if you wish.

Yes No

If the commercial property is attached to residential dwellings and sharing communal areas of the building then the local authority should be able to issue repayment charges.

Consideration may have to be taken of the type of business e.g. garages which are generally open plan and open to the elements may not benefit from major energy improvements and consequently it may not be “fair” to charge them for works, from which they will derive no benefit.

19. What action, if any, do you think the Government should take to make it easier to dismiss and replace property factors?

Limit contracts between factors and owners to a maximum duration of one year but making it a requirement that there must always be a factor in place building in the appropriate timescales to allow either renewal or dismissal. Incorporate the latter into the existing legislation

20. What action can be taken to raise the importance placed by owners and tenants on the energy efficiency of their properties?

Back to public awareness, exemplar homes on every street corner. As referred to previously NHBC Foundation 40 (www.nhbcfoundation.org) refers to the importance of cash savings in selling energy efficiency. Once people see their neighbours' bills reducing as the result of energy efficiency work, won't this sell the concept?

21. Should the Scottish Government introduce minimum energy efficiency standards for private sector housing?

It is naturally assumed that the homes referred to would have been constructed to comply with the building regulations in force at the time they were constructed and consequently there is an argument that when built they did meet minimum energy efficiency standards proscribed by Government.

However despite the latter the energy efficiency gap between the existing housing stock and new build homes is significant, especially for the housing stock constructed under building warrants pre 2007. Therefore homeowners of the relevant existing stock should be encouraged to improve the energy efficiency of their homes and as the statement does not indicate this would be mandatory it is assumed it will be pushed through education and subsidy, but even with support this will not fully resolve the problem as it is technically difficult to improve many older homes and home owners human rights to live a chosen lifestyle has to be considered.

It will be a slow process over many years.

22. How could we amend EPCs to make them a more useful tool for influencing behaviour change to improve energy efficiency?

They have been amended very recently to address criticism – refer - <http://www.communities.gov.uk/documents/planningandbuilding/pdf/2040232.pdf>
In addition the delivery of the EPC could be accompanied by proper advice, preferably in person, but alternatively in the form of an easily understandable bespoke report with lots of illustrations.

Additionally they could be given a higher prominence when buying and selling homes and through the conveyancing process could potentially influence purchase decisions.

The Government could consider linking them to local government council tax and or the current proposal to reform Stamp Duty in Scotland, in essence offering tax discounts in bandings that link into EPC bandings with top reductions being given to homes that are designed to be more energy efficient.

23. Are there other key principles that we ought to consider when looking at the possible introduction of regulations?

The house building industry is already heavily regulated and unlike Westminster there is no consideration being given by the Scottish Government to lessen this burden, so first question must be, is there a need for more regulations?

Unlike England and Wales the implementation and management of regulations is confined to the public sector despite research confirming that the private sector can provide a more efficient service in this regard e.g. the provision of Building Control. Against a background of public sector spending reductions consideration should be given to how the private sector can assist in delivering regulation on behalf of Government with greater cost efficiency.

Through research and consultation the Scottish Government has already identified that there is a compliance gap between what is designed and what is constructed on site. The primary reason for this being the lack of physical inspection of construction work, therefore if additional regulation is introduced a greater focus should come with that on ensuring the construction phase and what is being built actually meets the design aspirations.

It is expected that new regulations will result in additional costs being incurred in the design and construction of new homes and this must therefore be carefully balanced against economic recovery prospects.

Over regulation may also slow down construction and affect the ability of social housing providers to deliver volumes as increased design and construction costs will result in lower volumes of homes being delivered.

24 How could regulation be used to support the uptake of incentives?

Section 7 (Sustainability) of the Scottish Building Regulations is not mandatory but seeks to encourage buildings to be designed to energy

levels that exceed the minimum requirement of the Building Regulations. Not only does it encourage this it provides guidance and also recognises when a building exceeds the minimum required standards by “badging” the building. Some extension of this could be considered which could also introduce financial incentives.

25. In section 2.68 we identify design options for the standard. Do you have any views on the options set out in that report? Are there other options that we should be considering?

Although there is reference to the works suggested being technically feasible who will decide this, as most homeowners do not have the competency or knowledge to make that decision? There have been recorded instances of cavity insulation being installed in homes when it is not appropriate and it is relatively common for installers of loft insulation to block over ventilation gaps in the eaves which can then result in excessive moisture affecting the roof structure.

The use of EPC’s as a benchmark should be cautioned as there are many factors that can influence the production of an EPC and not all solutions will fit the individual’s comfort requirements.

A simplified SHQS may work but there is little detail on how this will be applied in practice to facilitate comment.

Using the energy report for the purpose referred to is contentious and runs against the original principle of its introduction and it may result in slowing down house sales and affect economic migration.

Crucial to this is that consumers have a clear understanding of the potential impacts this type of policy can have on their lives and on their budgets and consequently some bespoke consumer research should be considered.

26. Do you agree that any regulations for private sector housing ought to reflect the energy efficiency capacity of the property and/or location, as is proposed for the social sector?

Yes No

Yes as there is an economic point of balance where the energy improvements being considered will not be economic over time. Therefore pay back and maintenance costs need to be factored into this.

In the private sector there may also be restrictions imposed by the mortgage provider, the property factor or by local government e.g. conservation areas so all the latter also need to be considered as they present legal and contractual barriers to proposed energy improvement work

27. If you agree with Q26, should houses of the same type in the social and private sectors be expected to meet the same standard?

Yes No

There is a clear difference between both sectors with the housing association generally having a longer term interest in the home given it generates rental revenue for them. With the support of the latter revenue the housing association or Local Authority provide reactive maintenance, planned maintenance and planned improvements, the same level of support is not available to the private sector.

Although the majority of private sector homeowners expect their investment in their home to grow they are not as effective as the social housing sector at maintaining the fabric of their home. The main reasons for this are lack of knowledge and cost. Therefore an education programme of the importance of maintaining the home may be required and consideration has to be made of the ability of private owners to pay for the work and the possible need for financial support.

28. Are there other specific issues we need to consider in introducing regulation on the energy efficiency of the home for particular groups of people, for example older people, those with disabilities, people from minority ethnic communities?

It could be helpful to work with relatives if the home owner is particularly vulnerable, however care must be taken to ensure that any disruption is not disproportionate and will not adversely affect the health of the individual.

Support groups, charities and organisations involved in this environment should be specifically targeted and consulted on this particular matter as they will have the expertise to properly respond.

29. Should we consider additional trigger points to point of sale or rental? If so, what?

Yes No

A potential additional trigger point could be when an existing home is being improved by the addition of an extension or internal improvements. This could trigger additional ad hoc improvements be undertaken –if necessary and appropriate –but these would have to be clearly defined in advance and some guidance prepared to assist the consumer.

30. Should rollout of any regulation across the owner occupied and PRS sectors be phased or all at once? If you think that rollout should be phased how do you think this should be done?

Yes No

It would be more palatable if introduced over a rolling phased programme and this will give the housing industry, the repair and maintain sector to

prepare for this. It will also allow time for the consumer to familiarise themselves with the requirements and budget accordingly.

Rather than have a blanket approach consideration should be given to prioritising its introduction by focusing potentially on the oldest housing stock or on groups of stock where there is exceptionally high levels of energy inefficiency evident.

31. What other issues around enforcement do we need to think about when considering how different approaches to regulation might work?

Currently much media reporting on the effects of public sector expenditure cuts which will result in reducing public sector services, so how can a new enforcement policy be introduced when the likelihood is that the capacity and resources to service it will be unavailable at a local level? The private sector can assist in the latter enforcement process but a budget for this will have to be found.

If enforcement is retained at a local authority level what degree of competence and experience will the enforcers have? Energy efficiency measures are generally delivered through a variety of mechanisms which in themselves interface with the building fabric and the user of the building i.e. this is a complex and technical environment and the enforcers will require to highly trained and competent professionals.

32. In sections 2.76-2.79 we suggest that one way of regulating would be to issue sanctions.

(a) Do you think that sanctions on owners should be used to enforce regulations?

Yes No

(b) Should owners be able to pass the sanction or obligation on to buyers?

Yes No

Although in favour of this process refer to previous comments about how planning legislation etc may restrict improvements.

The passing on of sanctions to the incoming owner will have a detrimental impact on the provision of mortgage as the value of the improvement will either be fully retained by the funder or retained as a retention pending completion of the required work. This therefore could negatively impact on the ability to sell and move on and may slow down the housing market.

Is any interaction proposed with the valuation surveyors who will need to be aware of this in advance of valuing a property for sale or for purchase and which in some circumstances depending on the level of information available may result in the cancellation of a sale or a purchase with a potential impact on their PI insurance.

33. The Scottish Government does not intend to regulate before 2015. The working group will consider what options for timing of any regulation might be appropriate,

but, given all the points set out in sections 2.80-2.81, from when do you think it might be appropriate to apply regulations?

There must be some additional work undertaken to ensure there is sufficient capacity in the house building industry in the repair and maintain sector and within local government.

Workable solutions must be made available that actually deliver the stated levels of energy efficiency benefits and the wider public must support this process or it will not work.

Given the current economic climate, the projected economic climate over the next two years and the above comments, 2015 seems too soon to be introducing this.

34. (a) In Section 3.4 we describe the range of legislative and policy levers that we believe are available to help us transform the financial market such that it values warm, high quality, low carbon homes. Do you agree that this is the full range of levers?

Yes No

34. (b) Can you suggest any other ways to help transform the market for more energy efficient, sustainable homes?

Mostly covered or referred to in earlier comments about raising public awareness, tax incentives and for commercial/ retail properties discounted business rates.

35. What changes would be required to current survey and lending practice to enable mortgage lenders to take account of the income from new technology or savings on energy bills?

There is increasing pressure on valuation surveyors by mortgage providers to ensure they do not over value, to avoid negligence claims against their PI insurance and this in some cases it resulting in valuation surveyors undervaluing. The economic value in energy efficiency measures remains with the home owner who may benefit from these by having more disposable income.

Whether energy efficiency measures add value to the home is a mute point and if for example there is a heat pump installed that is under delivering it could result in devaluing the home. Even if some micro generation equipment is installed in a home its output performance may degrade over time and it will require to be maintained, there will come a time when it will have to be replaced- so again depending on the point in the cycle it could have a negative effect on the valuation of the home.

Returning to the initial paragraph and even if the homeowner may have more disposable income who can say how he will chose to spend this, he may elect not to make any additional contribution to mortgage re-payment

and he may have increased his mortgage exposure taking account of that disposable income- therefore difficult for funders to say with certainty what impact if any that energy efficiency homes will have on disposable income.

36. Section 3.15 lists a range of challenges that may prevent the benefits of a more sustainable, energy efficient home being fully recognised in its value. What further challenges, if any, need to be addressed?

The use of technologies with a proven track record, and clarity on maintenance with an established resource to deliver that maintenance locally.

As previously stated develop trusted professionals and trades people – deter cowboys.

Oppose and challenge negative press coverage(e.g. the recent expose of heat pumps on 'Rip Off Britain') as this does so much harm.

37. (a) Sections 3.16-3.22 set out the action that Scottish Government is currently developing to encourage greater recognition of the value of sustainable homes. Do you agree that this action is appropriate?

Yes No

37. (b) What further action is needed to influence consumers and the market?

Promote the financial advantages over and above all else.

38. What steps can we take to ensure that we design and develop sustainable neighbourhoods?

Although I understand the philosophy behind a policy that denies the use of cars and promotes public transport there are major issues here that are out of step with reality. Unfortunately the public transport service is in need of improving and many rural and remote areas rely heavily on the car. Even in urban areas car ownership is the desired mode of transport so without significant and major improvements in the public transport system this is likely to continue and amending design principles in isolation will not mend this.

39. Section 4.10 sets out the main challenges to address in taking forward our aim of new build transformation. What further challenges, if any, need to be addressed?

As referred to earlier NHBC is the leading provider of warranties to the UK new build housing market and as it was the first established warranty organisation it has international links with like organisations across the world that it helped become established.

In British Columbia, Canada and in New Zealand in the early 2000's the introduction of new and innovative materials coupled with innovative designs led to a comprehensive failure in the housing stock that resulted in

bankrupting the local warranty organisations, a collapse of the new build housing market , financial ruin for homeowners and ultimately direct Government intervention.

Whereas NHBC support and promote the use of tried and tested products that are fit for their intended purpose in their intended location care must be taken to ensure that all innovative products are properly assessed and tested before being introduced into the market to avoid repeats of what happened in Canada and New Zealand.

Although current traditional methods of construction may not be seen to be innovative they have been significantly improved over time and there are many example of zero carbon homes being constructed using traditional methods which are supplemented by micro generation.

If the Scottish Government is promoting and pushing innovative methods of construction it should ensure that these are independently assessed and capable of being insured. NHBC is the only UK based warranty organisation that is an insurance company and because of this it employs comprehensive risk management processes to ensure the occupants of new homes are protected should the building fail.

Private house builders are cautious about adopting new and innovative forms of construction especially if the warranty organisation is not fully satisfied with the proposals.

Furthermore the house building market place is not a level playing field with homes being constructed under a range of different building regulations dependent on the date the building warrant was granted leading to builders having different cost exposures. Builders will tend towards the lowest market sales price to ensure they are competitive and consequently will resist factoring in new and innovative products which generally tend to result in higher capital cost and unknown maintenance costs.

NHBC Building Standards are changed annually and although having a few months lead in time are generally introduced each January and apply to all homes where foundations are begun from that January- a similar process could be considered for the building regulations.

House builders will respond to their customers' demands and therefore consumers and purchasers attitudes have to change to become promoters of energy efficiency homes and this can be instigated through marketing and information campaigns.

40. What action is needed to increase the capacity for developing and bringing to market innovative methods of construction?

Greater consumer confidence, greater house builder confidence in the systems being proposed and communication and dialogue with the leading warranty and insurance organisation in the UK.

Long-term monitoring that proves the performance of innovative methods including the views of the building occupants and the overall life cycle costs.

41. What further changes to the operation of the Government's affordable housing supply programme would help to enable it to champion greener construction methods and technologies in the medium term?

Scotland through the Scottish Government is the only country in the UK that fails to protect its public investment in affordable and social housing as it does not insist that investment is protected by warranty and insurance.

Where the house building industry the consumer and public body have a level of insurance protection they are all more likely to buy into greener building methods as their exposure in testing of new products is mitigated.

42. What further action is needed to influence the construction industry to make greater use of innovative methods to deliver more greener new homes?

In addition to the points made previously the house building industry requires more stability and confidence going forward as with more certainty the capacity of the industry will grow and it will be more willing to then adopt and try new products and systems in addition to making longer-term decisions.

Unfortunately the largest barrier to the industry progressing is economic with banks and funders restricting the flow of development finance and with mortgage availability continuing to be constrained.

There also needs to be clarity on what is meant by a 'green new home' with a clear definition to ensure the industry is aware of what it is being asked to deliver.

43. (a) Has Chapter 5 of this consultation identified the key challenges to ensuring Scottish companies have the skills to take advantage of the opportunities expected to be on offer?

Yes No

43. (b) If not, What other challenges are there?

It is estimated by Homes for Scotland that over the last 4 years at least half the workforce has left the house building industry. As identified there is a generally a lack of employment continuity in construction and there is a lack of interest amongst young people and women joining the industry. The industry will struggle to achieve the capacity it requires to continue building homes if there is even a small upturn in the market and it will certainly be a challenge to form new and hybrid trades to service the energy markets.

44. What further action is needed to ensure there is appropriate investment in skills and training to meet these opportunities?

Ensure security of employment and a long-term commitment to adopting the proposals.

45. How can the construction industry be made more aware of the potential funding and support for skills and training development opportunities and engage effectively with those providing training to ensure that it meets their current and future needs?

The current economic climate has resulted in placing investment in training low in the priorities builders have which have tended to focusing on the bottom line. With the significant reduction in workforce over the last 4 years the current capacity in the industry is stretched.

Although there is funding available for training the most common barrier to it being pursued is the lack of support at corporate level as resources are stretched people are not being offered the time they need to be away from the business to take up learning opportunities.

46. How do we ensure that skills and training opportunities are provided on an equitable basis to all groups in society?

No comment.

47. Apart from training and skills opportunities are there any other issues that should be addressed to make employment in construction and other industries becomes more representative?

Although women and ethnic minorities are underrepresented in the construction industry this could be as a result of choice, especially by women who correctly view the industry as being male dominated and macho. The industry needs to change culturally and needs to adopt processes that make it an attractive career choice for both women and ethnic minorities by engaging with these groups to determine the level of change required.

48. Please describe any specific difficulties relating to skills and training that apply to those in remote and island areas and your view on how these may be addressed.

NHBC is aware that in remote and rural areas it can be difficult to find and recruit trained specialist installers especially for new technologies. Skills and training can be taught remotely through AV links and distance learning but the real challenge will be sustaining a local economy that can support trained specialists. The Government could operate a licensed approach limiting the number of trained specialist individuals in a geographic area although this interference in the local economy may not be welcomed.