Next steps to zero carbon homes – Allowable Solutions

Consultation - Response Form

How to respond:

Please respond by email to: Building.Regulations@communities.gsi.gov.uk.

The closing date for responses is 5pm on 15/10/13.

About you:

Name:	Philip Haile
Position:	
Name of organisation (if applicable):	Transition Bath
Address:	Transition Bath South Vaults Green Park Station, Bath, BA1 1JB
Email address:	consultation@transitionbath.org
Telephone number:	

(i) Are the views expressed on this consultation an official response from the organisation you represent or your own personal views?

Organisational response ☒
Personal views ☐

(ii) Are the views expressed on this consultation in connection with your membership or support of any group? If yes please state name of group:

Yes ☒
No ☐

Name of group: **Transition Bath**

(iii) Please tick the *one* box which best describes you or your organisation:

Builders / Developers:		**Property Management:**	
Builder – Main contractor	☐	Housing association (registered social landlord)	☐
Builder – Small builder (extensions/repairs/maintenance, etc)	☐	Residential landlord, private sector	☐
Installer / specialist sub-contractor	☐	Commercial	☐
Commercial developer	☐	Public sector	☐
House builder	☐	**Building Control Bodies:**	
Building Occupier:		Local authority – building control	☐
Homeowner	☐	Approved Inspector	☐
Tenant (residential)	☐	**Specific Interest:**	
Commercial building	☐	Competent Person Scheme operator	☐
Designers / Engineers / Surveyors:		National representative or trade body	☐
Architect	☐	Professional body or institution	☐
Civil / Structural Engineer	☐	Research / academic organisation	☐
Building Services Engineer	☐	**Energy Sector**	☐
Surveyor	☐	**Fire and Rescue Authority**	☐
Manufacturer / Supply Chain	☐	**Other** (please specify)	☒
		Sustainability Charity	

(iv) Please tick the *one* box which best describes the size of your or your organisation's business?

Micro – typically 0 to 9 full-time or equivalent employees (incl. sole traders)

☐

Small – typically 10 to 49 full-time or equivalent employees

☐

Medium – typically 50 to 249 full-time or equivalent employees

☐

Large – typically 250+ full-time or equivalent employees

☐

None of the above (please specify) Voluntary membership of '1000'

☒

(v) Would you be happy for us to contact you again in relation to this consultation?

Yes ☒

No ☐

DCLG will process any personal information that you provide us with in accordance with the data protection principles in the Data Protection Act 1998. In particular, we shall protect all responses containing personal information by means of all appropriate technical security measures and ensure that they are only accessible to those with an operational need to see them. You should, however, be aware that as a public body, the Department is subject to the requirements of the Freedom of Information Act 2000, and may receive requests for all responses to this consultation. If such requests are received we shall take all steps to anonymise responses that we disclose, by stripping them of the specifically personal data - name and e-mail address - you supply in responding to this consultation. If, however, you consider that any of the responses that you provide to this survey would be likely to identify you irrespective of the removal of your overt personal data, then we should be grateful if you would indicate that, and the likely reasons, in your response, for example in the comments box.

Questions:

Please note: We very much welcome your views to help inform our decision on the way forward on standards. However, you are not obliged to answer every question. You can focus only on the sections that are most relevant to you.

Chapter 1: Fabric energy efficiency and carbon compliance

Question 1	Do you agree that the government should base its consideration for energy performance standards for 2016 on the fabric energy efficiency and carbon compliance standard recommended by the Zero Carbon Hub and endorsed by the government in May 2011?
Yes ☒	
No ☐	
Please give reasons for your answer:	

Question 2	Do you have evidence, including data on costs, which you can make available to DCLG and could be used in reviewing the assumptions underpinning the Fabric Energy Efficiency and Carbon Compliance standards?
Comments: We feel some of the DCLG/ZCH assumptions are out of date; a. the installed cost of retrofitted solar PV is about £1200/kWp (or about £140/tCO2 rather than the £2200/kWp to £2650/kWp seem to use in their analysis; if the 'learning rate' continues the cost might come below the £90/tCO2 cap which might make onsite mitigation more feasible. The consultation should also learn from the ECO CO2 market, currently running largely between £110 to £160/tCO2 (£90/tCO2 for the less certain lower volume brokerage market) which suggests there is very little chance Allowable Solutions could be used to directly offset carbon rather at rates capped below £90/tCO2 they can only be used to subsidise projects which are uneconomic otherwise. There seems to be a problem with the ECO market that there is a lack of suitable projects for CO2 mitigation at the moment which	

Allowable Solutions might only make worse?

Chapter 2: Design principles for Allowable Solutions

Question 3	Do you agree with these design principles for Allowable Solutions set out in paragraph 2.4 (a to e) of the consultation document?

Agree with all ☐

Disagree with:

a ☐ b ☐ c ☐ d ☒ e ☐

Please provide reasons why you disagree with any of the design principles

We disagree with the point that onsite solutions come with exorbitant costs. Typical 4 kWp solar PV installations cost £4.8K which are enough to make homes with a FEEs fabric zero carbon, we don't think £4.8K is exorbitant compared with the typical total site development cost of £180K (if you include S106, CIL, Site Access Costs, Professional Fees, Marketing Costs etc.). on this basis the addition costs are less than 2.5% of total costs which we don't feel is excessive. In the case of Social Housing higher rents could be charged to offset the benefits on free electricity from solar PV (typically £240/year).

Question 4	Are there other design principles which you think that the government should consider? Please provide an explanation for any other design principles suggested

Comments:

We feel there should be an element of localism included in the design principles if offsite mitigation is to be used. If a community is being asked to absorb signifcant extra housing in a locaility it should be compensated - this is an emerging principle in large scale renewable projects which we think should also be applied to Allowable Solutions. To translate this into a market mechanism it could be presentated as a discount to the carbon offset, so for example if the carbon was offset nationally it might incur a cost of £46 per tonne, but a lower hurdle for example a national rate - 20% e.g. £37/tonnefor locally delivered projects. This would incentivise developers to help reduce energy consumption in the immediate community, benefiting the community.

Question 5	Do you agree that house builders should have a variety of routes, as set out in paragraph 2.7 of the consultation document, to meet

	their zero carbon homes obligations?
Yes ☒	
No ☐	
Comments: But we don't think there is a sufficient market at the carbon prices being discussed in this consultation. As previously stated the similar ECO market is running at > £110/tCO2; we do however agree with the principle of providing builders with a variety of delivery mechanisms.	

Question 6	Do you agree or disagree with any of the routes ((i) to (iv)) identified in paragraph 2.7 of the consultation document and do you have other routes to suggest.
Agree with all ☐	
Disagree with: route (i) ☐ route (ii) ☐ route (iii) ☒ route (iv) ☐	
Suggested other route(s) and reasons: For iii we think LAs should be allowed to provide a subsidised 'carbon price' - in the same way we have suggested above to encourage builders to invest in the local community; so for example LAs should be able to discount their carbon price by 20% if the carbon offset is delivered locally?	

Question 7	**(For house builders)** How likely are you to use any of the routes identified in paragraph 2.7 of the consultation document? Please complete the table below

Route	**Very likely**	**Occasionally**	**Unlikely**
(i) Doing more onsite	☐	☐	☐
(ii) Delivering off-site through own actions	☐	☐	☐
(iii) Contracting with a	☐	☐	☐

third party			
(iv) Payment into a fund	☐	☐	☐
Please add any comments about your reasons.			

Question 8	Do you think the current market could scale up to meet additional demand for carbon abatement?
Yes ☐	
No ☒	
Comments: We feel that the market is likely to end up being capacity constrained in the same way the ECO market is currently struggling to deliver projects; we are also struggling to see any market at the level of carbon prices being discussed in this consultation e.g. £46/tonne; - because of this problem the ECO market for large scale offsetting (i.e. not the smaller brokerage market) is current running at between £110 and £160/tonne. To some extent we feel as a result this consultation is flawed - it would be better if the consultation identified both the possible markets and their capacity before deciding on the potential carbon prices.	

Chapter 3: Other delivery options considered

Question 9	Do you agree that the government should set out a national policy framework for Allowable Solutions and not leave it to local authorities to decide locally?
Yes ☐	
No ☒	

Please give reasons for your answer.
We believe there should be some incentive to deliver locally in the same way large scales renewable and potentially shale gas projects are being asked to do. If LAs or the local community can deliver projects cost effectively then they should be allowed to do so, and they should be given some addition credit/benefit for doing so e.g. a 20% advantage over a 'national' offset.
The comment in 3.8.4 is not correct; regulated energy use as defined by SAP is closely related to floor space as many of the energy losses are directly proportional to floor space and those that are not e.g. occupancy are still approximately linearly proportional to floor space up to 110 m2 and intercept at zero, as per the table below containing a series of differing property types modelled in SAP, the linear relationship only starts to breakdown above 110 m^2:

Floor Area	SAP Cost	Ratio
64	£315	4.92
75	£364	4.85
80	£376	4.70
90	£449	4.99
120	£518	4.32

Question 10	Do you agree that a mandated local approach to the delivery Allowable Solutions has no role in this national policy for the reasons set out in paragraphs 3.13 to 3.18 of the consultation document?
Yes ☐	
No ☒	

Please give reasons for your answer.
We feel that if a community is to put up with the burden of a local development then some of the additional carbon abatement needs to be delivered locally. The proposal contradicts the direction government legislation is heading in for renewable energy projects. and is therefore iniquitous; why should renewable energy or shale gas companies be forced to deliver additional benefits locally whereas builders are only required to do this nationally?

Chapter 4: Allowable Solutions measures and verification

Question 11	Should Allowable Solutions be concentrated on particular types of measure?
Yes ☐	
No ☒	
Please give reasons for your answer We feel there should be flexibility in the types of measures delivered, but guidance should be provided for each of the common types and any contraints which may be necessary particularly in calculating the carbon benefit of each scheme.	

Question 12	Do you think that Allowable Solutions should be confined to only to measures in the non traded sector of the economy?
Yes ☒	
No ☐	
Please give reasons for your answer We feel that the measures should be limited to those associated with the built environment and focused through incentives as discussed previously on local measures. A further absolute contraint of ensuring the measures are only delivered within the national borders of the UK should also be included.	

Question 13	Should measures in the traded sector be supported by Allowable Solutions, provided that they meet the appropriate criteria?
Yes ☐	
No ☒	
Please give reasons for your answer There is a risk if the regulation goes down this route of developers ebing able to trade carbon on the EU carbon market which is heavily distorted by national interest and has an almost meaningless carbon price of €4/tonne.	

Question 14	Do you think that Allowable Solutions should be confined to measures in the built environment?

Yes ☒	
No ☐	
Please give reasons for your answer	

Question 15	Do you think that measures should just be confined to residential buildings or should also cover non domestic buildings?
Residential buildings only ☐	
Residential and non domestic buildings ☒	
Please give reasons for your answer It probably doesn't matter too much whether the carbon is offset in domestic or non-domestic buildings.	

Question 16	Do you think that there should be any spatial limitations on Allowable Solutions?
Yes ☒	
No ☐	
Please give reasons for your answer As per previous comments there must be additional upside for the local community bearing the brunt of any development.	
If yes, do you think that Allowable Solutions should be limited to projects located in:	
(a) the locality of the development ☒	
(b) England ☐	
(c) United Kingdom ☐	
Please give reasons for your answer. As per previous comments there must be additional upside for the local community bearing the brunt of any development; this can be achieved by 'subsidising' the carbon price for local developments - so a 20% reduction could be provided for mitigation within	

2 miles of a development, and perhaps 10% within 10 miles?

Question 17	Do you consider that the five criteria set out in paragraph 4.17 of the consultation document are appropriate to determine Allowable Solutions' measures?
Yes ☐	
No ☒	
Please give reasons for your answer Generally we agree with the criteria in principle - but we don't understand what will happen if the level of the carbon cap - for example at £90/tonne is set too low such that no projects are brought forward - if you look at the current ECO market a cap of £90/tonne would exclude Allowable Solutions from all Green Deal type mitigation and the majority of other solutions e.g. renewables run the risk of double counting with other forms of subsidy.	

Question 18	Are there other criteria you consider should be used?
Yes ☐	
No ☐	
Please give reasons for your answer	

Question 19	Do you have evidence that you are willing to share with DCLG about the likely supply of Allowable Solutions' measures?
Comments: We feel that the 'Allowable Solutions Market' is likely to fail because of the shortage of available mitigation projects at the sort of carbon prices the consultation is suggesting. It would have been better if the consultation had done more detailed analysis whether there was a market, the depth of this market and the likely carbon prices before presenting this consultation - the Green Deal ECO market at £110+/tonne indicates the current;y proposed caps may be unrealistic.	

Question 20	Do you agree that the verification system for Allowable Solutions

	should include arrangements for deeming savings as a form of ex ante verification?
Yes ☒	
No ☐	
Please give reasons for your answer	

Question 21	Do you have views on how such a system might best operate?
Comments:	

Question 22	Do you agree that the verification system for Allowable Solutions should include arrangements for ex post verification?
Yes ☒	
No ☐	
Please give reasons for your answer Yes, but the administration of these should be kept to a minimum, so it might rely on trust unless there was a perception of a market breakdown.	

Question 23	Do you have views on how such a system might best operate to provide the best balance of assurance while avoiding overly burdensome reporting and monitoring processes?
Comments: Should largely rely on trust; but projects should be centrally logged and subject to public scrutiny	

Question 24	Should there be sanctions for non delivery of the expected carbon savings for Allowable Solutions' measures?
Yes ☒	
No ☐	
If Yes, how should those sanctions operate? but not punitary unless fraud is suspected	

Chapter 5: Price cap

Question 25	Please provide your view on whether the government should: (a) allow the market to set its own price? Or ☒ (b) set a single fixed price? Or ☐ (c) set a ceiling price but enabling Allowable Solutions to be brought forward at lower prices? Or ☒ (d) set a floor price for Allowable Solutions? ☐ *(tick one box above only)*
Comments:	

Question 26	Which price do you think should be adopted and why? low ☐ central ☐ high ☒
Comments:	We don't believe that at £90/tonne there will be enough projects brought forward, so even at this price there is a good chance the market will fail. We also don't understand how the £90/tonne 'solar pv' price is derived? At an optimistic £1000/kWp a solar panel might produce 850 kWh of electricity, with a carbon saving of 450 kg (850*.56kg/kWh), discounted over 30 years at 3.5% is 8.2 tonnes or £120/tonneCO2. You could for example 'extend the life' of the solar PV and discount over a longer period but we feel this is unrealistic and with grid decarbonisation post 2030 carbon benefits from solar PV might be significantly lower? So we believe the £90 cap to be unrealistic?

Question 27	What impact do you think the different price caps will have on the extent to which Allowable Solutions projects will be brought forward?
Comments:	As stated above and based on knowledge and experience of the ECO market we feel that very few projects are likely to be brought forward at the lower caps suggested - we feel this consultation should have spent more time researching

different types of mitigation and the potential depth in each of those markets

Question 28	What impact do you consider the different price caps will have on the viability of house building and would the impact differ in different parts of England?
Comments:	

Question 29	Is 3 years an appropriate interval to review the price cap?
Yes ☐	
No ☒	
If no, how often do you think it should be reviewed? Annually, or at least if there is a signifcant change in the market, government is particularly poor at tracking trends - e.g. the cost of solar PV & FITs and if there are signifcant structural changes in the market then caps should be adjusted, and this includes upwards if for example it is discovered that no low cost Allowable Solution market exists. This may present a slight problem for builders in terms of planning but we think it better that the cap moves in small increments more regularly than one big jump every 3 years.	

Question 30	Should Allowable Solutions cover 30 years of residual emissions?
Yes ☐	
No ☐	
If no, how often do you think it should be reviewed? 30 years is reasonable, but the methdology needs careful thought, particularly with grid decarbonisations the post 2030 electricity grid intensity is likely to be lower reducing the 'carbon offset'. We also think the discount rate might need to be higher than the typical government 3.5% to reflect the impact of new technologies, potentially making for example existing solar PV installations less economical (e.g. higher efficiency cheaper panels)	

Question 31	Do you think the calculation of the carbon abatement required should take account of the expected and actual decarbonisation of the electricity grid?
Yes ☒	
No ☐	
Please give reasons for your answer Absolutely, otherwise any carbon price is meaningless if you are planning on discounting over a long period. We also feel that a lack of future proofing of the FEEs homes as defined by ZCH needs to be included in the cost, it is likely that these homes will not meet 2050 standards - for example it is likely that they won't be insulated enough and still contain carbon emitting gas boiler which are not compatible with the governments 2050 commitments.	

Chapter 6: Allowable Solutions delivery routes

Question 32	Do you agree that route (i) of the house builder 'menu' can be accommodated within current Building Regulations compliance processes?
Yes ☒	
No ☐	
Please give reasons for your answer We are not sure we understand the question, but 100% compliance can be achieved on most sites with careful use of a mix of technologies. We disagree with the notion in the industry that roof spaces are not large enough to accommodate enough solar PV to provide 100% on site abatement, use of high efficiency solar PV reduces the demand on roof space. It is only when you get to flats, 3 storeys and above or in conservation areas that other measures need to be used.	

Question 33	What kinds of Allowable Solutions measures undertaken under route (ii) of the house builder 'menu' do you consider could be accommodated within current Building Regulations compliance processes?
Comments: We don't think the cost of retrofit will fit under the proposed cap.	

Question 34	Do you think that house builders should be able to enter into a direct transaction with third parties, including local authorities, to deliver Allowable Solutions?
Yes ☒	
No ☐	
Please give reasons for your answer	

Question 35	How might that approach operate?
Comments: The general answer to all these questions is to examine the operation of the current Green Deal/ECO market which seems to have many of the facets of what DCLG are looking for in terms of evidence.	

Question 36	Do you have any evidence of how such a system might work which could be drawn upon in developing such an arrangement?
Comments:	

Question 37	Do you agree that provision of a matching service should be considered?
Yes ☐	
No ☐	
Please give reasons for your answer: From what we understand from the Green Deal/ECO brokerage market, a lack of liquidity and guarantees means that the large energy providers are not using this market; there is a similar risk if this is the approach Allowable Solutions is also attempting to provide.	

Question 38	Do you have views on how such a system might work to assist house builders?
Comments:	

Question 39	Do you have any evidence of existing matching services which could be drawn on in developing such an arrangement?
Comments:	

Question 40	Do you agree that provision of a brokerage service should be considered?
Yes ☐	
No ☐	
Please give reasons for your answer	

Question 41	Do you have views on how such a system might work to assist house builders?
Comments:	

Question 42	Do you have any evidence of existing brokerage services which could be drawn on in developing such an arrangement?
Comments: Green Deal/ECO brokerage market	

Question 43	Do you agree that provision of a fund approach should be considered?

Yes ☐
No ☒
Please give reasons for your answer: We don't understand how the carbon saving from any investment a fund makes could be shared and whether it would fit under the cap and how you would avoid double counting?*

Question 44	Do you have views on how such a system might work to assist house builders?
Comments:	

Question 45	Do you have any evidence of existing funds which could be drawn on in developing such an arrangement?
Comments:	

Question 46	If invested in a fund, Allowable Solutions payment capital and profits can both be reinvested on a revolving fund basis to increase long-term potential carbon savings. However, commercial returns and/or capital could be given back to house builders rather than reinvested, but this would mean less carbon being abated and hence a higher upfront investment would be required to meet the house builder's zero carbon homes obligation. Is there any interest from house builders in investing into a fund which abates carbon and also makes a return rather than making a smaller one-off payment?
Yes ☐	
No ☐	

Comments:

Question 47	What are your views on the assessment of the delivery options set out in the table below paragraph 6.19 of the consultation document?
Comments:	

Question 48	Are there other considerations which government should be taking into account?
Comments: Yes, whether there is enough capacity for low cost carbon reduction projects to offer carbon prices below the suggested caps. The current Green Deal/ECO market is struggling to deliver projects below £100/tonne suggesting there might be a shortage of projects at a price below the caps. The impact analysis for example refers to a district heating study stating carbon costs of £16/tonne which we don't believe, some of which were for ficticious projects e.g. Hanham Hall in Bristol. The majority of the case studies were for new build sites which does suggest onsite mitigation might be the better option. For offsite district heating systems, on a retrofit basis we feel in many circumstances the prices will be much higher. In addition the ZCH Sep 2012 report on this subject appeared to struggle to find examples of carbon prices below £100/tonne, and those that were e.g. solid wall insulation we felt were too low and probably miscalculated.	

Question 49	In the light of this analysis what is your preferred delivery route?	
	house builder DIY	☐
	bilateral	☐
	matching / brokerage	☐
	fund	☐

	(tick one box above only)
Please provide reasons for your answer.	

Chapter 7: Next steps

Question 50	What do you think an appropriate familiarisation period might be for industry and appropriate transition arrangements for Allowable Solutions?
Please provide reasons for your answer.	

Question 51	A development stage impact assessment accompanies this consultation document. Do you have any views on the analysis, costs and benefits presented in that impact assessment? Can you provide any additional evidence to inform the further development of the impact assessment?

Comments:

As per question 48 above we don't believe there is a large enough, liquid enough market below £90/tonne at which projects can be delivered. We feel that more research by DCLG is necessary before setting any caps or levels. There is no point setting a cap for example at £60/tonne if there are no projects that can be delivered at this level.

In particularly we don't believe the figures presented for district heating systems in the impact assessment; it appears these can only be cost effectively delivered on new build sites and there are not really offset but rather on-site mitigation which we are ok with, but shouldn't be cited as examples of offsets. On a retrofit basis we feel the cost effective opportunities are limited to sites with existing centralised boilers e.g. blocks of flats, elsewhere if new district heating mains are to be laid the costs will be much higher.

We also feel that it is unrealistic to not take into account grid decarbonisation when assessing 30 year discounted carbon prices; we also we a higher discount rate should be assumed to take into account future uncertainty and changes in future technology.