



# The Code for Sustainable Homes and the Energy Efficiency Standard for Zero Carbon Homes

## **Summary of responses to consultation**



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Department for Communities and Local Government  
Eland House  
Bressenden Place  
London  
SW1E 5DU  
Telephone: 030 3444 0000  
Website: [www.communities.gov.uk](http://www.communities.gov.uk)

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# 1 Summary

## 1.1 Introduction

- 1.1.1 The Department for Communities and Local Government (DCLG) issued a consultation paper in December 2009 entitled *Sustainable New Homes – The Road to Zero Carbon. Consultation on the Code for Sustainable Homes and the Energy Efficiency Standard for Zero Carbon Homes*. The consultation set out the proposed changes to the Code that are planned to come into force in 2010.
- 1.1.2 Responses were invited by March 24th 2010. Respondents were encouraged to complete an online questionnaire included as Annex A of the consultation paper. Some replies were also received by email or as a paper copy.
- 1.1.3 The aim of the Code is to improve the overall sustainability of new homes by setting a single national standard for England, Wales and Northern Ireland within which the home building industry can design and construct homes to higher environmental standards, and giving new homebuyers better information about the environmental impact of their new home and its potential running costs.
- 1.1.4 To enable the Code to continue to play a valuable role, the consultation was focused on three main aims:
  1. Aligning the Code with the latest developments in the zero carbon homes policy – to enable it to continue to reflect the future regulatory trajectory and provide practical experience for developers and inform the development of detailed regulatory proposals for 2013 and beyond. This includes consulting on the new energy efficiency standard to be required of zero carbon homes
  2. Streamlining the standard and processes – learning from experience to date, to ensure that the Code is focused on the issues of greatest significance and that we eliminate unnecessary bureaucracy and
  3. Resolving problems that have arisen in use – seeking to find practical solutions to barriers that have arisen in the use of the Code so far, balancing sustainability policy aims with the practicalities of house building in the current economic climate.
- 1.1.5 AECOM has been commissioned to support DCLG in the development of the amendments to the Code. The views reported in this summary are those expressed by the respondents to the consultation and do not necessarily reflect those of DCLG or the authors of this report.
- 1.1.6 A number of stakeholder-focused workshops were held to discuss the consultation proposals and encourage attendees to submit a formal response. Attendees were invited to attend the session most appropriate to their area of knowledge:
  - Code Assessors 23rd Feb (Leeds)
  - Code Assessors 24th Feb (London)
  - Social Housing 24th Feb (London)
  - Housebuilders 1st Mar (London)

- Local Govt 8th Mar (London)
- Inclusive design 9th Mar (London)

1.1.7 The workshops enabled DCLG to obtain initial feedback from interested parties on the consultation and gain an early indication of whether the proposals being put forward were generally accepted or not. It is important to note that although the discussions provided important early learning to DCLG, any feedback provided during these sessions have not been accepted as formal responses to the consultation.

1.1.8 It is envisaged that a revised version of the Code will come into effect in November 2010.

## 1.2 The respondents

- 1.2.1 A total of 199 responses were received. Annex A lists the organisations that submitted a formal response to the consultation.
- 1.2.2 The majority of responses were received through the on-line consultation response form, but there were also a significant number via e-mail. A limited number of hardcopy responses were also received. Some respondents chose to respond using two or all three of the methods; however any duplicate responses from the same individual have not been included within this analysis in order to avoid 'double-counting'. It should be noted that there have been a number of multiple responses received from the same organisation but from different individuals, therefore these responses have been included.
- 1.2.3 It is evident from the analysis that some respondents chose only to respond to Part B of the consultation which addressed the energy efficiency standard for zero carbon. Many others chose not to respond to all questions, meaning the number of responses per question varies.
- 1.2.4 Respondents who completed the online consultation response form were asked to provide details of the organisation from which they are representing; or whether they are responding as an individual. Respondents were able to ask to remain anonymous, but none chose to do so.
- 1.2.5 To enable a more clear representation of the responses for each sector, organisations were grouped into broad categories. Table 1.1 below shows respondents by category in descending order of response numbers. Annex B provides a breakdown of how the responding organisations were categorised.

**Table 1.1: Categorised organisations and % proportion of total**

Respondent Types	Number	% of total
Consultancy <sup>1</sup>	57	28.6
House Builder	37	18.6
Local Authority	24	12.1
Social Housing Provider	16	8.0
Trade body / National Representative	19	9.5

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<sup>1</sup> This group comprised architects, environmental and technical consultants, assessors, and organisations that provide consultancy advice.

Manufacturer / Supplier	21	10.6
Government Body	15	7.5
Other	10	5.0
<b>Total</b>	<b>199</b>	<b>100%</b>

- 1.2.6 The largest number of respondents came from Consultancies, followed by the House Building sector.
- 1.2.7 A number of responses were received that were not directly related to the proposals set out in the consultation. These have been dealt with by DCLG outside of this consultation process.

### 1.3 Overview of responses

- 1.3.1 Where respondents have used the online form and did not respond to a particular question but entered 'not applicable' in the comments box, this entry has not been included when analysing the number of responses to that question.
- 1.3.2 Analysis of the written responses has shown that for some questions a number of respondents contradicted their indicated agreement or disagreement to a proposal (i.e. where they chose to select 'yes' or 'no') by providing a conflicting accompanying comment. This occurred in question 4 regarding the introduction of half credits, question 11 regarding the adoption of new energy efficiency levels for level 5 and Level 6; and question 22, regarding the definition of steeply sloping sites. In these cases it has been assumed that the respondent did not fully understand the intention of the proposal, or agree in principle but have some concerns regarding the detail of the proposal. However, since there is a level of uncertainty attached to this issue the pie chart and bar chart that accompany the analysis (showing the number of direct 'yes/no' answers) have not been amended.
- 1.3.3 This report presents a summary of the consultation responses. Within each section, the results for each question are presented as follows.
- The analysis of the yes/no questions is provided as a pie chart of the overall responses and in graphical bar chart form to show the variation of answers between organisation category types.
  - Following the quantitative analysis, a summary of the key comments received in response to each question has been provided.

### SUMMARY OF RESPONSES

- 1.3.4 The graph below (Figure 1.1) shows the proportion of outright 'yes' responses for each question and shows the level of agreement with the proposal put forward by the consultation. The graph has been ordered to show the questions with the highest level of agreement first, down to the lowest.
- 1.3.5 Overall the responses were mainly positive for most of the questions. Of the 52 questions the following proportions of 'yes' answers were received:

- 19 = 75 per cent and over (definite agreement)
  - 19 = 50 per cent - 74 per cent (agreement in principle, subject to comments provided)
  - 6 = 25 per cent - 49 per cent
  - 0 = under 25 per cent
- 1.3.6 The graph shows that respondents agreed most with questions relating to aligning the Code with Part L of the Building regulations and the Zero Carbon Hierarchy, and the proposed use of the Energy Efficiency Standard.
- 1.3.7 A number of questions ask for examples of experience as opposed to a yes/no response to a specific question.
- 1.3.8 Where responses of agreement are less than 50 per cent of the total, DCLG will revisit the proposals put forward using the response comments to inform any revisions potentially made.

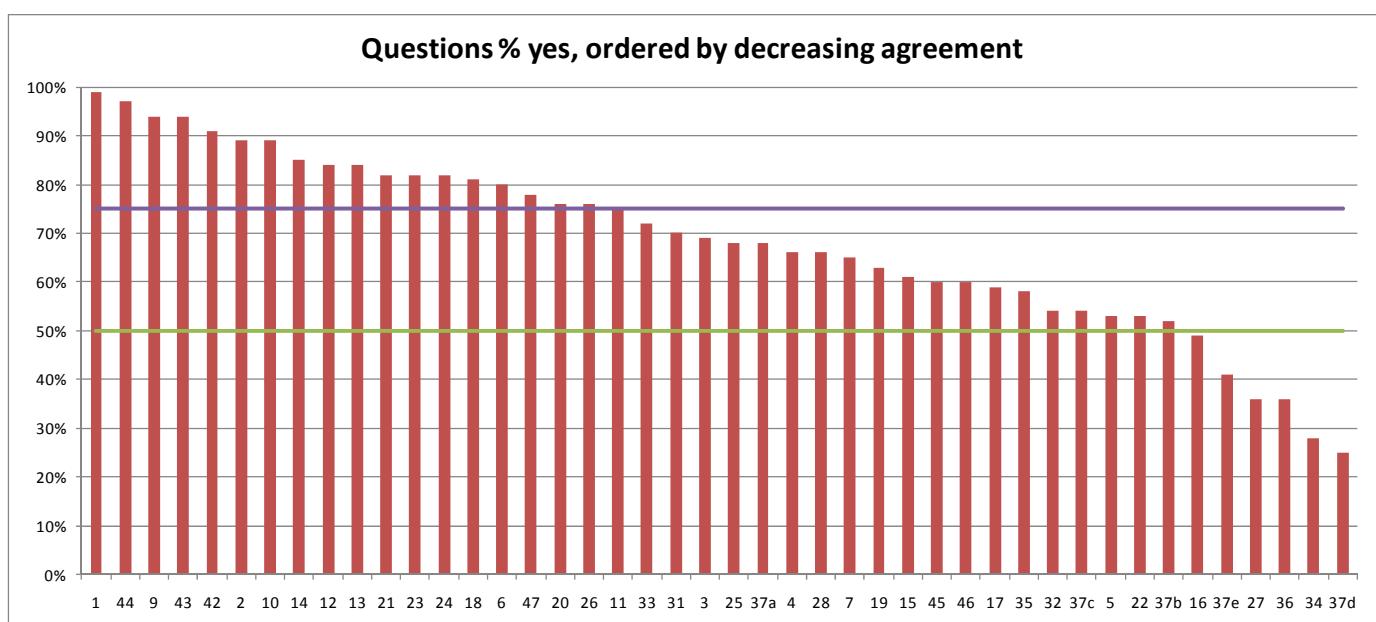


Figure 1.1: Chart showing % 'yes' responses for each question, ordered by the highest percentage of respondents that agreed with the consultation question

- 1.3.9 Areas where less than 50 per cent agreement was received were:
- Renaming of ENE7 Low and Zero Carbon Technologies to ENE3 Renewable Technologies.
  - Doubling external storage space for domestic waste collection.
  - Applying reduced requirements to parts of the Code other than the Home Office space requirement for specialist housing.
  - Changes to the assessment criteria for SUR1 management of Surface Water Run-off from Development.

- Making Secured by Design physical security standards mandatory.
- Awarding 2 credits for consulting with an ALO or CPDA.

1.3.10 Table 1.2 below presents the percentage proportion of 'yes', 'no' and unspecified responses for each of the consultation questions. Where 'n/a' has been shown this is because the question did not ask for yes/no answers, asking for comments instead for instance.

1.3.11 The responses which did not specify direct agreement or disagreement with the proposal tended to provide comments on the respondents concerns and issues instead. Some of the responses indicated some level of agreement or disagreement; however since these were not direct these responses have not been included within the 'yes/no' analysis. The comments have however been used in the overall response analysis and where appropriate will be used to help inform the final policy decision on the revisions to the Code.

Question	% Yes	% No	% Unspecified
1. Do you agree that the Code energy methodology should be aligned with the revised Part L 2010 when published?	99	1	0
2. Do you agree that in principle we should maintain the current approach whereby the energy section of the Code (ENE 1) anticipates the 2013 and 2016 changes to regulations leading to zero carbon?	89	8	3
3. Do you agree in principle that the energy issues in the Energy category of the Code should be revised to reflect the terminology used in zero carbon hierarchy? If not, what would be your suggested approach?	69	28	3
4. Do you agree that introducing half credits under ENE1: Dwelling Emission Rate is an effective approach to preventing degradation of specification? If not, why?	66	31	3
5. Would it be beneficial to introduce a further breakdown of credits available in this section? If yes, what would you propose?	53	42	5
6. Do you agree with removing 5 credits from ENE 1: Dwelling Emission Rate and reallocating them to ENE 2: Building Fabric to incentivise improvements to the energy efficiency of the building?	80	16	4
7. Do you agree with the proposed allocation of credits, as shown in the credit allocation table? If not, what would be your suggested approach?	65	23	12
8. Do you have any suggestions for mechanisms for allowable solutions that could be used in the Code in advance of the introduction of a national approach to allowable solutions?	n/a	n/a	n/a
9. Do you agree that ENE2: Building Fabric be changed from its current name to ENE2: Fabric Energy Efficiency to reflect the zero carbon hierarchy?	94	6	0

10. Do you agree that we should adopt the new energy efficiency metric and levels for the 2016 zero carbon definition into the Code now? If not, why not?	89	8	3
11. Do you agree that we should adopt the new energy efficiency levels for the 2016 zero carbon definition into the Code as a mandatory requirement at Code levels 5 and 6 and award 5 credits?	75	17	8
12. Do you agree that Code level 4 should mirror the outcome of the consultation on the energy efficiency definition (see Part B) for interim measures to be introduced into regulations in 2013 ?	84	10	6
13. Do you agree that the credits for internal lighting will no longer be required once the Code is updated in 2010 and it is therefore appropriate to delete ENE3: Internal Lighting and reallocate the points elsewhere in the energy section?	84	13	3
14. Do you agree that evidence must be provided by developers on the energy efficiency of appliances provided as optional extras if they choose to gain the credit for leaflet provision?	85	10	5
15. Do you agree that the 2 points awarded for external lighting should be reduced to 1 point?	61	39	0
16. Do you agree that this issue is renamed from 'ENE7 Low and Zero Carbon Technologies' to 'ENE3: Renewable Technologies' to better reflect the zero carbon hierarchy?	49	44	7
17. Do you agree that for technologies under 50kWe and 300kWt certification under the 'Microgeneration Certification Scheme' should be a requirement for allocating credits and for all renewable CHP schemes over 50kWe assurance under the CHPQA should be a requirement for allocating credits?	59	31	10
18. Do you agree that a new issue should be introduced into the Code for the provision of energy display devices?	81	10	9
19. Do you agree with the proposed credit allocation for this new issue? If not, why not?	63	32	5
20. Do you agree that we should postpone making the Lifetime Homes Standards (as revised) a mandatory requirement from Code level 4 upwards pending a review in 2010?	76	18	6
21. Do you agree with our proposal to introduce an exemption on steeply sloping sites for the external Lifetime Homes requirements and award 3 out of the 4 available points?	82	9	9
22. Do you agree with the definition of a steeply sloping site as having a predominant gradient of 1:12 or greater?	53	37	10
23. Do you agree with the proposals for measuring gradients?	82	10	8
24. Do you agree with the proposed changes to the technical guide criteria in order to better reflect current thinking and standards on accessibility? If not, which proposals do you disagree with, and why?	82	9	9

25. Do you agree that current Code requirements cause duplication for some developers who already have a corporate site waste management plan in place? If yes, please provide evidence of experiences to support your answer.	68	31	1
26. Should the mandatory requirement for Site Waste Management Plans be removed and replaced with voluntary credits for minimising or diverting waste to landfill as set out above and in the technical guide?	76	16	8
27. Do you agree with the proposed methodology and requirements for dealing with doubling external space where there is a fortnightly collection? If not, what methodology/requirements do you think should be used?	36	59	5
28. Do you agree that waste compactors should be allowed on sites where there are space restrictions for storing waste? If yes, do you agree with the proposed requirements?	66	29	5
29. Should communal cycle storage in large scale, high density developments be reduced, remain the same or be increased? We would welcome evidence from respondents of experiences with this issue.	(26% - Remain the same)	(36% - Reduced)	38%
30. If we were to rescale the communal storage requirements for certain sized developments, what threshold should be used to describe a development as 'large scale' and allow a rescaled requirement to be applied, e.g. 100 dwellings, 200 dwellings, etc.? Why do you consider this threshold to be appropriate?	n/a	n/a	n/a
31. Do you consider it appropriate to reduce the cycle storage requirement for certain types of development, such as specialist retirement housing. If so, what types of development would you consider it appropriate to apply the reduction to?	70	17	13
32. Should the requirement for cycle storage remain for all developments but be flexible to allow for storage of mobility equipment applicable to the likely end user as well as cycles?	54	32	14
33. Do you agree that the home office space requirement for specialist housing such as retirement homes should be reduced?	72	28	0
34. Are there other parts of the Code you think this may apply to?	28	48	24
35. Should the issues in the Code not directly related to climate change remain in the Code? What are the reasons for your answer and do you have any evidence to support them?	58	26	16
36. Do you agree with the proposed changes set out in the technical guide to the assessment criteria in 'SUR1: Management of Surface Water Run-off from development'? If not, why not?	36	45	19
37a. Do you agree in principle that the minimum door and window security standards outlined in Box B should be introduced into the Code and awarded one credit?	68	23	9

37b. Should an additional credit be available for consulting with the local architectural liaison officer or crime prevention design advisor and implementing their recommendations based on 'Secured By Design part 2'?	52	33	15
37c. Do you think the above options would give rise to additional construction costs. If so, please state what you think those costs would be.	54	25	21
37d. Alternatively, to drive take up of basic physical security standards in new homes would it be necessary to make them a mandatory part of the Code?	25	61	14
37e. Would an alternative approach of allowing two credits for consulting an architectural liaison officer or crime prevention design advisor (whilst leaving the credit for door and window locks voluntary) be a more attractive way of encouraging take up of basic security standards?	41	35	24
38. Do you agree that the technical guide should only be updated in 2013 and 2016? If not, do you have any suggestions for how often updates should be issued (for instance annually or every 18 months)?	53	29	18
39. Do you have any comments on the redesign of the technical guide or suggestions for improving it?	n/a	n/a	n/a
40. Do you have any experience or views on how to help make the Code more accessible, visible and valuable to consumers?	n/a	n/a	n/a
41. We would welcome your thoughts on whether these areas (see below) should be considered for the future and any evidence you may have to support those views.	n/a	n/a	n/a
42. Do you agree that the appropriate metric for the energy efficiency standard to support the regulatory definition of zero carbon homes should be based on the amount of energy demand for space heating and cooling per square metre per year? If not, why not?	91	3	6
43. Do you agree that it is right to focus on fabric and passive energy efficiency measures within the energy efficiency standard and to capture the efficiency of heating and cooling appliances and systems, mechanical ventilation, heat recovery and gains from hot water via carbon compliance? If not, why not?	94	0	6
44. Do you agree that it is right to differentiate the level of the fabric energy efficiency standard (expressed in kWh/m <sup>2</sup> /year) according to the type of dwelling? If not, why not?	97	3	0
45. Do you agree that the regulatory standard applicable from 2016 should (based on consultation SAP 2009) be 39 kWh/m <sup>2</sup> /year for apartments and mid-terrace houses and 46 kWh/m <sup>2</sup> /year for semi-detached houses? If not, do you think it should be (a) more demanding - for example equivalent to the Specification C- considered by the task group or (b) less demanding - for example equivalent to the Specification A considered by the task group?	60	3 – less demanding 15 – more demanding	22

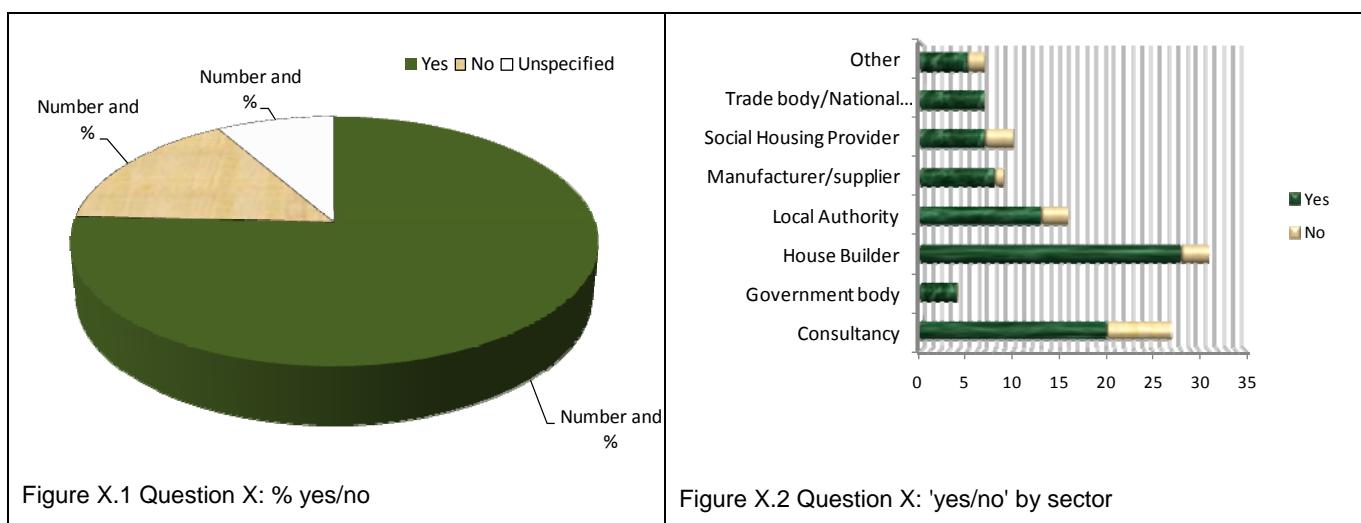
46. Do you agree that the regulatory standard applicable from 2016 should (based on consultation SAP 2009) be 46 kWh/m <sup>2</sup> /year for detached houses? If not, do you think it should be (a) more demanding - for example equivalent to the Specification C considered by the task group or (b) less demanding - for example equivalent to the Specification B considered by the task group?	60	4 – less demanding 16 –more demanding	20
47. Government is minded to introduce interim requirements from 2013. Do you agree? What approach would you support, bearing in mind the considerations and ideas set out in paragraphs 220-221?	78	10	12
48. Are the proposals set out in this chapter likely to result in any seriously adverse unintended consequences that are unlikely to be addressed through the research requirements identified in paragraph 217?	n/a	n/a	n/a

Table 1.2 Proportion of 'yes', 'no' and unspecified responses for each question

## 2 Response analysis by question

### 2.1 Section structure

- 2.1.1 The following sections provide a breakdown of the analysis of the responses to each consultation question. All sections have been structured in the following way, unless specified otherwise.
- question number
  - the question, as worded in the consultation document
  - summary charts
- 2.1.2 The pie chart (Figure X.1) shows the proportion of “yes” and “no” responses, and those responses that did not specify either. Each chart segment provides the number of responses received, followed by the overall percentage of total responses to that question.
- 2.1.3 The bar chart (Figure X.2) breaks down the responses by sector and gives the number that agreed (“yes”) and disagreed (“no”) with the consultation question along the bottom of the chart.



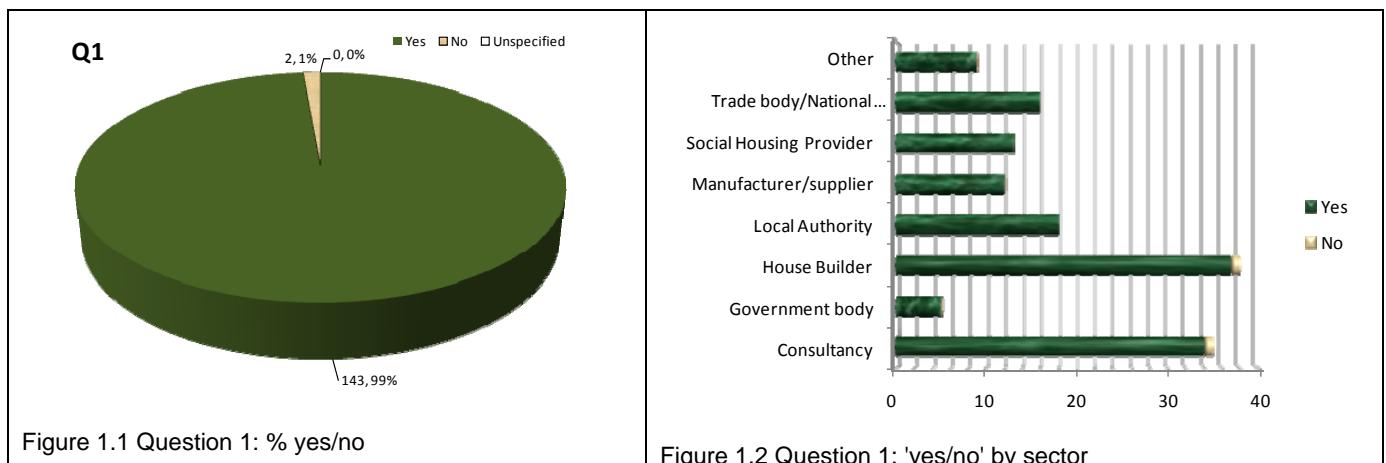
- Comments on responses to question X
- 2.1.4 We have provided a summary of the responses and accompanying comments for each consultation question, indicating the level of agreement and disagreement, and from which sectors.
- Conclusion
- 2.1.5 Based on our analysis of the responses received, we have set out the policy decision that has been made in regards to the question asked.

## **2.2 Analysis by question**

The responses to each question have been analysed. The findings have been summarised, and together with the policy decision, have been provided on the following pages.

### **Question 1:**

**Do you agree that the Code energy methodology should be aligned with the revised Part L 2010 when published?**



The methodology adopted in the Code energy section builds on the methodology for the current Part L of the Building Regulations and uses SAP as the tool for calculations. It is proposed that Code will be aligned with the revised Part L 2010 when finalised to ensure that lower levels of the Code at least match expected regulatory standards.

### **Comments on responses to question 1**

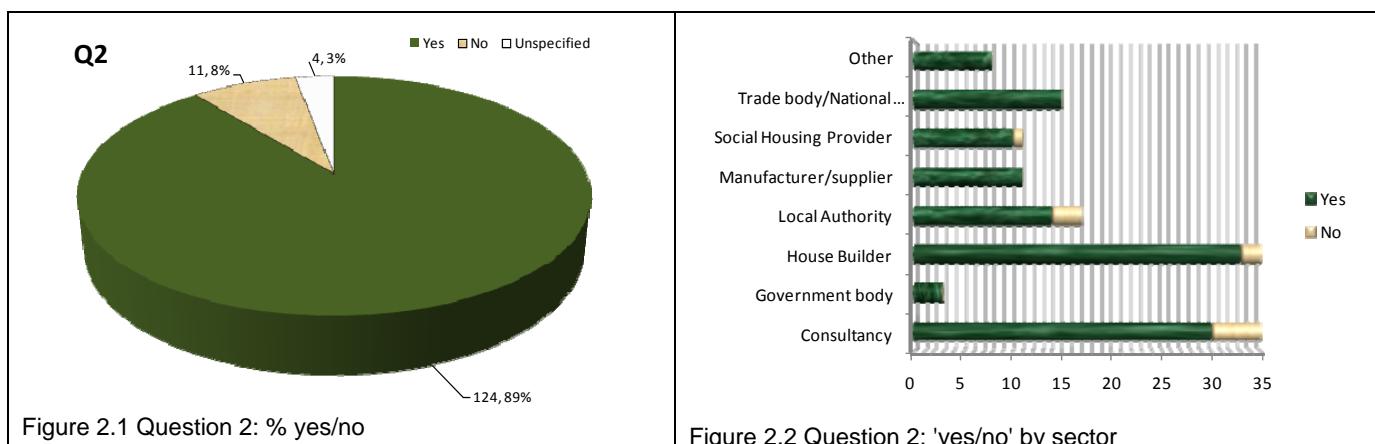
In total 145 responses to this proposal were received. Responses were received across all the participating sectors. Only two respondents disagreed with the proposal.

There was almost complete consensus that alignment of the Code with Part L would promote consistency and avoid confusion. It was also considered that establishing better alignment to the trajectory towards zero carbon is crucial in order to maintain industry momentum. Some respondents stated that support for the proposal was based on there being no major changes between cSAP and SAP 09. This point was raised for many of the energy-related proposals.

A limited number of comments were provided in support of respondents' answers; however several weren't directly relevant to the question being asked and appeared to be more relevant to questions asked later on in the consultation document.

## Question 2:

**Do you agree that in principle we should maintain the current approach whereby the energy section of the Code (ENE 1) anticipates the 2013 and 2016 changes to regulations leading to zero carbon?**



Energy issue *ENE1: Dwelling Emission Rate* follows the trajectory to zero carbon and sets minimum standards for each of the Code levels against the Building Regulations Part L 2006 baseline. Feedback from industry suggests that this trajectory, and the ability to build to these higher standards, has helped focus minds and encouraged some builders to gain early experience. DCLG consider additional benefit to be gained by adopting the proposed regulatory definition of zero carbon in the Code at the highest level. This will enable industry to continue piloting approaches to low and zero carbon homes through the Code. It is therefore proposed that ENE1 maintains the current approach and is revised to anticipate the new zero carbon definition, the new Part L requirements and anticipate what Code level 4 (the 44 per cent improvement) and Code level 5 will look like.

### Comments on responses to question 2

In total 139 responses to this proposal were received. The majority of respondents (89 per cent) agreed with the proposal, with 8 per cent respondents disagreeing.

The general consensus is that the Code should anticipate the changes to Part L in 2013 and 2016. It is considered that this is necessary in order to provide a staged approach, giving time to develop and adapt to low carbon approaches.

Some concern was expressed about the regulatory jump from 25 per cent to 44 per cent and how this is managed. Yearly reviews were suggested as being useful. Those who disagreed considered that this approach would result in the Code moving the “goal posts” and expressed concern regarding the timetable for Part L towards zero carbon homes.

### Question 3:

**Do you agree in principle that the energy issues in the Energy category of the Code should be revised to reflect the terminology used in the zero carbon hierarchy? If not, what would be your suggested approach?**

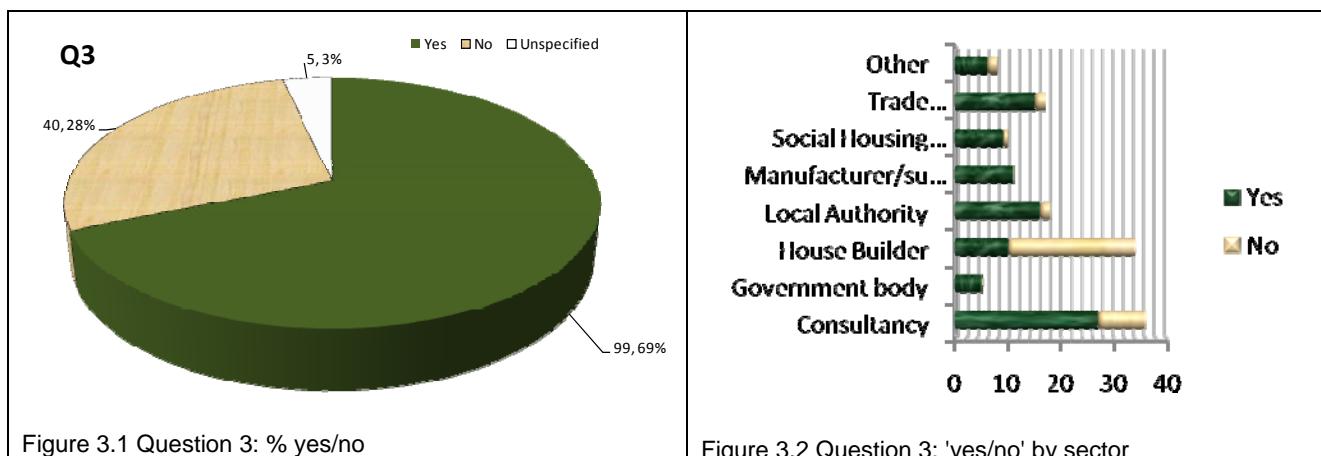


Figure 3.1 Question 3: % yes/no

Figure 3.2 Question 3: 'yes/no' by sector

This proposal suggests revising the wording and sequencing currently used in the Code energy section to better reflect the zero carbon hierarchy. This will help industry become familiar with future regulations, including the terminology and approaches used, and will reduce the need for further changes in the future.

### Comments on responses to question 3

In total 144 responses to this proposal were received. The majority of respondents (69 per cent) agreed with the proposal - the need for clarity and consistency with the zero carbon definition was the main reason for supporting the proposal.

Twenty-eight per cent of respondents disagreed with the proposal. A large proportion of these were house builders, and out of all the sectors they were the only group where more respondents disagreed than agreed. The main reasons given were in regards to the administrative burden caused by renaming and rearranging issues, plus it was considered that a policy decision shouldn't be made on this proposal until the full definition of zero carbon is finalised.

#### Question 4:

**Do you agree that introducing half credits under ENE1: Dwelling Emission Rate is an effective approach to preventing degradation of specification? If not, why?**

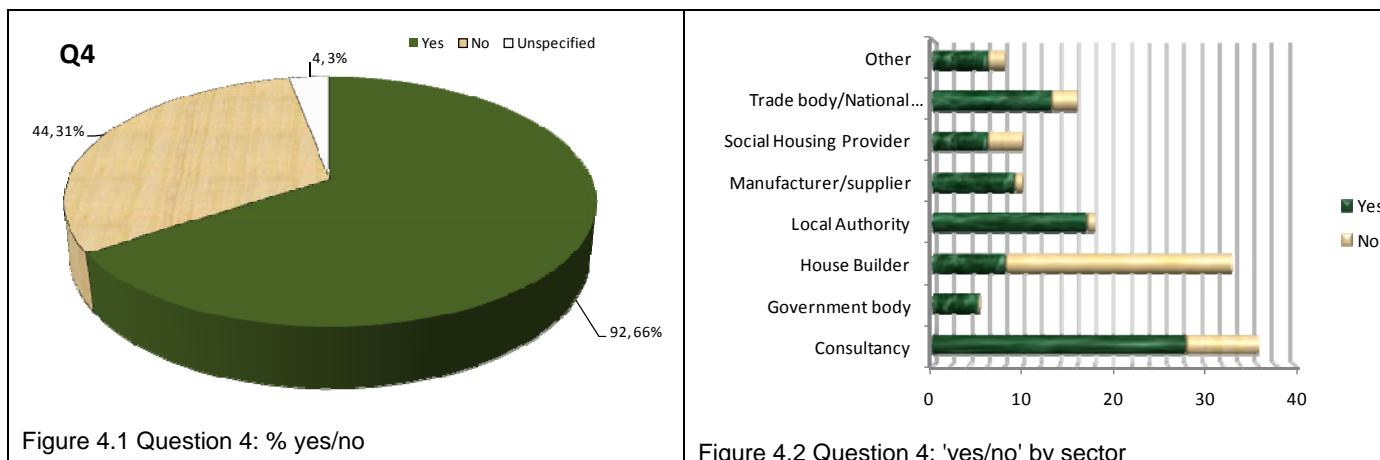


Figure 4.1 Question 4: % yes/no

Figure 4.2 Question 4: 'yes/no' by sector

With the current credit allocation for *ENE1: Dwelling Emission Rate*, if, for example, 29 per cent improvement is achieved, 5 credits would be awarded because it falls within the range between 25 per cent to 30 per cent. This is despite 29 per cent being nearer to the 6 credit boundary (31 per cent). This could limit energy efficiency specifications to only achieve the mandatory minimum requirements, rather than encourage developments to aim slightly higher. Therefore it is proposed that fractions of credits, e.g. 'half' credits, be awarded where emissions reductions sit between defined benchmarks.

#### Comments on responses to question 4

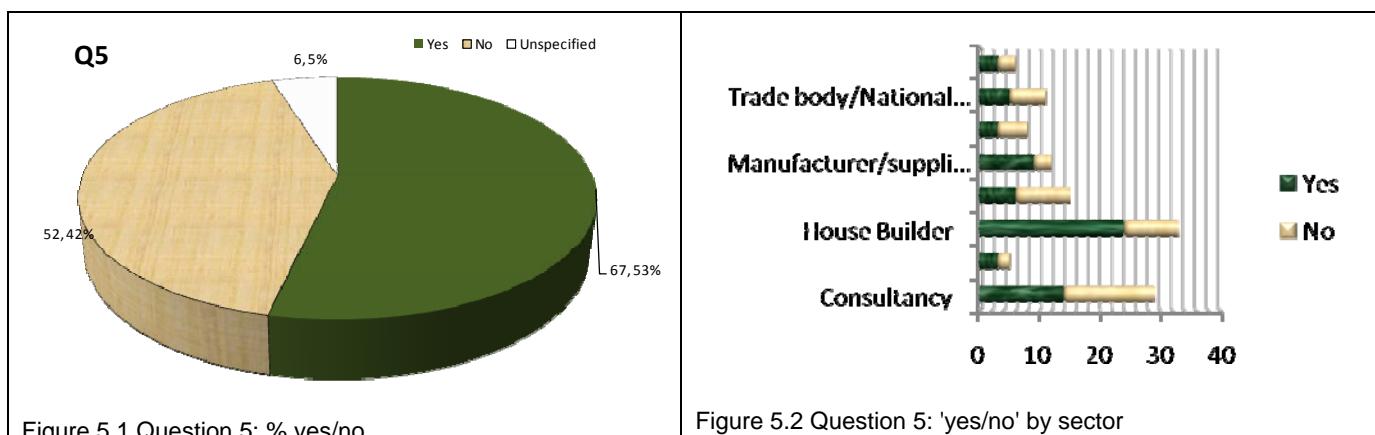
In total 140 responses to this proposal were received. Two-thirds of respondents (66 per cent) agreed with the proposal, with 31 per cent respondents stating that they disagree. Of those who disagreed with the proposal the majority were house builders.

Support for this proposal was generally strong and the half credit approach welcomed. However a number of suggestions were also put forward to further strengthen this issue, although a number of responses stated a preference for using a decimal scale, which contradicts supporting the half credit approach.

From those respondents who disagreed, it was suggested that the proposal would lead to over-complication and no additional value in terms of higher specification or cost would be realised. Nearly all of the responding housebuilders who disagreed with the proposal (20 out of 23) stated a preference for using a decimal point system instead of half credits. They consider this approach provides better reward for the improvements made to the DER.

## Question 5:

**Would it be beneficial to introduce a further breakdown of credits available in this section? If yes, what would you propose?**



The previous question, question 4, proposes that fractions of credits, e.g. 'half' credits, be awarded where emissions reductions sit between defined benchmarks. Question 5 asks whether a further breakdown of credits available would be beneficial.

### Comments on responses to question 5

In total 125 responses to this proposal were received. The majority of respondents (53 per cent) agreed with the proposal, although only marginal when compared to those who disagreed (42 per cent). More housebuilders agreed with the proposal than disagreed, whereas more social housing providers disagreed with the proposal than agreed. Responses from consultants were split 50/50.

A number of comments were provided and many (mostly house builders) suggested the use of a decimal scale. In addition, there were suggestions that credit breakdown should be applied to the proposed ENE3: Renewable Technologies and ENE7: Cycle Storage credit issues.

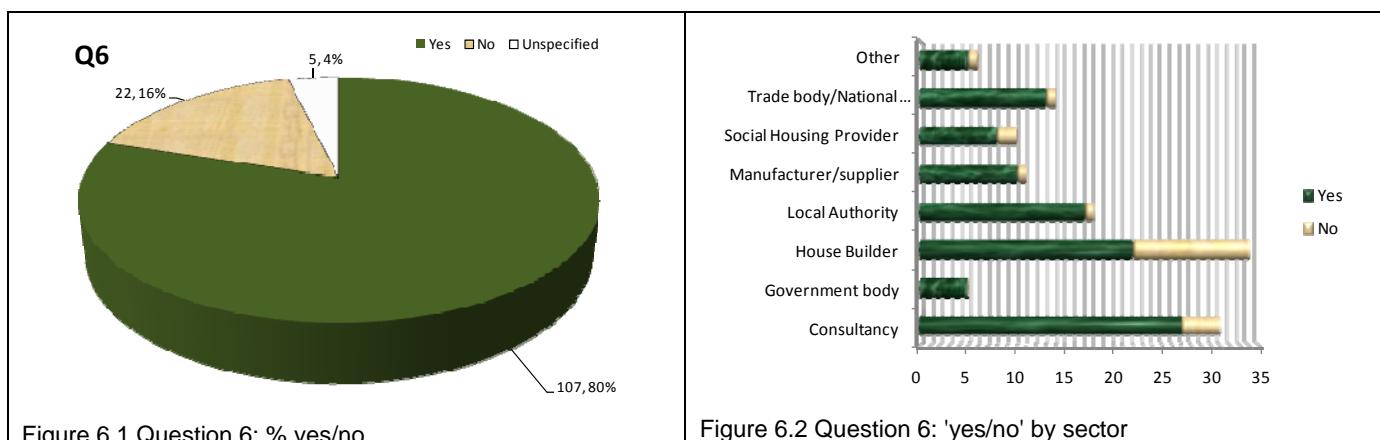
Where respondents disagreed with the proposal this tended to be either because the current approach was seen as acceptable and any changes would lead to confusion, or because they support the half credit approach proposed in Q4 and felt there would be little added benefit in breaking the points down further.

A small majority of respondents are in favour of a further credit breakdown. Analysis of the comments received showed that similarly to question 4 there was strong support for the use of a decimal scale. A number of respondents also suggested that a further credit breakdown for ENE3 and ENE7 could be beneficial. These two different types of responses suggest that the question wasn't clear in its intention and was interpreted in two ways: either should the credits available for ENE1 be broken down even further than a half credit, or should credits for other issues in the energy section also be broken down, as proposed for ENE1.

Those who were not in favour mostly stated that they were content with the current scoring system, or had a preference for the half credit approach, as proposed in question 4 of the consultation.

## Question 6:

**Do you agree with removing 5 credits from ENE 1: Dwelling Emission Rate and reallocating them to ENE 2: Building Fabric to incentivise improvements to the energy efficiency of the building?**



Currently ENE1 awards 15 credits in total for achieving the different levels. This includes 5 credits for achieving Levels 1 to 3, which will be below, or level with, the new 2010 Part L Regulations. The proposal is to move those 5 credits from ENE1 and reallocate them to ENE: Building Fabric to incentivise improvements in energy efficiency. By reallocating the credits the Code will reward those who improve fabric energy efficiency by increasing the number of credits available from 2 to a total of 7.

The impact assessment that accompanied the consultation document modelled the cost of this change at £0.54m a year, but it is considered that this proposal will help industry towards standards that will become mandatory in 2016.

### Comments on responses to question 6

In total 134 responses to this proposal were received. The large majority of respondents agreed with the proposal (80 per cent), with only 16 per cent respondents stating that they disagreed. The largest proportion of responses that disagreed came from the house builders sector, although overall most agreed.

There is general consensus that this proposal should be implemented because of the importance of prioritising fabric improvements which will bring benefits for the lifetime of the dwelling. In addition low energy-use dwellings can play a significant part in improving energy security.

Those house builders that disagreed with the proposal suggested that by reallocating the award of credits, the cost and design specifications for building to different Code levels would have to be re-evaluated. However, the benefits in terms of improving fabric efficiency and stimulating the supply chain were appreciated and thus it is the uncertainty of the potential cost issue that concerned most of these respondents.

There is overwhelming support by all the sectors for the Code to reward fabric efficiency improvements as a priority over other measures such as renewable energy technologies. The majority of respondents, including two-thirds of the responding housebuilders, agree with the

proposal for reallocating credits from ENE 1 to ENE 2; despite concerns by other house builders regarding the administrative and cost burden.

## Question 7:

**Do you agree with the proposed allocation of credits, as shown in the credit allocation table? If not, what would be your suggested approach?**

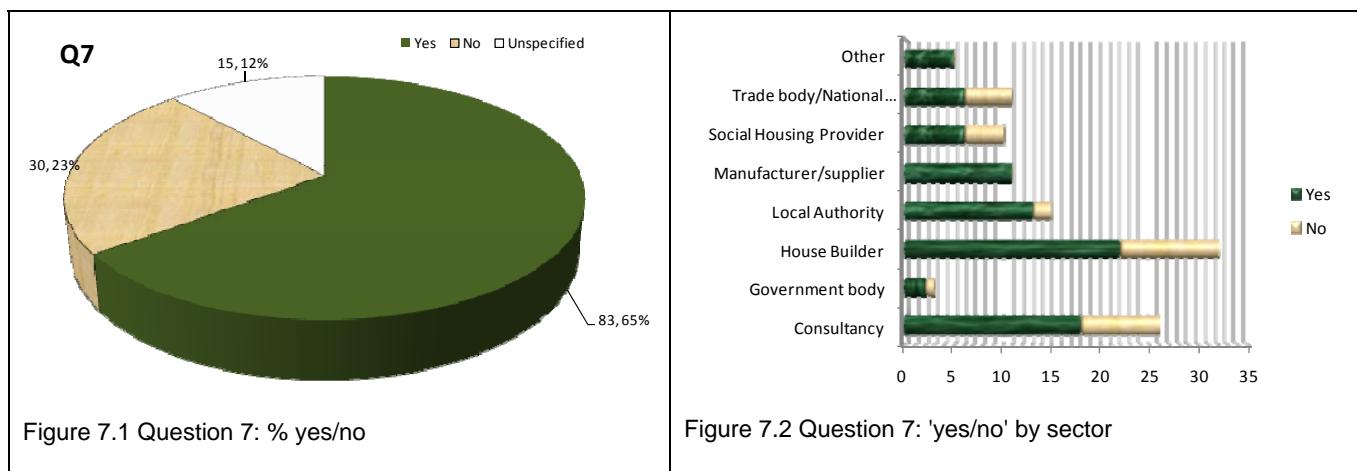


Figure 7.1 Question 7: % yes/no

Figure 7.2 Question 7: 'yes/no' by sector

This question asked the respondent whether they agree with the proposed allocation of credits, as shown in Table 3 of the consultation document, and if not, what their suggested approach would be.

### Comments on responses to question 7

In total 128 responses to this proposal were received. The majority of respondents agreed with the proposal (65 per cent), with the remaining respondents stating either that they disagreed (23 per cent), or not specifying a preference (12 per cent). Of those housebuilders that agreed, several stated that this would be subject to there being no major changes between outputs from 'consultation SAP' (cSAP) and the recently launched SAP 09 which will be used with the updated Building Regulations Part L when it is launched in October 2010.

Those who disagreed with the proposal felt there would be cost increases and increased difficulty in the ability to achieve level 3. There were also concerns over changing the number of credits awarded, perceived as moving the targets.

There was also significant concern by respondents from across the sectors that the credits awarded for meeting level 5 and level 6 are disproportionately difficult to achieve. It was considered that the provision of one extra credit for meeting the zero carbon requirement (i.e. level 6) is not reflective of the jump from Level 5 to 6 in terms of the CO<sub>2</sub> reduction achieved and the investment required by the developer.

The majority of respondents agreed with the proposal; however analysis of the comments showed that there was concern regarding the allocation of one additional credit when moving from Level 5 to Level 6. It was considered that more reward, i.e. more credits, should be given for what is seen as additional investment by developers to achieve the required reductions in CO<sub>2</sub>.

Another concern was the perceived potential for different outcomes between cSAP (which was used to support this Consultation) and the recently released SAP 09.

## **Question 8:**

**Do you have any suggestions for mechanisms for allowable solutions that could be used in the Code in advance of the introduction of a national approach to allowable solutions?**

*This question asked for written responses providing suggestions that could support the above issue, therefore charts have not been provided.*

The following Allowable Solutions (AS) were given broad support following the December 2008 consultation on zero carbon homes:

- further carbon reductions on site beyond the regulatory standard
- energy efficient appliances meeting a high standard which are installed as fittings within the home
- advanced forms of building control system which reduce the level of energy use in the home
- exports of low carbon or renewable heat from the development to other developments
- investments in low and zero carbon community heat infrastructure

(Other allowable solutions remain under consideration)

Government is working to consider the practical arrangements that would be required to permit allowable solutions to be put in place and to ensure that standards are achieved in practice. It should be understood that further carbon reductions on site beyond 70 per cent would count towards carbon reductions for purposes of the Code so, even in the absence of other allowable solutions, going further on-site would count.

## **Comments on responses to question 8**

In total 122 responses from across all the sectors were received to this question. A large number of comments and suggestions were received which have been analysed and appropriately grouped to identify the key issues. This chapter summarises the analysis; however the full analysis will be used to inform further development of AS.

Approximately 20 per cent of the responses received stated that AS should not be implemented through Code in advance of the national approach being adopted, and a small number suggested that AS should not be applied within the Code until the next update.

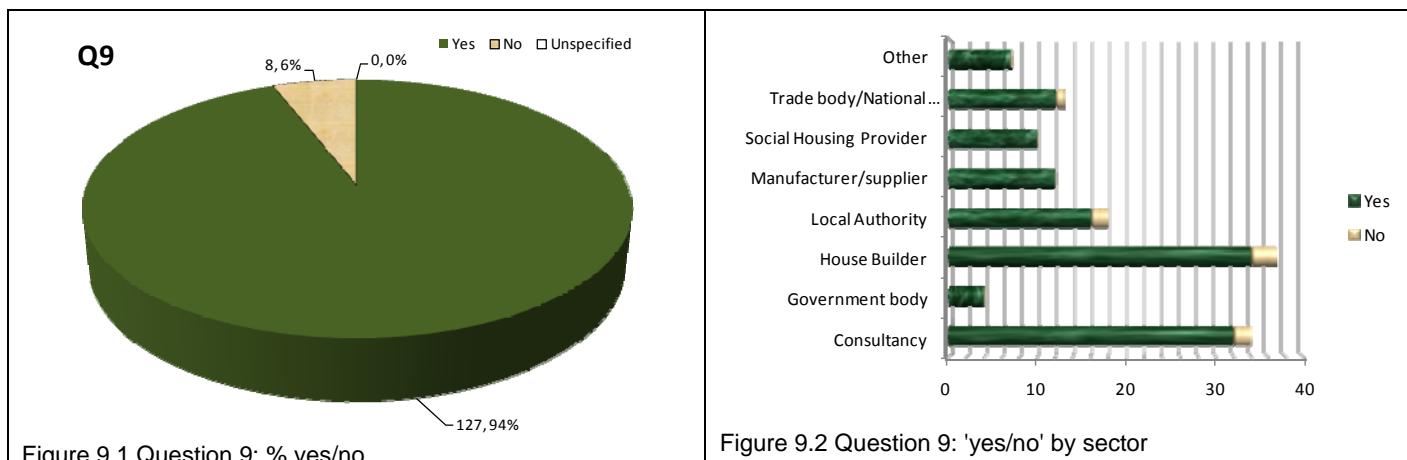
The remaining 80 per cent of respondents stated that they support the introduction of AS into the Code in advance of the national approach, with a large proportion of these specifying the solutions they were in favour of. It should be noted that some respondents were in favour of several solutions and therefore their response would have been represented more than once in the analysis. The strongest support was given for a carbon offset fund to improve the energy efficiency of existing housing stock. This was followed by investment into off-site renewable energy and district heating networks.

The biggest concerns amongst those against the use of AS in the Code were that a cost per tonne of CO<sub>2</sub> has yet to be finalised, and that industry is not ready to trial solutions.

The majority of respondents are in favour of the Code implementing allowable solutions ahead of national adoption, and consider it an appropriate approach for trialling a carbon buyout fund in particular.

## Question 9:

**Do you agree that ENE2: Building Fabric be changed from its current name to ENE2: Fabric Energy Efficiency to reflect the zero carbon hierarchy?**



The aim of credit issue *ENE2: Building Fabric* in the current version of the Code was to future proof the energy efficiency of dwellings over their whole life by limiting heat losses across the building envelope.

To align with the zero carbon hierarchy it is proposed changing the name of this credit issue from *ENE2: Building Fabric* to *ENE2: Fabric Energy Efficiency*. Currently the focus is on improvements to the thermal performance of the building envelope using the Heat Loss Parameter as calculated by the SAP methodology. This is also proposed to be changed; the focus would move from heat loss to space heating and cooling energy demand by adopting the proposed new metric for the zero carbon definition of kWh/m<sup>2</sup>/year, rather than continue to use 'Heat Loss Parameter'. By reallocating the credits the Code will reward those who improve the energy efficiency of the homes by increasing the total number of credits available from 2 to a total of 7

### Comments on responses to question 9

In total, 135 responses to this proposal were received. The majority (94 per cent) of the respondents agreed with the name change of ENE2 stating this would be rational and logical. The general consensus is that the name change will provide consistency with the zero carbon hierarchy, including common terminology and definitions. However, several respondents felt the credit would provide more clarity if its name included the term 'building' or 'envelope'.

A small number of responses were received which did not address this particular proposal but appeared to be more in answer to proposals set out in Part B of the consultation on the fabric energy efficiency standard.

Those that disagreed with the name change were mainly concerned that it would cause confusion, particularly if it is not made clear that the credit refers to space heating and cooling.

The main concern by those disagreeing is in regards to users of the Code not being given clear guidance on how to apply the changes to this credit issue. This will be appropriately addressed by the updated technical guidance which will provide clear direction on how the credit should be

applied and how it should be assessed. However, an overwhelming majority of the respondents support a name change; although there is a request that the credit name provides more clarity by including the term ‘building’ or ‘envelope’.

## Question 10:

**Do you agree that we should adopt the new energy efficiency metric and levels for the 2016 zero carbon definition into the Code now? If not, why not?**

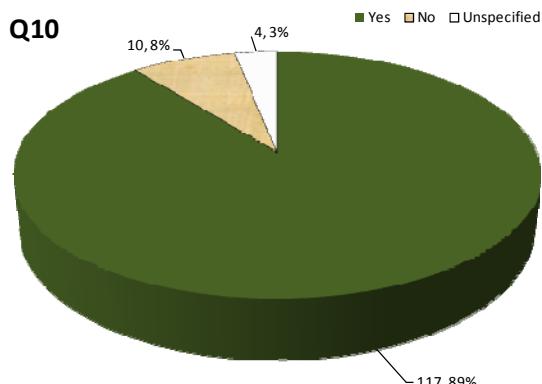


Figure 10.1 Question 10: % yes/no

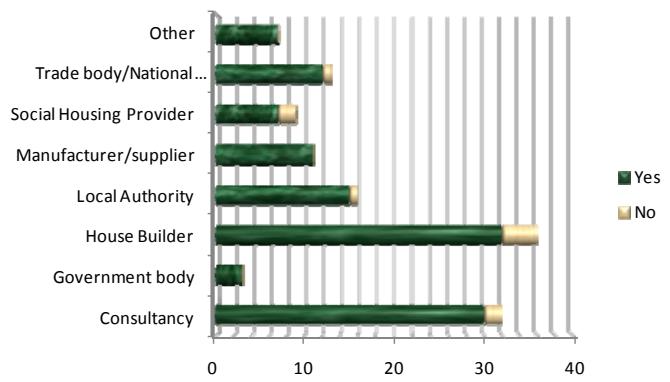


Figure 10.2 Question 10: 'yes/no' by sector

The Code plays an important role in supporting the transition to zero carbon. Therefore it is proposed to include a possible 2013 requirement for interim standards for energy efficiency at Code level 4, as shown in Table 4 of the consultation document.

### Comments on responses to question 10

In total, 131 responses to this proposal were received. The chart clear majority of respondents (89 per cent) agreed with the proposal. Respondents mainly considered it better to introduce the standard now as this would familiarise the industry with the requirements for 2016 and bring clarity and consistency with Part L and the Zero Carbon definition.

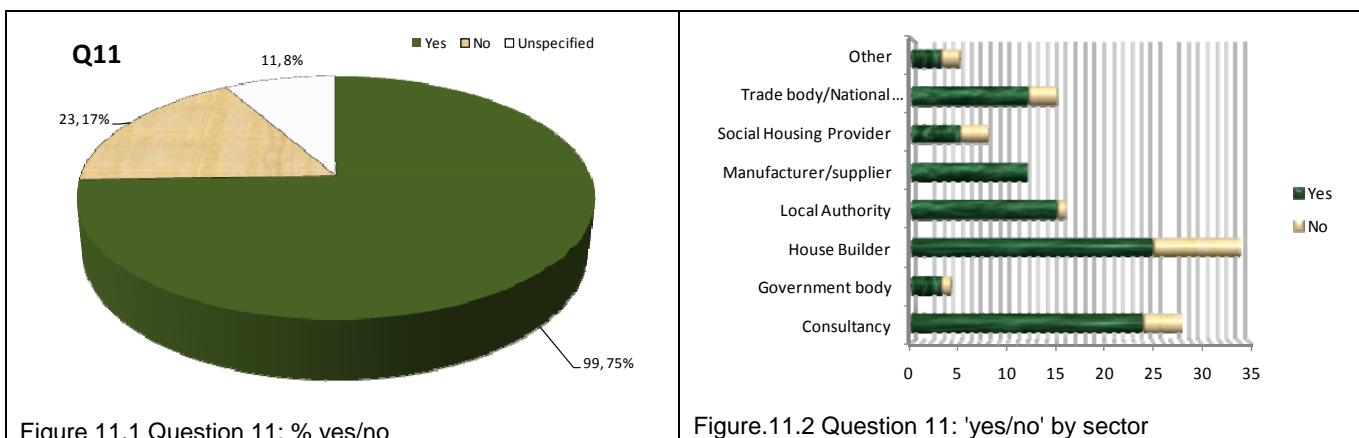
There was some concern raised that further modelling should be carried out using SAP09 before a final decision is made on this proposal. This was also the main reason given by those respondents who disagreed with the proposal. In addition, there was some concern expressed over the current lack of skills and expertise within the industry to achieve these targets.

There is overall agreement with the proposed interim targets; however there was some concern regarding the accuracy of modelling using CSAP and the perceived lack of knowledge within industry to enable these levels to be achieved now.

As discussed previously, modelling has since been carried out using SAP09 and the outputs are comparable with those using cSAP. From analysis of responses to this and other proposals in the consultation it is evident that stakeholders are generally keen to use the Code as a stepped approach to support industry in advance of 2016 zero carbon homes.

## Question 11:

**Do you agree that we should adopt the new energy efficiency levels for the 2016 zero carbon definition into the Code as a mandatory requirement at Code levels 5 and 6 and award 5 credits?**



The consultation proposes to include the levels of kWh/m<sup>2</sup>/year for the 2016 definition of zero carbon into the Code with a mandatory requirement at Code level 5 and 6 for the 2016 levels (shown in Table 4 in the consultation document). It is the intention to award 5 out of the 7 credits available for reaching this standard. It is considered that this provides the right balance between rewarding achievements of what is supposed to be the highest practical regulatory standard and providing further incentive for those who want to go further than this minimum regulatory level.

### Comments on responses to question 11

In total 133 responses to this proposal were received. The majority of respondents agreed with the proposal (75 per cent), whilst 17 per cent disagreed. There were 11 responses with comments only but most of these indicated agreement with the proposal.

Despite agreeing with the proposal, some respondents suggested more credits should be awarded due to importance of the issue as well as the cost implications for housebuilders, who were particularly keen to see more credits introduced. It was also suggested that the new energy efficiency levels for the 2016 zero carbon definition should only be mandatory at level 6 not at level 5, because this would allow for greater flexibility at level 5 to test different energy efficiency approaches. These two reasons were given by those that disagreed with the proposal, who were mainly represented by house builders.

The majority of respondents agree with the proposal, although some contradicted their agreement by suggesting that more credits should be available because of the level of investment required, or that it should only be mandatory at Level 6. These were also the reasons given by those who did not agree with the proposal. The respondents putting forward these suggestions were mainly housebuilders.

We have carefully considered the allocation of credits within the proposed ENE2 credit issue and within the energy section as a whole. We feel that the proposed approach is appropriate given the opportunities to be rewarded by other credit issues within the energy section for investment into improving the energy performance of a dwelling.

## Question 12:

**Do you agree that Code level 4 should mirror the outcome of the consultation on the energy efficiency definition (see Part B) for interim measures to be introduced into regulations in 2013?**

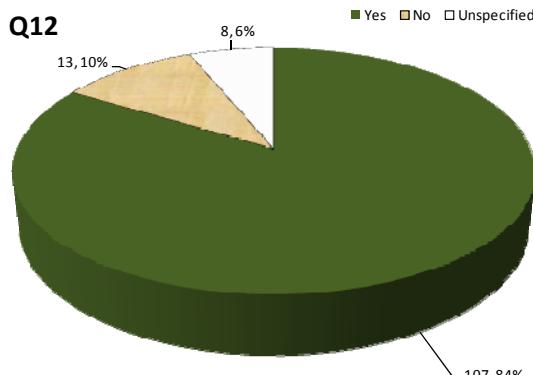


Figure 12.1 Question 12: % yes/no

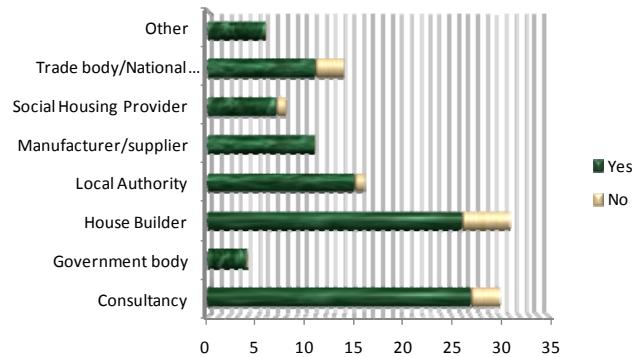


Figure 12.2 Question 12: 'yes/no' by sector

Part B of the consultation document consults on whether it would be appropriate to introduce interim fabric energy efficiency requirements into regulations in 2013. Given the role the Code has of smoothing the transition to zero carbon it is proposed to include a possible 2013 requirement for interim standards for energy efficiency at Code level 4 (as previously shown in *Table 4* in question 11). If, as a result of the consultation on the fabric energy efficiency standard within zero carbon homes (Part B), an alternative approach to setting the requirements for 2013 is chosen then potentially these requirements could be introduced into *EN1: Dwelling Emission Rate* at Code level 4, alongside the mandatory emissions reduction (44 per cent).

### Comments on responses to question 12

In total 128 responses to this proposal were received. The majority (84 per cent) agreed with the proposal whilst 10 per cent disagreed. A small number of responses were unspecified but analysis of their comments suggests general agreement with the proposal.

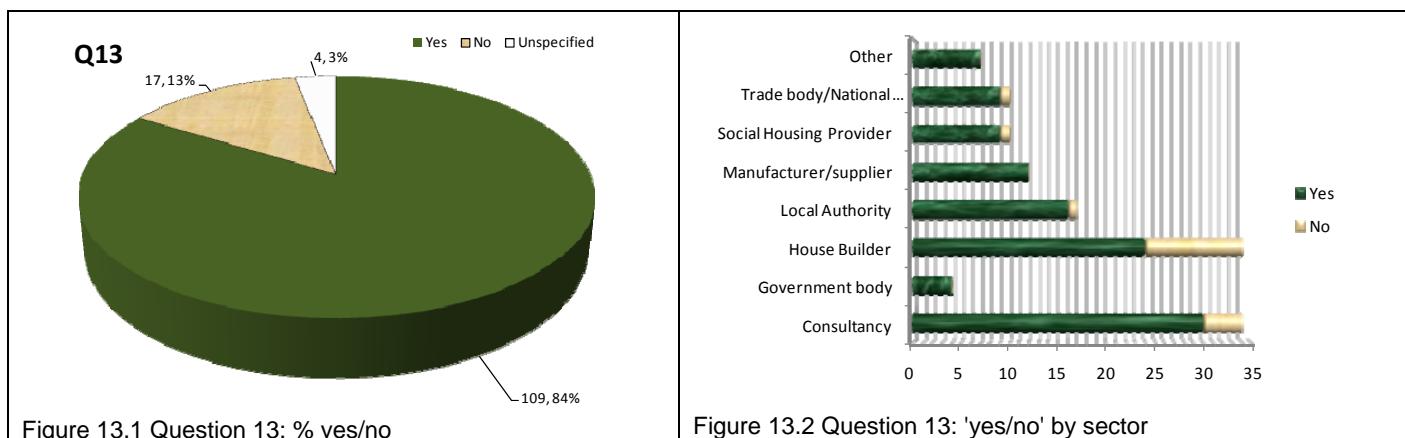
The general consensus is that the Code levels need to reflect the changes to Part L of the Building Regulations anticipated in 2013 in order to support industry. This would ensure consistency in approaches, avoid confusion between requirements, and will help industry gear up to 2016 zero carbon homes.

The respondents that did not agree with the proposal mostly comprised house builders, consultancies, and trade body/national representative organisations. However, as with other earlier consultation proposals, the main reason provided was in regards to the uncertainty of using cSAP in advance of SAP09 to carry out modelling. However this issue has since been addressed by the BRE.

Overall, there is support for this proposal and analysis of the responses show that industry is keen for the Code to have a consistent and parallel approach with Part L of the Building Regulations.

### Question 13:

**Do you agree that the credits for internal lighting will no longer be required once the Code is updated in 2010 and it is therefore appropriate to delete ENE3: Internal Lighting and reallocate the points elsewhere in the energy section?**



Part L of the Building Regulations requires that at least 30 per cent of internal light fittings are dedicated energy efficient fittings. The Code builds on that and *ENE3: Internal Lighting* awards up to 2 credits for installing either greater than 40 per cent or greater than 70 per cent of dedicated, fixed internal energy efficient fittings. This credit is no longer required in light of changes to Part L as well as proposals to phase out inefficient lighting and therefore deletion was proposed in the consultation.

#### Comments on responses to question 13

In total, 130 responses to this proposal were received; the largest proportion of these were from house builders and consultancies. Overall, respondents agreed with the proposal (84 per cent); although approximately one-third of responding house builders disagreed.

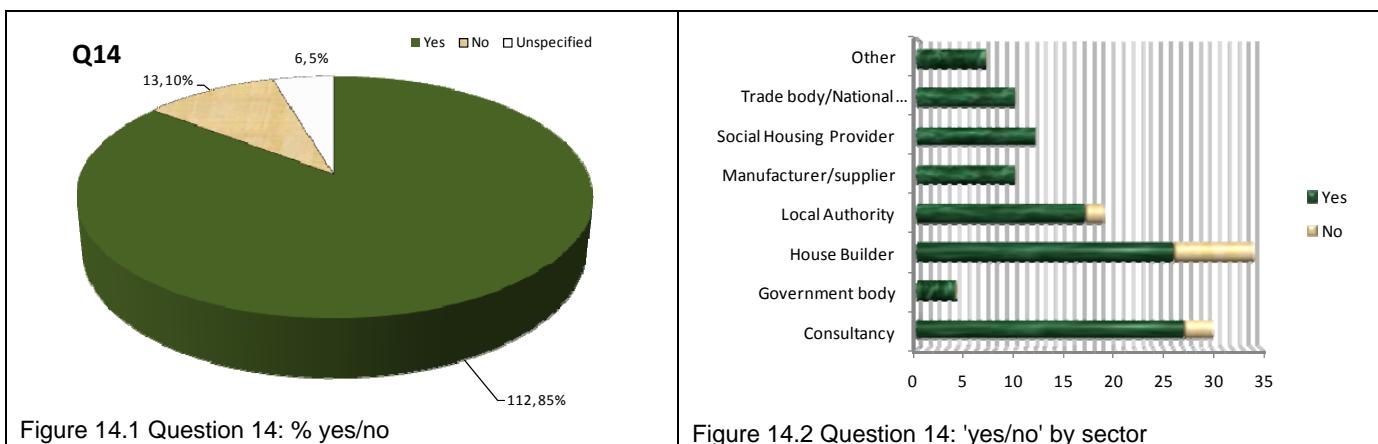
The general consensus was that the Code should be used to promote the most efficient internal lighting available and that the updates in SAP mean there will no longer be a need for energy efficient lighting to be covered under the Code. However, a small proportion agreed to removing ENE3 but considered that the 2 credits could be reallocated outside of the energy section to improve the overall sustainability of dwellings.

Of those disagreeing with the proposal, most were housebuilders who generally indicated that ENE3 should remain as it is but the proposal should be reviewed again under the 2013 revision (this is based on the respondents' assumption that Code would be revised in 2013). There was some support from other respondents for ENE3 to remain in the Code but that the requirement be increased from 75 per cent to 100 per cent before credits are awarded to better reflect the requirements in Part L 2010.

It is evident that there is significant support for the deletion of *ENE3: Internal Lighting* and the reallocation of the points. Those who were not in favour mostly comprised house builders who would prefer for the credits to remain unchanged, although there was some support from other respondents for increasing the requirement.

#### Question 14:

**Do you agree that evidence must be provided by developers on the energy efficiency of appliances provided as optional extras if they choose to gain the credit for leaflet provision?**



It is proposed that where the leaflet is used to gain 1 credit but appliances may be offered and installed as 'optional extras', evidence must be provided to demonstrate that all appliances offered by the developer meet the minimum standards for gaining credits. This approach supports the zero carbon homes policy. There is currently no requirement under the Code for developers to demonstrate that appliances offered as extras will be energy efficient.

#### Comments on responses to question 14

In total 131 responses to this proposal were received, with mainly house builders responding, most of which agreed with the proposal. Overall, 85 per cent of respondents stated that they agreed and only 10 per cent disagreed.

The comments received by both those agreeing (and to some extent those disagreeing) with the proposal were generally mixed and a large proportion did not directly answer the question (i.e. for developers to provide evidence to demonstrate that appliances offered as optional extras would be energy efficient). Instead, it would appear from the analysis that respondents used this proposal as an opportunity to discuss *ENE5: Energy Labelled White Goods* in general by focussing on issues relating to leaflet provision, the influence of occupant behaviour, and further incentives for developers.

There was some clear objection by a minority of respondents who disagreed that this proposal would create an additional administrative burden on developers.

There is strong support for developers to provide evidence on the energy efficiency of appliances provided as optional extras if they choose to gain the credit for leaflet provision. However analysis of the written responses indicates that either respondents generally did not understand the intention of the proposal, or the proposal was understood but they were just using the consultation as an opportunity to discuss other issues relating to the ENE5.

## Question 15:

**Do you agree that the 2 points awarded for external lighting should be reduced to 1 point?**

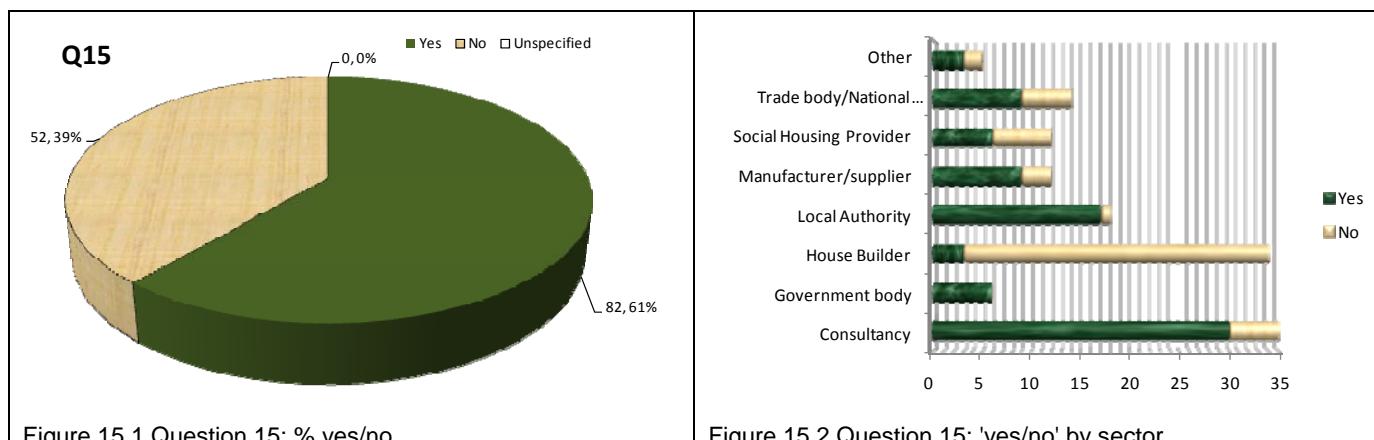


Figure 15.1 Question 15: % yes/no

Figure 15.2 Question 15: 'yes/no' by sector

There are currently two credits available under this issue to encourage the use of energy efficient external lighting. It was suggested that this issue had only had a limited impact on reducing carbon emissions and that the two credits are disproportionately rewarding this issue. We therefore sought views on whether the credits available should be reduced to one credit. The impact assessment shows there is a small cost associated with this change of between £45 and £50 for each dwelling.

### Comments on responses to question 15

In total, 134 responses to this question were received. Although a slight majority (61 per cent) agreed with the proposal and the justification behind it, a large portion of respondents were not in favour. Nearly all local authorities and consultancies agreed to reducing the credits available to 1 from 2, whilst conversely, the majority of house builders did not support this approach.

Although agreeing with the proposal, some suggestions were put forward for grouping both the internal lighting credits and the external lighting credits under one issue. This was the reason provided by some respondents for disagreeing with the proposal.

Other comments provided by those against the proposal supported retention of the two credits in order to encourage the most energy efficient solutions to external lighting, and to ensure continued incentive to provide adequate lighting for safety and security.

Generally there is support for reducing the 2 points awarded for external lighting to 1 point; but not by an overwhelming majority. House builders are particularly against the proposal; however this is not completely unexpected since the 2 points under this credit issue are currently regularly targeted.

## Question 16:

**Do you agree that this issue is renamed from 'ENE7 Low and Zero Carbon Technologies' to 'ENE3: Renewable Technologies' to better reflect the zero carbon hierarchy?**

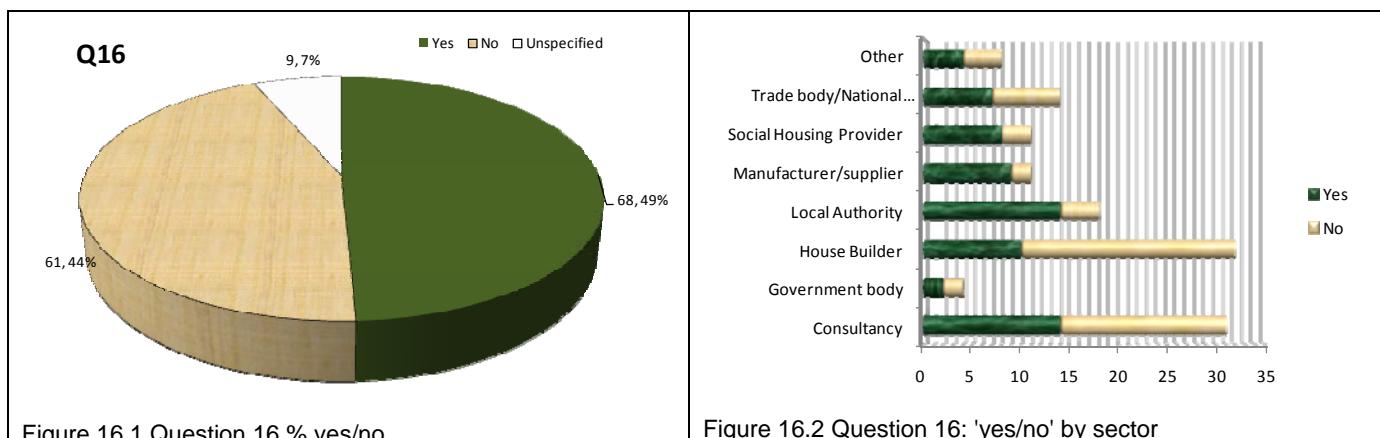


Figure 16.1 Question 16 % yes/no

Figure 16.2 Question 16: 'yes/no' by sector

The current *ENE 7: Low or Zero Carbon Technologies* category was introduced to help stimulate the market for low and zero carbon technologies as well as to help reduce carbon emissions from a dwelling. The EU Renewable Energy Directive 2009 encourages the promotion of renewable energy technologies through the adoption of a European target on consumption of renewable energy. Therefore continuing to incentivise renewable technologies in the Code helps towards meeting our renewable energy targets. It is therefore proposed to keep this issue, but to rename it '*ENE 3: Renewable Technologies*'. This proposal means that gas CHP would no longer be able to achieve credits under this issue.

### Comments on responses to question 16

In total 138 responses to this proposal were received. Respondents are divided on this issue, with those that agree (49 per cent) just exceeding those who do not (44 per cent). Two thirds of housebuilders and half of consultancies disagree, whereas three quarters of social housing providers and half of trade bodies/national representative groups support the proposal.

Most of the respondents in favour provided no written comment. It is evident that the consultation document did not fully clarify the intention of this proposal to remove low carbon technologies and reward renewables only since there was concern from some respondents that by changing the name, low carbon technologies would be mislabelled as renewable energy.

Where respondents disagreed with the proposal, this opposition tended to be strong. In summary there was concern that the proposal would restrict the technologies that could be applied by the developer, which could subsequently make it more difficult to meet planning requirements (particularly where the energy hierarchy is imposed) as well as the Code, and could also impact upon the development of emerging low and zero carbon technologies.

Additionally it was considered that a development that has achieved significant reductions in carbon emissions through the use of a low carbon technology should receive the same recognition as a scheme that has achieved equivalent reductions through the use of renewables.

There is majority support for this proposal, albeit slight; however a significant proportion of respondents disagreed, when compared with other proposals in the consultation. Strong

opinions were provided on the proposed exclusion of low carbon technologies with a key concern regarding the impact on emerging technologies. However, the EU Renewable Energy Directive 2009 encourages the development and promotion of renewable energy technologies so we consider that emerging technology development would not be impacted. An additional concern by respondents is the perceived risk that Code requirements will conflict with local planning energy requirements, making it difficult for developments to comply with both. We view the Code as also encouraging the use of the energy hierarchy through imposing a mandatory ENE1 Dwelling Emission Rate at each level, but by keeping the credits for applying renewable energy voluntary.

### Question 17:

**Do you agree that for technologies under 50kWe and 300kWth certification under the *Microgeneration Certification Scheme* should be a requirement for allocating credits and for all renewable CHP schemes over 50kWe assurance under the CHPQA should be a requirement for allocating credits?**

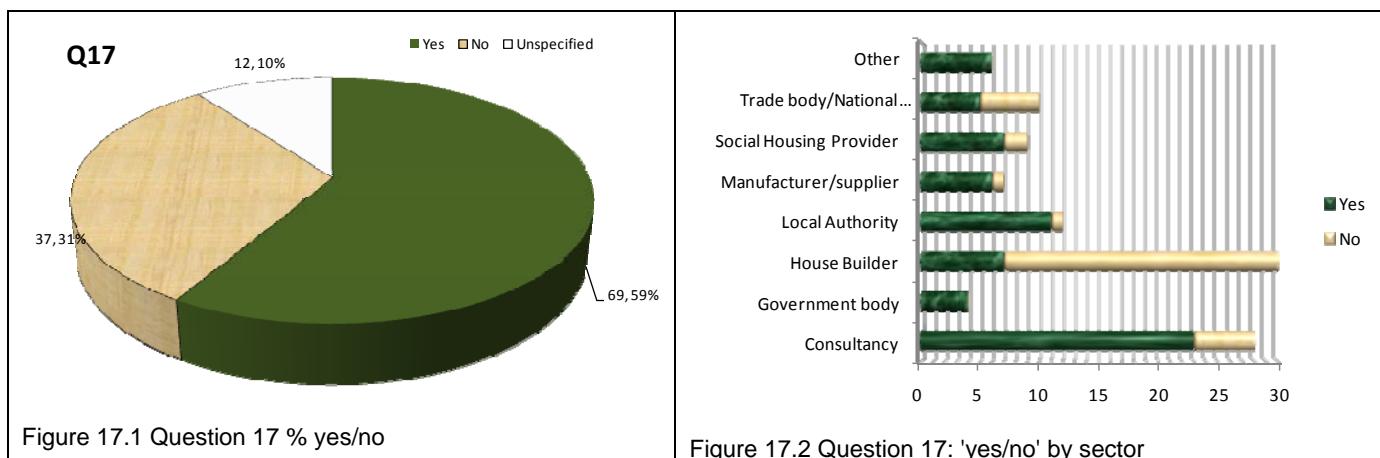


Figure 17.1 Question 17 % yes/no

Figure 17.2 Question 17: 'yes/no' by sector

Under the current *ENE7: Low or Zero Carbon Technologies* to gain credits the technologies specified and installed must be recognised by the Microgeneration Certification Scheme (or similar). Question 16 proposes changing the issue name to *ENE3: Renewable Technologies*. To qualify for the credits under this revised issue it is proposed that technologies must be recognised by the EU Renewables Directive and (as relevant):

- i) Certified under the Microgeneration Certification Scheme (for technologies under 50kWe or 300kWth) or
- ii) Assured under the CHP Quality Assurance (for renewable combined heat and power above 50kWe)

Other onsite renewable technologies over 50kWe or 300kWth have no certification or assurance scheme at present but it is proposed that they are still eligible.

### Comments on responses to question 17

In total 118 responses to this proposal were received. Fifty-nine per cent of respondents agree with the proposal whilst 31 per cent disagree and 10 per cent were unspecific. The majority of respondents who disagreed were house builders.

Of those in favour it was generally felt that the use of a standardised scheme will ensure consistency and clarity in terms of meeting Code compliance for this issue. In addition, it will provide continuous and fast development and improvement of renewable technologies, as intended by the EU Renewables Directive.

Similarly to the responses for question 16, those against the proposal suggested it would reduce flexibility and choice for developers, and that innovation could be inhibited. Concern was also expressed for how this credit issue would deal with communal solutions where the application is across numerous dwellings and where the output would be higher than 50kWe, however the

consultation document proposed that other onsite technologies over 50kWe or 300kWth would still be eligible.

Overall there is support for the use of the MCS and CHPQA schemes and the concerns expressed by those who are not in favour are the same as those for question 16 and we therefore offer the same response.

## Question 18:

**Do you agree that a new issue should be introduced into the Code for the provision of energy display devices?**

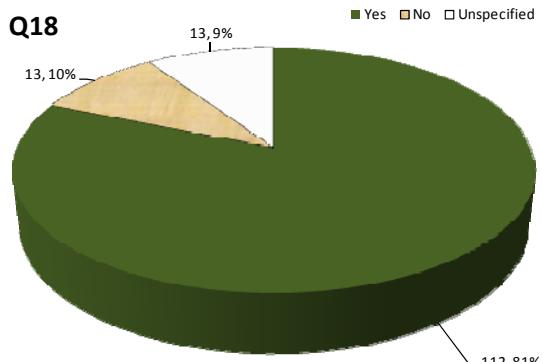


Figure 18.1: Question 18 % yes/no

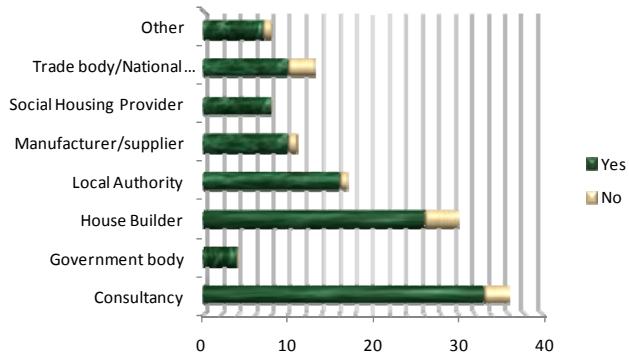


Figure 18.2: Question 18: 'yes/no' by sector

Under the Carbon Emissions Reduction Target programme energy companies provide energy display units that can be located anywhere in the home and show how much energy is being used. There was strong support during the review that credits should be introduced into the Code energy category to reward developers who provide such devices in new homes. The consultation therefore sought views on whether to introduce a new issue in the energy category *ENE9: Energy Display Devices*, with up to 3 credits available for providing a way for residents to clearly understand and monitor their energy usage.

### Comments on responses to question 18

In total 138 responses to this question were received, a large proportion were consultancies and house builders. The majority of respondents agreed with the proposal (81 per cent) and there was a general consensus that the use of energy display devices would lead to significant changes in lifestyle and energy use reduction as well as the potential for saving money. However some consider that this should be an interim measure until the DECC strategy is implemented in 2012.

A small minority did not agree with the proposal; however from analysis of the written comments it would appear that there are mostly concerns with the number of credits awarded or the method for implementing this credit issue, rather than being against the implementation of energy display devices.

From the responses provided to this question it is evident that there is strong support for the introduction of a new issue into the Code for the provision of energy display devices, even from those who stated disagreement with the proposal who appeared to only have concerns over how the credit issue would be administered and the credits awarded (which is addressed in question 19).

## Question 19:

**Do you agree with the proposed credit allocation for this new issue? If not, why not?**

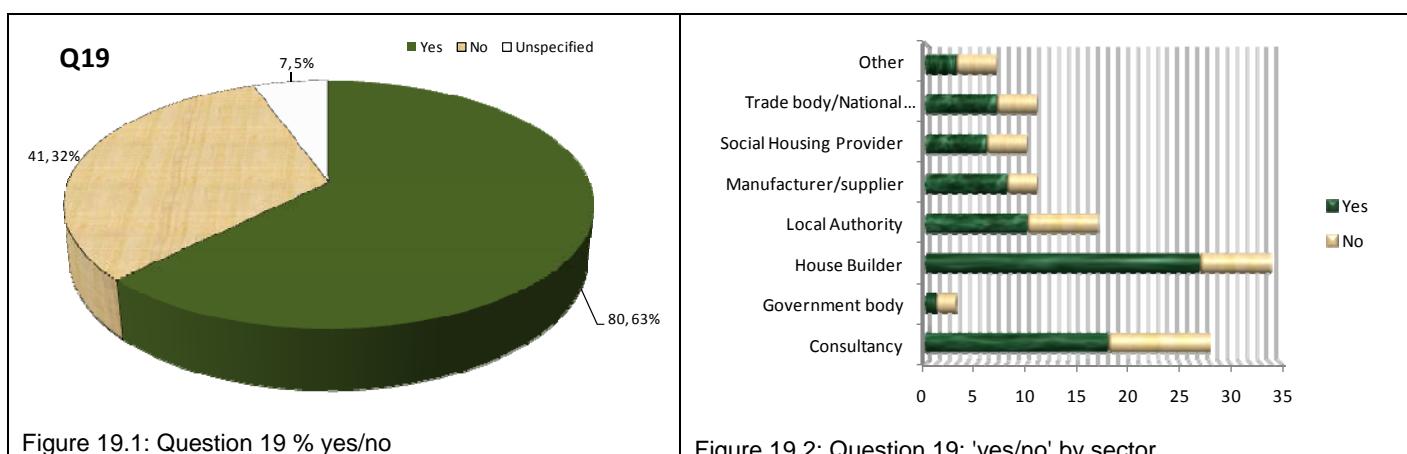


Figure 19.1: Question 19 % yes/no

Figure 19.2: Question 19: 'yes/no' by sector

Under the Carbon Emissions Reduction Target programme energy companies provide energy display units that can be located anywhere in the home and show how much energy is being used. There was strong support during the review that credits should be introduced into the Code energy category to reward developers who provide such devices in new homes. We are therefore seeking views on the proposed credit allocation of 3 points; the first credit would be awarded for providing a device to monitor electricity or primary heating fuel consumption, the second for providing a device which monitors both electricity and primary heating fuel consumption, and the third credit would be awarded where devices provided are capable of recording data.

### Comments on responses to question 19

One hundred and twenty-eight responses to this question were received. Sixty-three per cent of respondents stated that they with the proposed credit allocation agreed - the majority from house builders and consultancies, whilst 32 per cent disagreed.

Similarly to responses for question 18, those who disagreed considered the allocation of up to three credits to be disproportionate to other energy credit issues which may require significantly more investment and provide higher CO<sub>2</sub> savings than energy display metres. Some respondents consider that one credit would be appropriate, with the remaining credits reallocated elsewhere, possibly to other sections.

In general there is support for the proposed three credit allocation; however some responses suggest that alternative allocation and/or approach to awarding credits should be considered so that this credit issue is not disproportionate to other issues in the energy section.

## Question 20:

**Do you agree that we should postpone making the Lifetime Homes Standards (as revised) a mandatory requirement from Code level 4 upwards pending a review in 2010?**

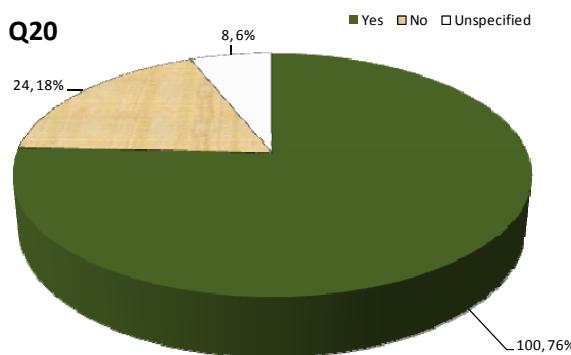


Figure 20.1: Question 20 % yes/no

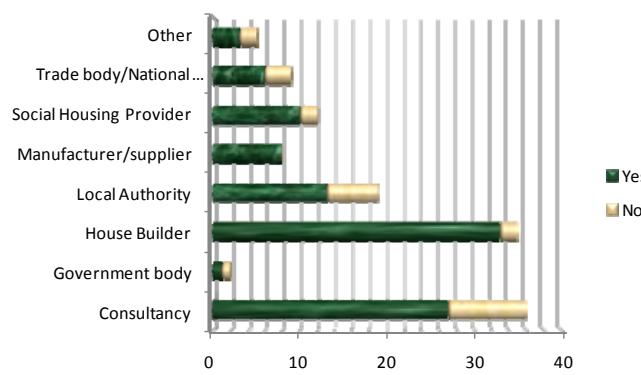


Figure 20.2: Question 20: 'yes/no' by sector

Lifetime Homes Standards (LTH) are a set of criteria developed by stakeholders to make homes more accessible and adaptable to people's changing circumstances by ensuring that homes are better able to adapt to the needs of their occupants at different stages of their life. The intention was to make LTH mandatory at progressively lower levels of the Code in future i.e. at Code level 4 in 2010 and Code level 3 in 2013. Given that we will be conducting a wider review of how we should take forward the regulatory position on LTH, and in the light of the current economic pressures on the housing sector and the need to support recovery, we do not propose to proceed with the move to make the standard mandatory at Code level 4 in 2010. The standard will therefore remain voluntary in the Code, except at level 6.

### Comments on responses to question 20

In total, 132 responses to this question were received. Three quarters of the respondents agreed with the proposal (76 per cent), with nearly all house builders in favour. Many house builders agreed that the proposed approach would be appropriate to allow more flexibility in design and reduce the cost burden on the industry.

There were a number of responses that stated agreement, but their comments suggest this is not agreement to postponing the mandatory use at Level 4 in 2010, but to its removal from the Code completely. However this is not the intention of the proposal.

18 per cent did not support the proposal and written comments were provided. One main area of concern was the importance of the role of LTH in ensuring homes for life for an aging population and therefore it should be mandated as soon as possible. A number of other respondents felt that the Code should an updated version of Part M of the Building Regulations rather than LTH since it was felt it would give homes a greater level of compliance.

There is a general consensus that the introduction of Lifetime Homes at Code level 4 should be postponed, particularly amongst house builders. Those that disagreed expressed concerns regarding the need for adaptable homes for an aging population. However we are aware of a counter-argument that suggests that people should not be encouraged to stay in their homes for

life since there is a shortage of family-size dwellings and these should be freed up where possible by encouraging elderly homeowners to move to smaller and more manageable homes.

An argument was also provided for the use of Part M of the Building Regulations instead of LTH. However, LTH goes beyond the requirements of Part M to deliver better practice, which effectively is the role of the Code.

## Question 21:

**Do you agree with our proposal to introduce an exemption on steeply sloping sites for the external Lifetime Homes requirements and award 3 out of the 4 available points?**

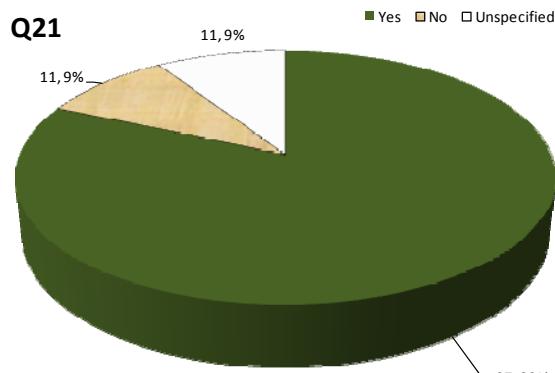


Figure 21.1: Question 21 % yes/no

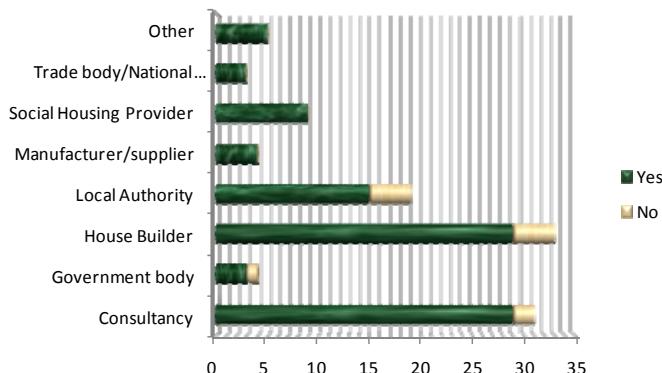


Figure 21.2: Question 21: 'yes/no' by sector

Developers and designers have indicated that on very steeply sloping sites where gradients prevent the possibility of a gently sloping or even ramped approach, it is not possible to meet all of the Lifetime Homes (LTH) criteria. On such sites developers are deterred from adopting the standard (as they cannot score points). It is therefore proposed to introduce an exemption for the two criteria relating to outside access in the LTH standard on steeply sloping or in severely constrained sites, as long as accessible steps are installed.

### Comments on responses to question 21

In total 119 responses to this question were received, a large proportion were from house builders, consultants and local authorities. The majority of respondents agreed with the proposal (82 per cent), whilst only 9 per cent disagreed and 9 per cent were unspecified. All of the responding social housing providers supported the proposal.

There was general agreement that the exemption could prevent developers from implementing the other Lifetime Homes Standard principles, which previously they were likely to do. However, some respondents questioned whether developers will think it is worthwhile as they cannot formally market the property as Lifetime Homes.

Those who disagreed either did so because they felt there should be no exemptions at all, i.e. the credit compliance criteria and credit allocation should remain as it is; or because, although supporting the exemption, they felt that sites unable to attain this one element of LTH should not be penalised and should still be awarded the full 4 credits. Housebuilders were particularly keen on the award of 4 credits. Similarly, a number of house builders who stated agreement with the proposal also made this comment.

From analysis of the comments received there is some evidence that a proportion of respondents misunderstood the question, and it isn't clear whether their decision to disagree is based on their perceived understanding of the proposal.

The majority of respondents agree with this proposal and there is strong opinion from respondents that this approach would incentivise developers of sloping sites to adopt the

remaining LTH standards and obtain 3 credits, where previously they probably wouldn't have done so. Most housebuilders support the exemption but some stated that the full 4 credits should be awarded. Interestingly this was also given as the main reason by a proportion of those not in favour of the proposal.

## Question 22:

**Do you agree with the definition of a steeply sloping site as having a predominant gradient of 1:12 or greater?**

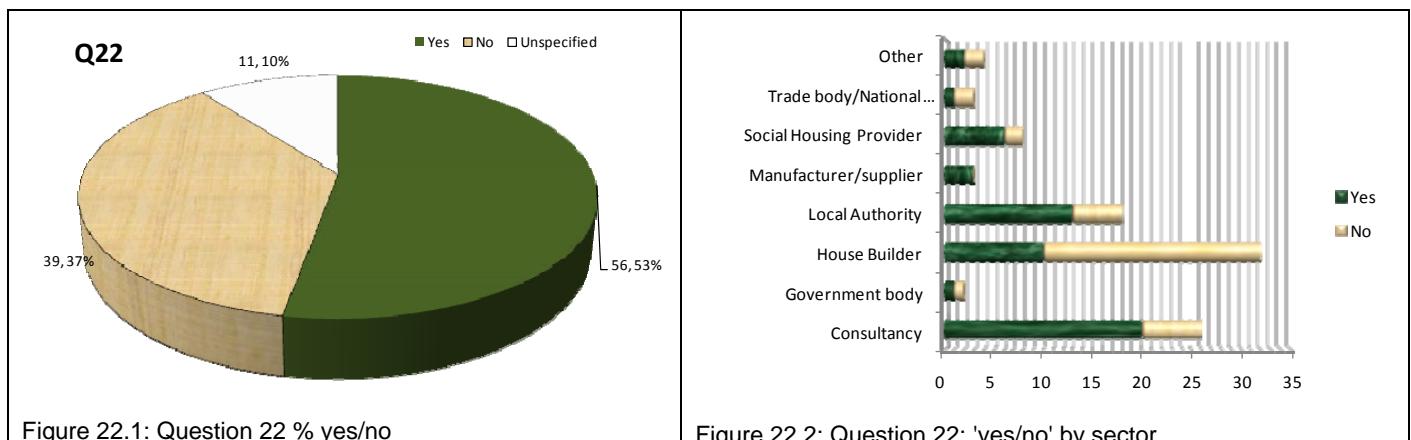


Figure 22.1: Question 22 % yes/no

Figure 22.2: Question 22: 'yes/no' by sector

It is proposed that the exemption can only apply to dwellings on plots with sloping topography that predominantly exceeds 1:12. This will be assessed on the basis of individual dwellings so only those parts of a site which are unable to meet the approach criteria can benefit from the exemption.

### Comments on responses to question 22

In total 106 responses to this question were received with a slight majority (53 per cent) agreeing to the proposal. The largest proportion of respondents came from house builders who mainly disagreed.

Very few comments were provided by those in agreement to support this decision. Several of the written responses which were received stated that support might be subject to the Code definition aligning with that used in Part M of the Building Regulations of 1:15, which contradicts their support of the proposed 1:12 gradient.

Of those who disagreed with the proposed definition, many felt that the Code should be consistent with Part M of the Building Regulations which refers to sites of 1:15 or greater, whilst others provided alternative suggested gradient variants.

There is some level of agreement with the proposed definition of a steeply sloping site; however analysis of the written responses suggests that a proportion of these respondents actually support the Part M definition instead. A large proportion of respondents, mainly comprising house builders, disagreed with the proposal stating that the definition should be in line with Part M of the Building Regulations.

### Question 23:

#### Do you agree with the proposals for measuring gradients?

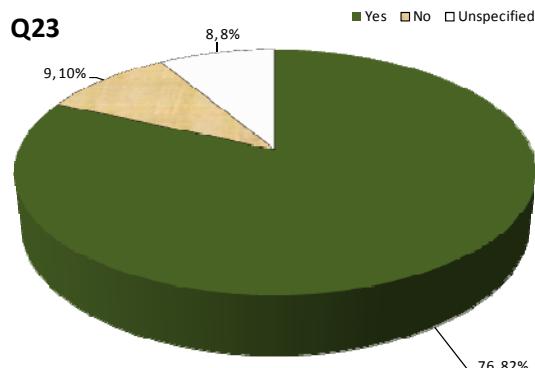


Figure 23.1: Question 23 % yes/no

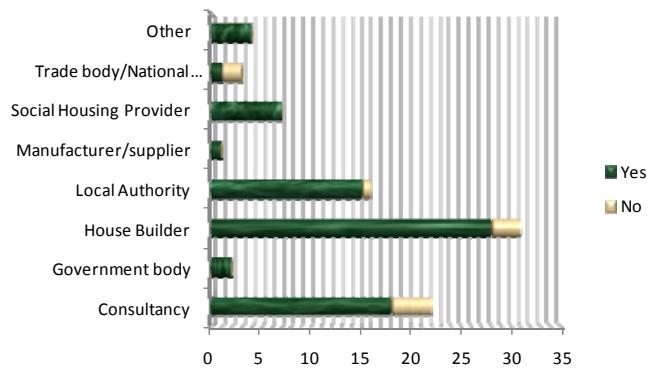


Figure 23.2: Question 23: 'yes/no' by sector

It is proposed that plot gradients must be measured between two points starting at parking spaces or drop off points to the finished floor level at: a) the principle or secondary entrance doors to an individual dwelling (where a footpath link exists). b) The main communal entrance door to a block of dwellings c). In the case of basement parking – the entrance door to the lift core, or the start of all footpath approach routes to the dwelling to all individual or communal entrances where a footpath link to the plot boundary exists

#### Comments on responses to question 23

In total 93 responses to this question were received; a large proportion were house builders followed by consultancies and local authorities. Eighty-two per cent support the use of this measurement approach with only 10 per cent disagreeing.

There was overwhelming agreement to this proposal; however many suggested that the wording should be put into a simpler form for the technical guidance.

Of those who disagreed with the proposal the common reasons given were that the measurements were either too complicated, or should be aligned with Part M to allow for consistency when trying to comply with Building Regulations.

The general consensus is that this is an appropriate method of measurement, although there are some concerns regarding the complexity of the wording.

## Question 24:

**Do you agree with the proposed changes to the technical guide criteria in order to better reflect current thinking and standards on accessibility? If not, which proposals do you disagree with, and why?**

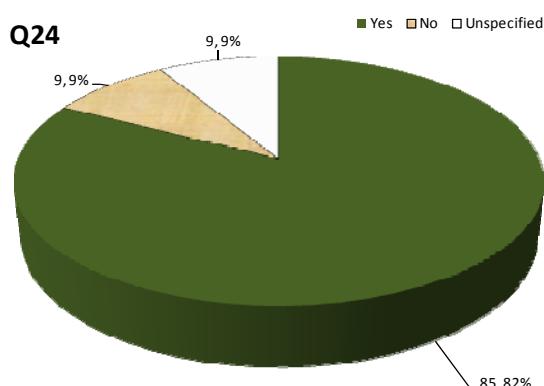


Figure 24.1: Question 23 % yes/no

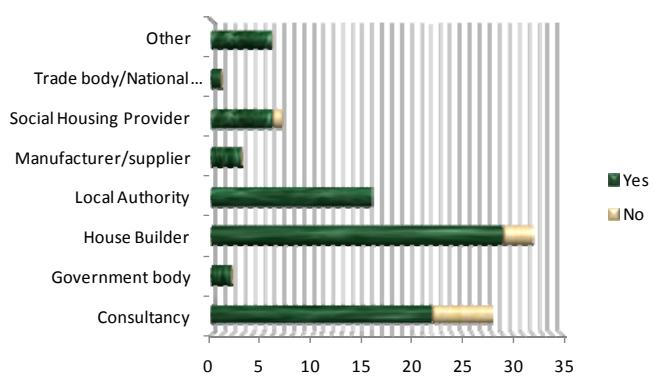


Figure 24.2: Question 23: 'yes/no' by sector

The Code currently has accessibility requirements in the Waste and the Health and Wellbeing categories of the technical guide. Many of the accessibility requirements currently refer to accommodating 'wheelchair users'. This limited definition and the related requirements are not in keeping with recent standards and terminology related to accessibility. It is therefore proposed to shift this terminology towards providing 'inclusive environments' based on existing definitions in British Standards, Lifetime Homes and CABE housing standards, as well as access requirements to waste storage.

### Comments on responses to question 24

In total, 103 responses to this question were received with the majority of respondents agreeing to the proposal (82 per cent). One hundred per cent of the local authority, government body, manufacture/supplier and trade body respondents agreed, whereas there was some disagreement from house builders, consultancies and social housing providers.

Those in support generally stated that the proposed changes to the technical guide are sensible in order to align with current guidance and legislation and the shift in terminology was welcomed.

A minority of respondents disagreed with the proposal citing issues relating to planning, Building Regulations and the achievability of the credits. Some comments related to issues outside the context of this proposal and were therefore not considered as part of the analysis.

There is overall agreement with the proposal to update the accessibility terminology and access to waste storage technical criteria within the Code.

## Question 25:

**Do you agree that current Code requirements cause duplication for some developers who already have a corporate Site Waste Management Plan in place? If yes, please provide evidence of experiences to support your answer.**

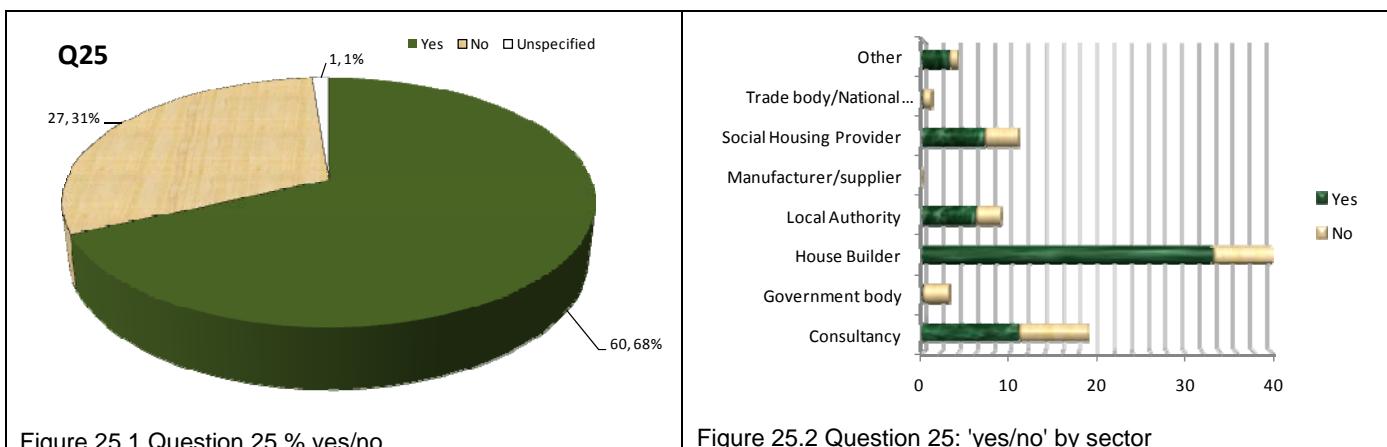


Figure 25.1 Question 25 % yes/no

Figure 25.2 Question 25: 'yes/no' by sector

Site Waste Management Plans (SWMP) were introduced as a mandatory element of the Code prior to the introduction of regulations in England by Defra. The Code requirements for SWMPs currently sets slightly higher standards than regulations, therefore any SWMP that has been prepared to meet the Code should also satisfy the regulatory requirement. However some house builders, particularly those with corporate waste reduction commitments in place and supporting SWMPs, have reported that the Code requires them to write additional and slightly different SWMPs when there are Code homes on a development. This question aimed to identify the level of significance of this issue.

### Comments on responses to question 25

In total 88 responses to this question were received and of those that responded, a significant proportion were house builders. The majority of respondents agreed with the proposal (68 per cent).

Those agreeing with the question provided limited evidence to support this decision, despite being asked for information on their experiences. A number of comments were provided, mostly by house builders, but the issues discussed weren't always clear or were not relevant to the question asked. For example, a number of respondents commented that since SWMPs are already regulated through the Environment Agency the requirement should be removed from the Code. This issue is addressed by question 26 which proposes replacing the mandatory credits with voluntary credits encouraging best practice.

The majority of respondents that disagreed with the question did not provide a comment, but those that did suggested that if an additional Code-compliant SWMP is required this does not cause an unnecessary administrative burden. Some (major) house builders stated that they have developed a Code-compliant SWMP and apply this to all developments, regardless of their being Code homes or not. This has enabled them to avoid duplication in the future.

Although the charts indicate that there is concern - mostly from house builders - that the Code is causing duplication of SWMP documentation little evidence was provided to support this. Where

comments were provided these tended not to directly address the question being posed, or were unclear. Due to the lack of clarity in the responses provided it is still unclear as to whether the issue of duplication is significant.

## Question 26:

**Should the mandatory requirement for Site Waste Management Plans be removed and replaced with voluntary credits for minimising or diverting waste to landfill as set out above and in the technical guide?**

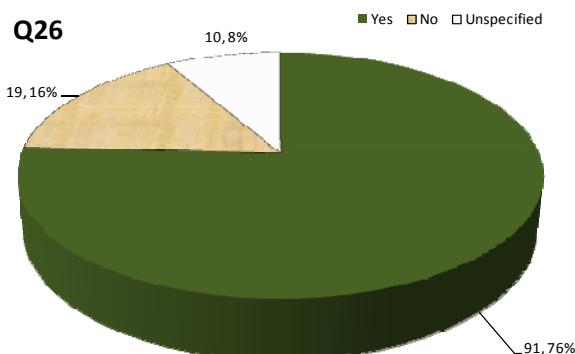


Figure 26.1 Question 26 % yes/no

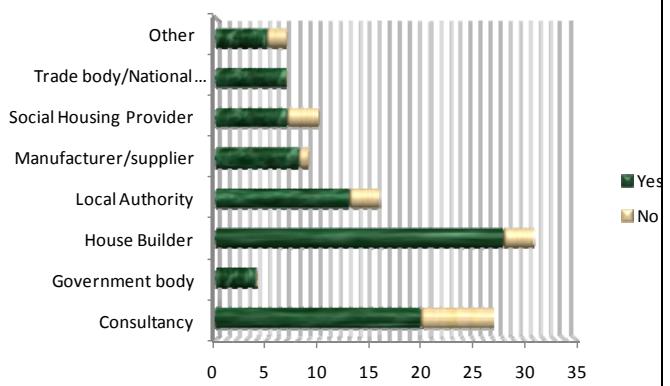


Figure 26.2: Question 26: 'yes/no' by sector

Given the statutory requirement in England to have a Site Waste Management Plan (SWMP) in place for all developments over £300,000, the consultation proposed removing the current mandatory requirement for SWMPs in the Code. It also proposed that the voluntary credits be improved and an additional credit be added to reflect better the policy of waste minimisation and diversion from landfill to help drive change in site waste management. This will mean that in Wales there is not a mandating or a statutory requirement for Site Waste Management Plans.

### Comments on responses to question 26

In total 120 responses to this proposal were received. The majority of respondents agree with the proposal (76 per cent), with 16 per cent respondents stating that they disagree.

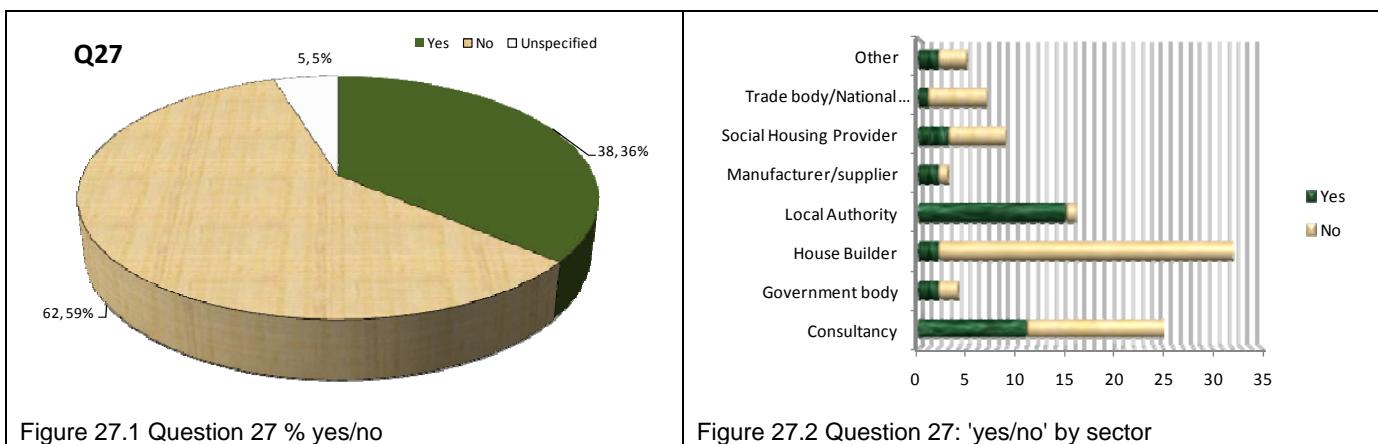
The general consensus is that the mandatory requirement should be removed since this is enforced by regulation outside of the Code. However there was some concern expressed that SWMPs are not currently being checked sufficiently by local authorities and therefore the Code at least provides a mechanism for enforcing the use of SWMPs. The majority of respondents believe that voluntary credits for minimising or diverting waste to landfill should be provided to encourage better practice.

Of those respondents that disagreed with the proposal and provided comments, the analysis showed that the proposal was misunderstood by several respondents since there were concerns over site waste management issues being removed from the Code, which is not our intention.

There is overwhelming support for removing the mandatory requirement for a SWMP and providing voluntary credits for better practice, and this is reflected in both the charts shown above and the comments provided by respondents. Although there is concern that Code is the only effective mechanism for ensuring regulatory compliance is achieved, the role of Code is not to enforce regulatory requirements.

## Question 27:

**Do you agree with the proposed methodology and requirements for dealing with doubling external space where there is a fortnightly collection? If not, what methodology/requirements do you think should be used?**



The waste credit issue Was1: *Storage of non-recyclable waste and recyclable household waste* aims to recognise and reward the provision of adequate internal and external storage space for non-recyclable waste and recyclable household waste. There are mandatory and voluntary elements to this issue. Given the variability of frequency of waste collections by local authorities the consultation proposes to amend the calculation methodology for external space to link it to the frequency of collections by the local authority. Where a local authority does not provide the waste containers and collects fortnightly the BS5906:2005 space standards should be doubled. (We are not proposing that the space requirements can be reduced for more frequent collections). Additionally, it is proposed that where the local authority does not limit the volume of waste collected weekly then compliance with BS5906:2005 is required.

### Comments on responses to question 27

In total 105 responses to this proposal were received. A slight majority of respondents (59 per cent) disagreed with the proposal, with 36 per cent of respondents in favour. All but one local authority support the proposal, whereas the large majority of house builders do not support the proposal.

Of those disagreeing, reasons cited focussed mainly on the difficulty and confusion for developers attempting to meet the proposed requirements, and for this issue to be determined by local planning.

A small number of respondents who agreed with the proposal provided additional suggestions on the compliance criteria, despite stating that they supported the proposed methodology.

The majority of respondents disagreed with the proposal, although this was not overwhelming and there was a level of support for the proposed methodology.

## Question 28:

**Do you agree that waste compactors should be allowed on sites where there are space restrictions for storing waste? If yes, do you agree with the proposed requirements?**

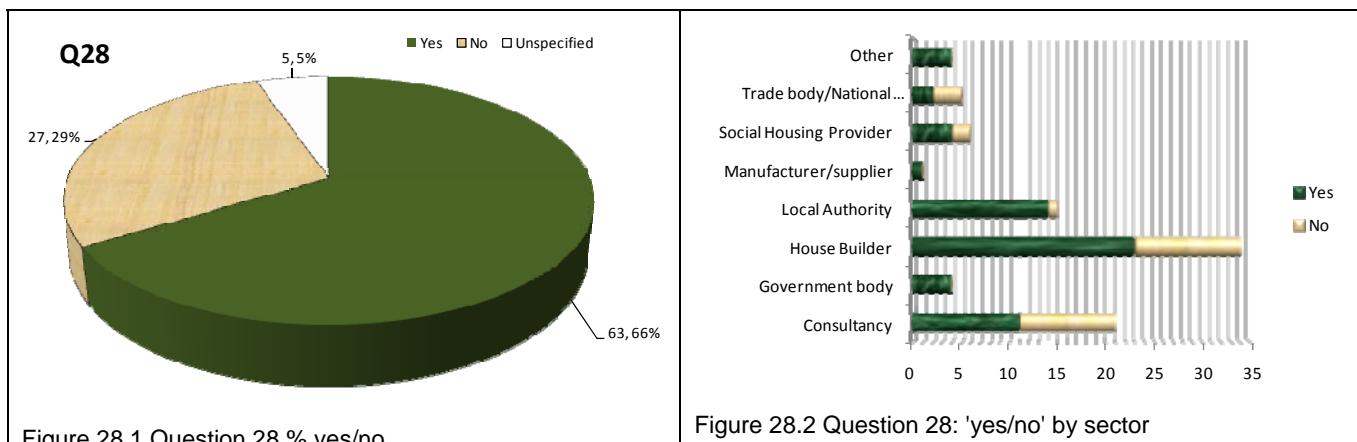


Figure 28.1 Question 28 % yes/no

Figure 28.2 Question 28: 'yes/no' by sector

The consultation proposes to allow the installation of a waste compactor on sites where space is restricted, providing the more demanding of the following are met: local authority space requirements for collection or BS5906:2005. In addition the local authority must agree to the installation, i.e. planning permission is either not required or would be granted.

### Comments on responses to question 28

In total 95 responses to this proposal were received. Two-thirds of respondents (66 per cent) agreed with the proposal, with 29 per cent respondents stating that they disagree. Only one local authority disagreed with the proposal but did not provide a reason, whilst the other 14 local authority respondents supported the proposal.

Although supporting the proposal, many respondents stated concerns regarding the related energy consumption/CO<sub>2</sub> emissions and possible health and safety implications.

Others who agreed in principle stated that other approaches to waste minimisation should be allowed if this proposal is accepted, to encourage and reward innovation.

Of those that disagreed, most of the comments related to the concerns and issues stated by those who supported the proposal.

Both those who agreed and disagreed with the proposal state concerns over health and safety implications. Additionally, both sets of respondents consider that other approaches to waste minimisation should also be considered by the Code if this proposal is accepted.

## Question 29:

**Should communal cycle storage in large scale, high density developments be reduced, remain the same or be increased? We would welcome evidence from respondents of experiences with this issue.**

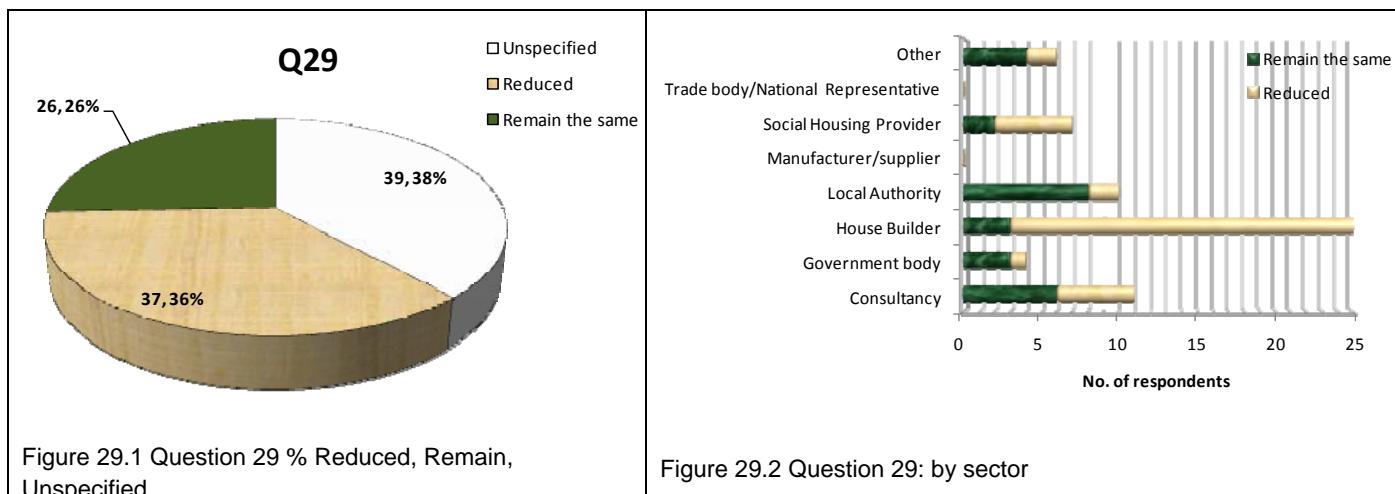


Figure 29.1 Question 29 % Reduced, Remain, Unspecified

Figure 29.2 Question 29: by sector

It has been suggested that the storage requirement could be slightly reduced for large scale, high density developments where communal storage is provided, since these developments are already under pressure in terms of providing sufficient levels of space amenity (usually a local planning requirement). Where there are opportunities for communal cycle parking, there may be potential to decrease the cycle storage standards in large scale, high density developments.

### Comments on responses to question 29

In total, 102 responses to this question were received with most specified support being given for reducing the requirement (36 per cent). However, from analysis of the written responses that did not make a direct specification but *indicated* a preference, there appears to be a higher level of support (estimated at 50 per cent of total responses) for reducing the requirement. House Builders were the largest responding sector group and mainly supported a reduction in cycle storage provision; however a number felt the requirement could remain the same. The largest support for keeping the requirements the same came from local authorities.

Common reasons from those requesting a reduction included experience that shows under utilisation of cycle racks and storage, either due to the perceived safety of the communal storage facility by residents, or the frequency of local public transport options offering a preferred alternative to cycling.

Common reasons for those requesting the requirement remains the same included the importance to encourage sustainable alternatives to car travel, particularly where public transport alternatives are inadequate.

There were also a number of written responses that did not directly state an option preference but suggested that storage size isn't necessarily the issue for under-use; it is in fact the design criteria. House builders in particular stated that cycle storage currently designed to Code requirements can deter use due to perceived safety issues. Therefore it was suggested that the Code compliance design criteria should be amended to encourage more accessible and safe storage areas.

The response generated a mixed response with many responses provided through comments. Where responses clearly indicated a preference, these have been considered in the analysis and have informed the final policy decision. Other responses gave no indication as to what option they agreed with, whilst several left inconclusive comments.

### Question 30:

If we were to rescale the communal storage requirements for certain sized developments, what threshold should be used to describe a development as 'large scale' and allow a rescaled requirement to be applied, e.g. 100 dwellings, 200 dwellings, etc.? Why do you consider this threshold to be appropriate?

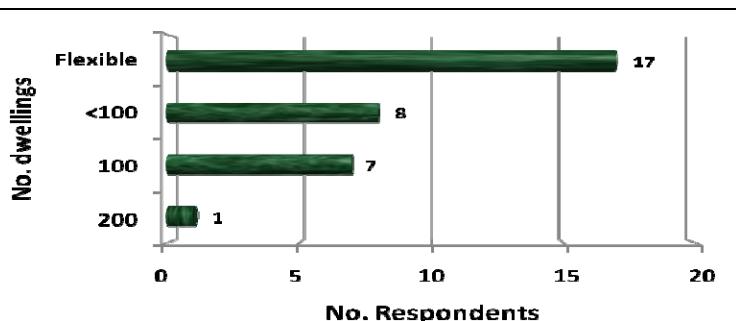


Figure 30.1: No. of respondents against preferred threshold

This is a continuation of question 29 which proposes changes to the credit issue on cycle storage.

#### Comments on responses to question 30

This question generated a mixed response. Of the 84 responses received only a limited number provided their preferred threshold (Figure 30.1). Eight suggested a threshold of lower than 100; one suggested 200 units; and seven suggested 100 units. Approximately 20 per cent of respondents, mostly comprising housebuilders, suggested that a threshold could not be determined by density alone, as no one size fits all, and therefore flexibility should be allowed. It was also suggested by several respondents that cycle storage requirements should be determined by local planning policy rather than Code.

This question did not generate a large number of suggestions on appropriate thresholds and therefore it was difficult to determine the most preferred option. However from analysis of the written responses a small proportion of respondents support a limited range of thresholds based on density, against a larger proportion who would prefer some level of flexibility and for there not to be a threshold set by the Code due to one size not fitting all developments.

### Question 31:

**Do you consider it appropriate to reduce the cycle storage requirement for certain types of development, such as specialist retirement housing. If so, what types of development would you consider it appropriate to apply the reduction to?**

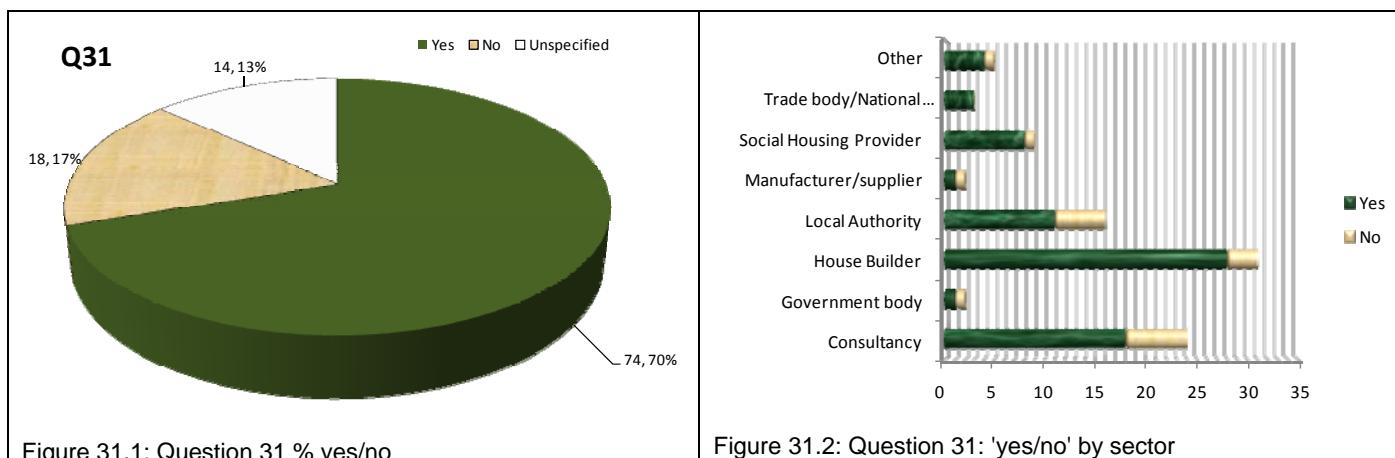


Figure 31.1: Question 31 % yes/no

Figure 31.2: Question 31: 'yes/no' by sector

Where there are opportunities for communal cycle parking, it has been suggested that the cycle storage requirements for certain types of development, such as specialist retirement housing, in addition to large scale, high density developments, should be reduced as the use of cycles is likely to be lower than that of a standard residential development.

#### Comments on responses to question 31

In total, 106 responses to this question were received. There was general agreement (70 per cent) to the proposal, with the majority of responding house builders showing support.

Although the question generated a mixed response of comments, overall it was agreed that cycle storage should be reduced for retirement accommodation given the reduced likelihood of use, but suggested consideration should be made for the storage of mobility equipment as an alternative use of space. This issue is addressed by question 32.

Those who disagreed stated other items such as mobility equipment should also be included and that cycle storage for visitors would still be required. Some respondents suggested an exemption for retirement homes (i.e. assisted living) but not for retirement villages since residents will likely wish to cycle recreationally.

There is strong support to reduce cycle storage for specialist retirement housing; however there was a suggestion that not all retirement developments should have the requirement reduced since residents may wish to cycle recreationally.

It is evident that respondents have largely considered this proposal in the context of occupant wellbeing rather than carbon dioxide emissions. However the cycle storage credit issue is within the energy section of the Code and therefore focuses on maximising the potential to reduce transport-related CO<sub>2</sub> emissions through promoting cycle use.

### Question 32:

**Should the requirement for cycle storage remain for all developments but be flexible to allow for storage of mobility equipment applicable to the likely end user as well as cycles?**

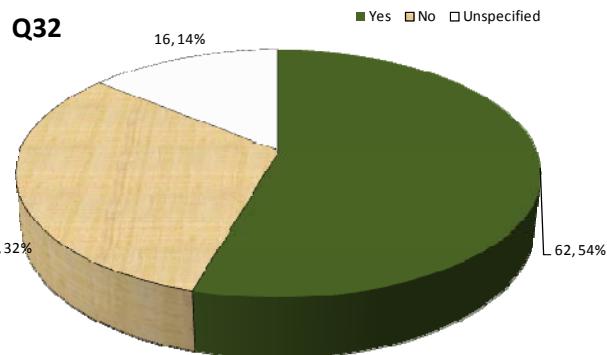


Figure 32.1: Question 32 % yes/no

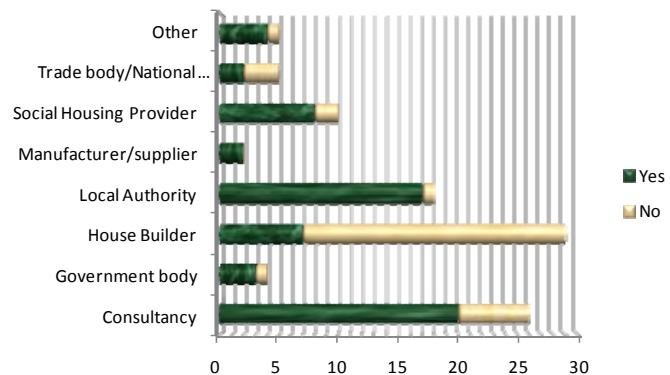


Figure 32.2: Question 32: 'yes/no' by sector

Where there are opportunities for communal cycle parking, it has been suggested that the cycle storage requirements for certain types of development, such as specialist retirement housing, in addition to large scale, high density developments, should be reduced as the use of cycles is likely to be lower than that of a standard residential development. However it may be more appropriate to retain the current storage requirements but that these requirements should be flexible to allow for storage of mobility scooters/buggies instead of cycles.

### Comments on responses to question 32

In total, 114 responses to this question were received with a slight majority (54 per cent) supporting the proposal. There was a large response from local authorities and consultancies, who largely agreed. However the majority of housebuilders were not in favour of the proposal.

The response generated a mixed response and 14 per cent did not directly state a preference. Those that agreed generally felt that it was appropriate to allow cycle storage to be multipurpose and flexible with end-users in mind, and that this could include electric vehicle charging points.

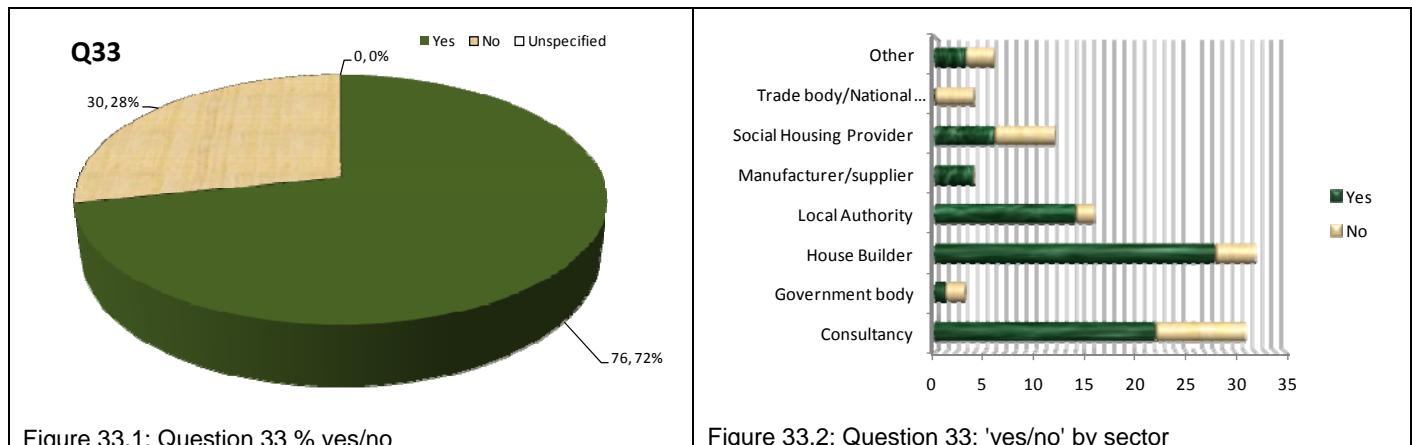
Those who disagreed largely has issues with the inclusion of mobility scooters because they either felt the storage space requirement is not be comparative with that of a cycle, or that making provision for scooters will not reduce CO<sub>2</sub> which is the primary aim of the cycle storage credit.

Several comments already provided for questions 30 and 31 were repeated again for this question and did not directly relate to the proposal.

There appears to be a level of support for this proposal; although not overwhelming and generally not from house builders. The issues raised regarding comparative space sizing and CO<sub>2</sub> emissions have been taken into consideration when making a decision on this proposal.

### Question 33:

**Do you agree that the home office space requirement for specialist housing such as retirement homes should be reduced?**



Currently there is 1 point available for providing home office space. The aim of this credit issue is to reduce the need to commute to work by providing residents with the necessary space and services to be able to work from home. DCLG consider it unlikely therefore that the role of the home office in reducing travel related CO<sub>2</sub> emissions is applicable in some types of specialist housing such as retirement homes since most households are unlikely to be commuting to work. It is therefore proposed that the space requirement is reduced to allow for desk space and provision of services, but not necessarily space for a filing cabinet or bookcase, as with the current space requirements.

### Comments on responses to question 33

In total, 106 responses to this question were received, with the majority of respondents (72 per cent) agreeing to the proposal. This included most house builders and local authorities; however conversely, the majority of government bodies (although only three responded) and all trade bodies disagreed with proposed reduction. Social housing providers were equally divided in their support.

The proposal generated a mixed response from those supporting the proposal, but overall the opinion was that whilst some retired people may require a home office, there will also be those that do not require this space therefore the requirement should be reduced to allocating space for IT equipment or bookshelves, rather than both.

Those who disagreed generally felt that retired people would still have need for office space since many access the internet for personal use.

There is majority support for this proposal, particularly from house builders. Similarly to question 31, those in disagreement have largely considered this proposal in the context of occupant wellbeing rather than reducing CO<sub>2</sub> emissions through reduced travel to the workplace, which is the intention of the Home Office credit.

### Question 34:

Are there other parts of the Code you think this may apply to?

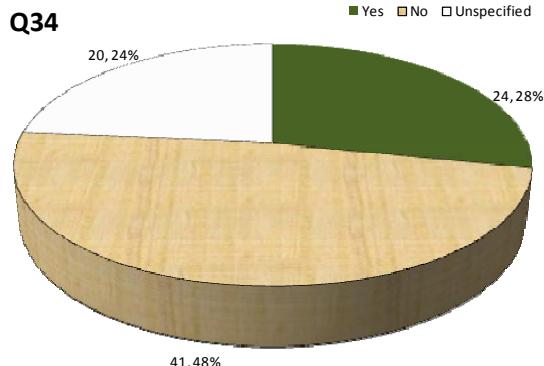
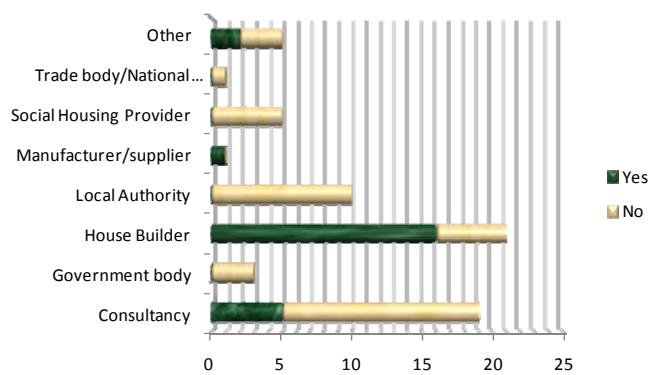


Figure 34.1: Question 34 % yes/no



It is proposed that the Home Office space requirement for specialist housing is reduced to allow for desk space and provision of services, but not necessarily space for a filing cabinet or bookcase, as with the current space requirements. The consultation sought views on whether the reductions made to specialist and retirement housing applies to any other areas of the Code.

#### Comments on responses to question 34

In total, 85 responses to this question were received. Although the chart shows that the majority (48 per cent) do not consider requirement reductions applicable to other parts of the Code, this is not necessarily an accurate reflection of respondents' opinions since a large number of written responses were received where it was unclear as to the respondents' preference (24 per cent).

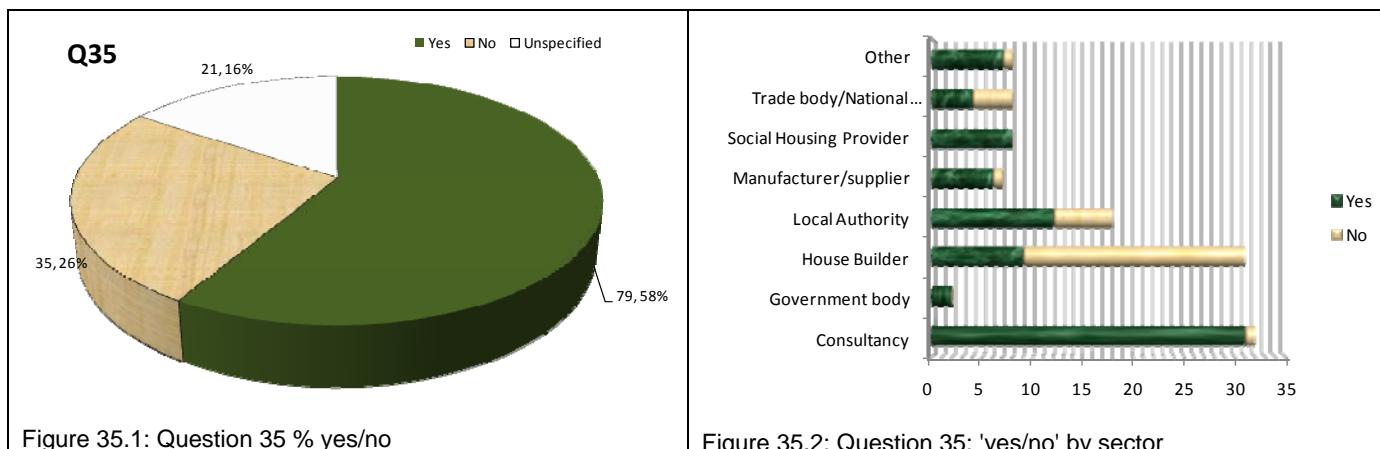
There was unanimous disagreement from local authorities, social housing providers, government bodies and trade bodies, whereas the majority of housebuilders felt there were other parts of the Code where a reduced requirement could apply.

The main areas specified by those providing clear responses were water use, waste storage space, and communal drying space. Cycle storage was also suggested however this issue has already been addressed by the consultation.

Although the majority of respondents disagreed with the question this is less than 50 per cent of the total responses. A proportion of the written responses received did not provide clear direction on whether they felt requirements should be reduced elsewhere in the Code, thus it was difficult to include these responses in the analysis. Where responses were clear a number of areas were highlighted.

### Question 35:

**Should the issues in the Code not directly related to climate change remain in the Code? What are the reasons for your answer and do you have any evidence to support them?**



Most of the Code focuses on different issues that relate to climate change mitigation and adaptation. DCLG believe this is appropriate prioritisation, as climate change is the greatest long-term challenge we face. However, there are a number of issues within the Code that go wider to provide a more holistic sustainable building standard, such as the Lifetime Homes Standard and acoustic requirements. DCLG would like to consider carefully whether these should continue to be pursued through the Code and welcomed views on the benefits these areas bring to the Code and whether there is a strong case to remove any of them.

#### Comments on responses to question 35

In total 135 responses to this question were received, mainly from consultancies closely followed by house builders. There was general agreement from all respondents (58 per cent) and near 100 per cent agreement by consultancy respondents and 100 per cent agreement by social housing providers that the issues not relating to climate change should remain in the Code. Conversely the majority of house builders disagreed.

Respondents supported retaining items not directly related to climate change, and the general view was that these issues deal with wider social sustainability which is an important factor rarely covered outside of the Code. In particular, it was strongly felt that issues such as security in the home, daylight, and acoustics should remain in the Code to promote safety and wellbeing of residents.

The largest proportion of those disagreeing came from house builders. The most common reason given was that these issues do not deal directly with climate change and reducing CO<sub>2</sub> emissions and therefore should be removed from the Code.

There is general support for this proposal in order to promote social sustainability, as well as environmental. There is evidence to suggest that either housebuilders misunderstand the role and scope of the Code (i.e. to promote to sustainable and not just energy efficient housing), or that there is a view that the Code should focus solely on energy and reducing CO<sub>2</sub> emissions.

### Question 36:

**Do you agree with the proposed changes set out in the technical guide to the assessment criteria in SUR1: *Management of Surface Water Run-off from development*? If not, why not?**

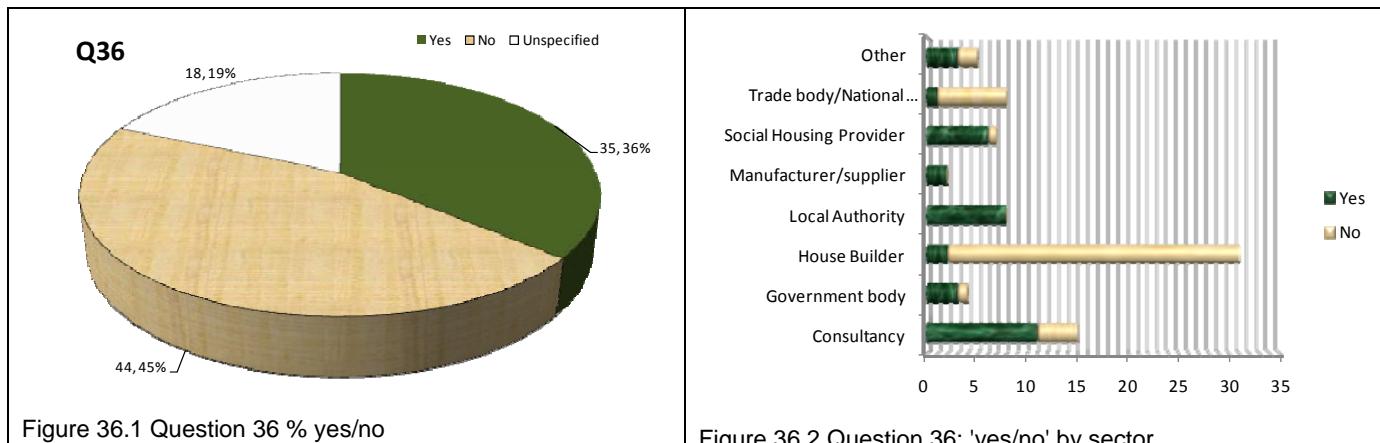


Figure 36.1 Question 36 % yes/no

Figure 36.2 Question 36: 'yes/no' by sector

The Code currently includes a mandatory requirement to design housing developments which avoid, reduce and delay the discharge of rainfall to public sewers and watercourses. It is aligned with the requirements of *Planning Policy Guidance 25: Planning and Flood Risk*. There has been a significant amount of feedback regarding the mandatory criteria and the BRE recently published a guidance note to address current confusion with the mandatory requirements.

DCLG has also undertaken a fundamental review of SUR 1 (*Management of Surface Water Run-off from development*) in light of stakeholder feedback and the emerging National Standards for SuDs. This includes clarifying and amending the requirements for the volume of run-off and peak rate of run-off and introducing new criteria for designing for system failure. The criteria for water quality have also been clarified. This question asked for views on changes to the technical guide assessment criteria for SUR 1.

### Comments on responses to question 36

In total 97 responses to this question were received and a significant proportion of these came from house builders. Analysis of the direct responses show that more respondents, including the majority of housebuilders, disagree (45 per cent) with the question than agree (36 per cent), with 19 per cent showing no direct preference.

Analysis of the written responses however, indicates that most respondents are in favour of the improvements to the clarity of the assessment criteria proposed in the Consultation. In addition, comments suggest that this issue is considered important and therefore has a role within the Code. A minority consider the current proposals to still be too complex and restrictive.

The main reason cited for disagreeing with the question is not due to the proposed revision to the assessment criteria, but concern over the potential conflict or duplication with PPS25 and the anticipated National Sustainable Drainage Standards. Thus, although flooding is acknowledged as an important sustainability issue, there is strong support for this credit issue to be removed from the Code once the Flood and Water Management (FWM) Act is fully implemented.

A full and detailed response was provided by a key Government body in this area who stated general agreement with the proposed changes to SUR1. However, a number of suggestions were made to improve the clarity of the criteria which have been taken into consideration.

Despite the charts showing majority disagreement with the consultation question, the comments provided suggest that most respondents are satisfied with the clarifications made to the assessment criteria in the technical guide. There is strong support for the issue of surface water runoff to be included within the Code but only until the actions coming out of the Flood and Water Management Act have been fully implemented. It should be noted that the revised assessment criteria for SUR 1 is an interim measure to ensure that SuDS continue to be implemented (where appropriate) and will be amended to take account of the National Sustainable Drainage Standards once these are published.

### Question 37a:

**Do you agree in principle that the minimum door and window security standards outlined in Box B should be introduced into the Code and awarded one credit?**

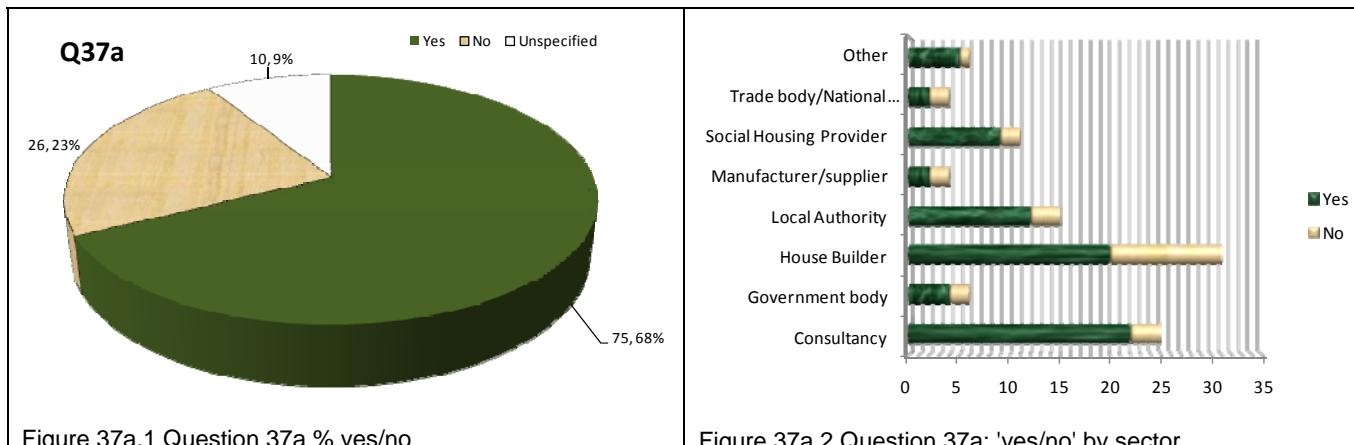


Figure 37a.1 Question 37a % yes/no

Figure 37a.2 Question 37a: 'yes/no' by sector

Security is currently a voluntary part of the Code under the Management category and is based upon part two of the Secured by *Design* initiative run by the police. DCLG is not currently minded to introduce more mandatory requirements into the Code; however it is agreed that introducing clear basic security requirements could be beneficial, particularly in ensuring a consistent security baseline around the country. It is therefore proposed to split the current credits available in the security section and awarding one credit for achieving the minimum security standards outlined in Box B on page 54 of the consultation document.

### Comments on responses to question 37a

In total, 111 responses were received to this question. There was general consensus (68 per cent), in particular amongst Social Housing Providers and Local Authorities that the minimum door and window security standards outlined in Box B should be awarded one credit within the Code.

Although 23 per cent stated that disagreement with the proposal, few provided written comments to support their decision. Where a written response was provided opinions were strongly expressed and some viewed the Box B standards as being lower than Secured by Design (SBD) *Section 2 Physical Security* requirements.

Comments from housebuilders tended to relate to cost or were not relevant to this proposal.

The majority of respondents agreed to the proposed Box B requirements, although concern was expressed by some of those who were not in support that the standards are below that of SBD *Section 2*.

A proportion of comments were not relevant to this proposal and analysis of the further consultation questions related to security showed that several comments were just repeated for each.

### Question 37b:

**Should an additional credit be available for consulting with the local architectural liaison officer or crime prevention design advisor and implementing their recommendations based on Secured by Design Part 2?**

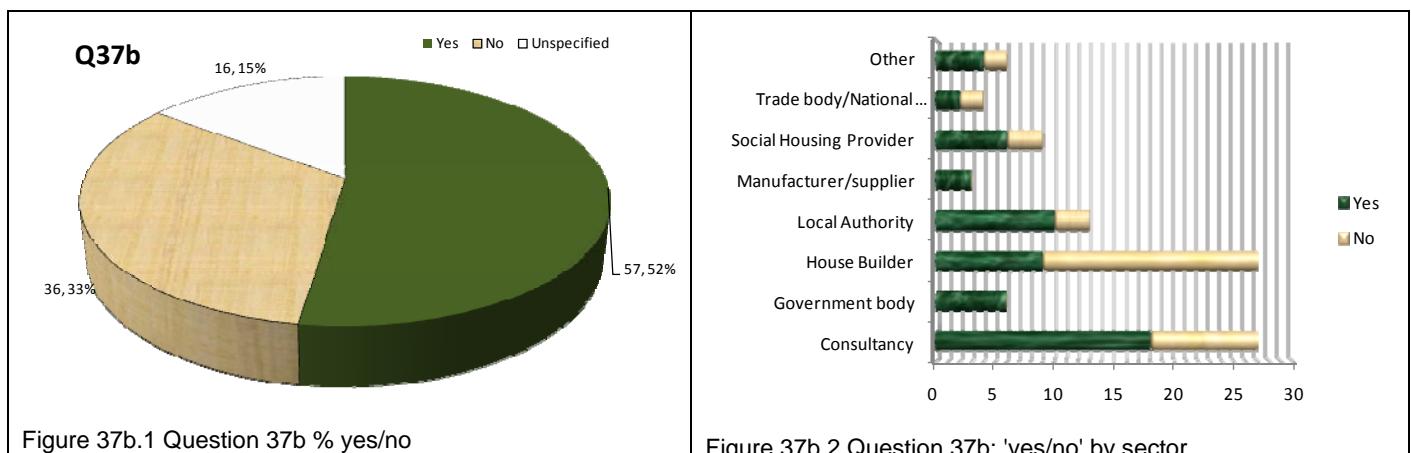


Figure 37b.1 Question 37b % yes/no

Figure 37b.2 Question 37b: 'yes/no' by sector

Police crime prevention design advisors base their advice on a risk assessment therefore they can provide site specific advice that goes beyond the minimum. A proposed approach to help drive the take up of basic security standards in new homes could be to make the physical security standards a mandatory element of the Code (still with 1 credit available) or to increase the credits available for consulting a crime prevention design advisor (to 2 credits) thereby making the whole section more valuable, offsetting the additional costs.

### Comments on responses to question 37b

In total, 109 responses were received to this question. The majority of respondents agree with this proposal (52 per cent), but only marginally when compared to those not in support (33 per cent). Some of those who agreed provided comments expressing concerns about the proposal, therefore it wasn't clear whether these respondents were indeed agreeing to the proposal.

Similar concerns were expressed by those who rejected the proposal and tended to focus on the inconsistency or relevance of the advice from crime prevention design advisors.

Both sets of respondents highlighted issues regarding the use of crime prevention design advisors, assumed based on their own experiences. However the majority of respondents stated agreement that one credit should be awarded for consultation and implementation of their recommendations.

### Question 37c:

**Do you think the above options would give rise to additional construction costs? If so please state what you think these costs would be.**

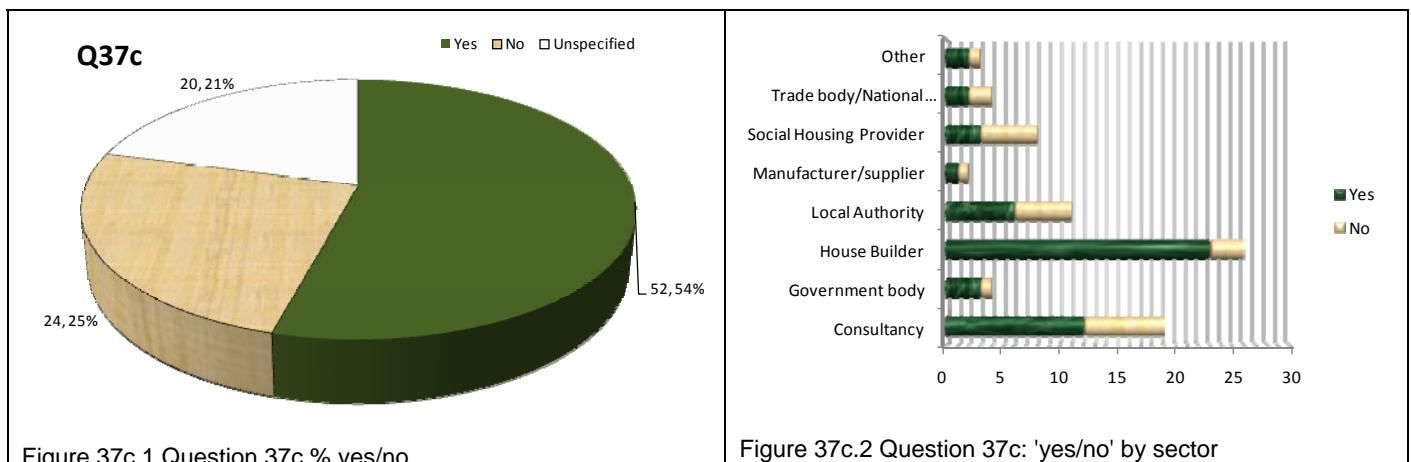


Figure 37c.1 Question 37c % yes/no

Figure 37c.2 Question 37c: 'yes/no' by sector

The impact assessment clearly shows that whilst there are benefits to the economy and society of minimising the risk of burglary, the costs are primarily on house builders. The consultation asked for views on the proposals being put forward; particularly whether the new voluntary credit for basic window and door locks would be adopted by house builders and therefore produce the expected benefits.

#### Comments on responses to question 37c

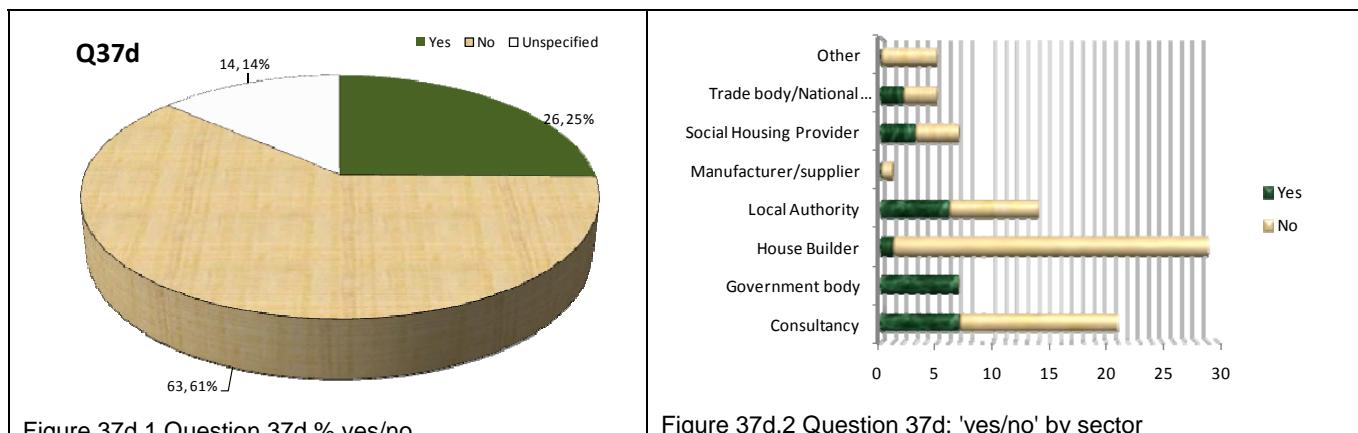
In total, 96 responses were received to this question. A slight majority of respondents agreed that additional costs would be incurred; however no indication was provided as to what these might be. Most housebuilders agreed with the question posed, although the majority of social housing providers disagreed. One Social Housing Provider however, suggested that meeting minimum security standards for doors and windows would not incur additional costs but meeting the architectural liaison officer's requirements would.

Comments directly relevant to this question suggested that the costs would be similar to those being incurred at present and several stated this was because developments are already designing in security measures even without the influence of the Code.

Although 54 per cent of respondents agreed that additional costs would be incurred, no comments were provided on what they felt these costs would be. Many appeared to consider that security-related costs are already accounted for in the design of dwellings so the Code proposal would unlikely incur additional costs.

### Question 37d:

**Alternatively, to drive take up of basic physical security standards in new homes would it be necessary to make them a mandatory part of the Code?**



### Comments on responses to question 37d

In total, 103 responses were received to this question. The majority disagreed (61 per cent), particularly house builders, and there was general consensus that standards on physical security do not require to be made mandatory in order for standards to improve. Most did not elaborate on this response:

All of the responding government bodies supported the proposal, forming a proportion of the overall 25 per cent of respondents who agreed that physical security standards should be made mandatory to improve take up, despite it being stated that take up of the Code security credits is already at 90 per cent.

The majority of respondents, with house builders forming a large proportion of this group, do not consider it necessary to make security standards mandatory. Government bodies disagree however; although it was stated that 90 per cent of developments target the Code security credits.

### Question 37e:

**Would an alternative approach of allowing two credits for consulting the local architectural liaison officer or crime prevention design advisor (whilst leaving the credit for door and window locks voluntary) be more attractive?**

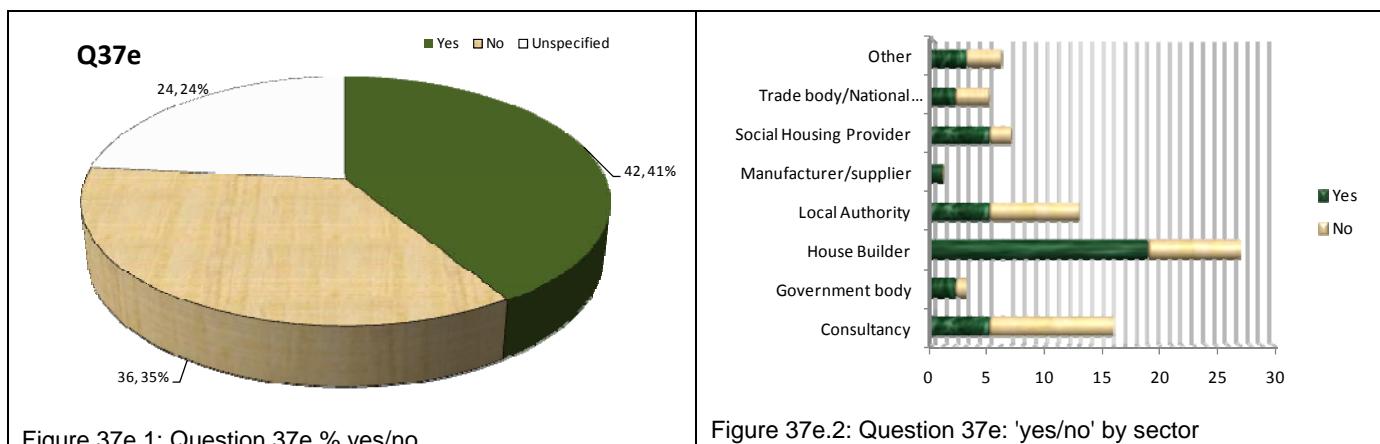


Figure 37e.1: Question 37e % yes/no

Figure 37e.2: Question 37e: 'yes/no' by sector

### Comments on responses to question 37e

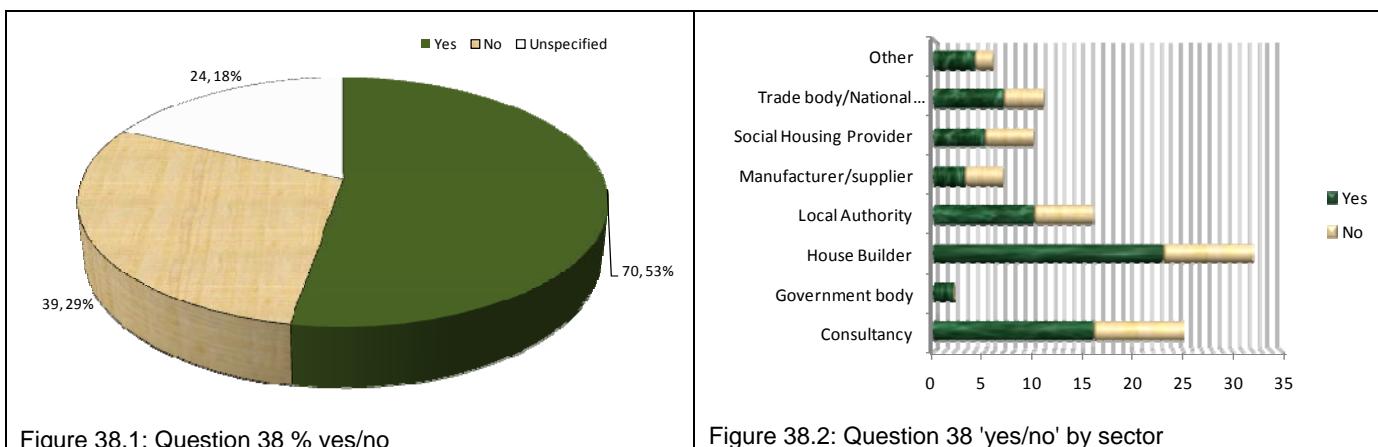
In total, 102 responses to this proposal were received. Although the majority agreed (41 per cent) to the proposal, support was not overwhelming and there was a comparable level of disagreement (35 per cent). A quarter of respondents did not state a direct preference but provided a written response instead; however many of the comments provided were either unclear or not directly relevant to the proposal and there is evidence to suggest that the intention of the proposal was generally misunderstood. This was the case for a large proportion of the responses received by the other respondent groups. We have assumed that this may have been due to a misinterpretation of the proposal, or that respondents were repeating comments provided for previous security questions.

### Conclusion

The conclusions arising from this set of responses are unclear due to the comparable level of agreement against the level of disagreement, and the lack of clarity in the written responses. A proportion of respondents, including those who stated agreement or disagreement, provided written responses that showed that the intention of the proposal had not been fully understood. This suggests that further clarification may have been required by the explanation in the consultation document. There is also some evidence that respondents were repeating concerns and issues relating to previous consultation questions and proposals on security.

### Question 38:

**Do you agree that the technical guide should only be updated in 2013 and 2016? If not, do you have any suggestions for how often updates should be issued?**



As related regulations and standards have changed it has been necessary to periodically update the technical guide to improve clarity and usability of the Code. Whilst the changes made in the technical guide were not generally considered to be fundamental to the Code it is recognised that this has made it more difficult for industry to use the Code. In future it is proposed to update the Code only at the same time as changes are made to the Building Regulations, that is every three years i.e. in 2013, 2016, etc. This will reduce the flexibility of the Code to respond to changes in regulations, but will also increase stability and should reduce costs on industry. The consultation therefore sought views on whether it is appropriate to update the Code technical guide only in 2013 and 2016 or whether more frequent updates would be desirable.

### Comments on responses to question 38

In total, 133 responses to this proposal were received. The majority of respondents agreed with the proposed approach for changes to the technical guide (53 per cent); however this was only a small majority, although many of the 'unspecified' responses indicated support for this proposal through their comments. When broken down by sector, only manufacturers/suppliers had a larger proportion of respondents who disagreed with the proposal than agreed.

Generally it was felt that the proposed approach would add consistency to the process and assist understanding as the Code moves forward. A number of suggestions were also provided on how the Code could remain flexible in the way it deals with interim amendments between the update periods.

There was some concern expressed that the proposed approach would provide too large a gap in between updates and reduce flexibility for industry. A period of 18 months was suggested as being more appropriate by a number of respondents.

The comments received in response to this question suggested that if implemented there would be reduced flexibility but increased stability of the Code. The majority of respondents across most of the sectors support this approach since it was felt it would bring more consistency to the process.

**Question 39:**

**Do you have any comments on the redesign of the technical guide or suggestions for improving it?**

*This question asked for written responses providing suggestions that could support the above issue, therefore charts have not been provided.*

**Comments on responses to question 39**

A total of 96 responses were received to this question, of which a number simply stated 'no comment' or that they had already sent a list of issues direct to BRE. Most of the responses provided general comments on format, usability and clerical issues. All comments have been collated and issued to BRE for consideration in the revision to the technical guide.

**Conclusion**

Most comments and suggestions provided related to clerical and format issues rather than technical issues.

**Question 40:**

**Do you have any experience or views on how to help make the Code more accessible, visible and valuable to customers?**

*This question asked for written responses providing suggestions that could support the above issue, therefore charts have not been provided.*

**Comments on responses to question 40**

This question produced a response from a broad range of stakeholder categories, with most comments coming from house builders. It was generally agreed that publicity to consumers required improvement, with the main benefit being that greater awareness would lead to greater demand which could encourage improved marketing by developers. The role of estate/sales agents and as a means of raising awareness amongst homebuyers was also highlighted, together with a need for better education.

A number of other issues, including barriers, were put forward which have been collated and will help to inform strategy development in this area.

## **Question 41:**

**We would welcome your thoughts on whether these areas below should be considered for the future and any evidence you might have to support those views?**

**Helping to adapt to climate change**

**Reducing the embodied carbon of building products, alongside changes being introduced through revisions to the Construction Products Directive**

**Further reducing the carbon emissions from accidental fires by providing additional fire protection measures beyond those necessary for fire safety**

*This question asked for written responses providing suggestions and evidence of experiences that could support the above issues, therefore charts have not been provided.*

## **Comments on responses to question 41**

A large majority of those who responded see adaptation as a key future issue, but opinions differed on its incorporation into the Code. In general there was support for adaptation issues to be included within the Code, and a number of suggestions were put forward which are being considered by DCLG; however some consider that Building Regulations may be better placed to deal with climate change adaptation.

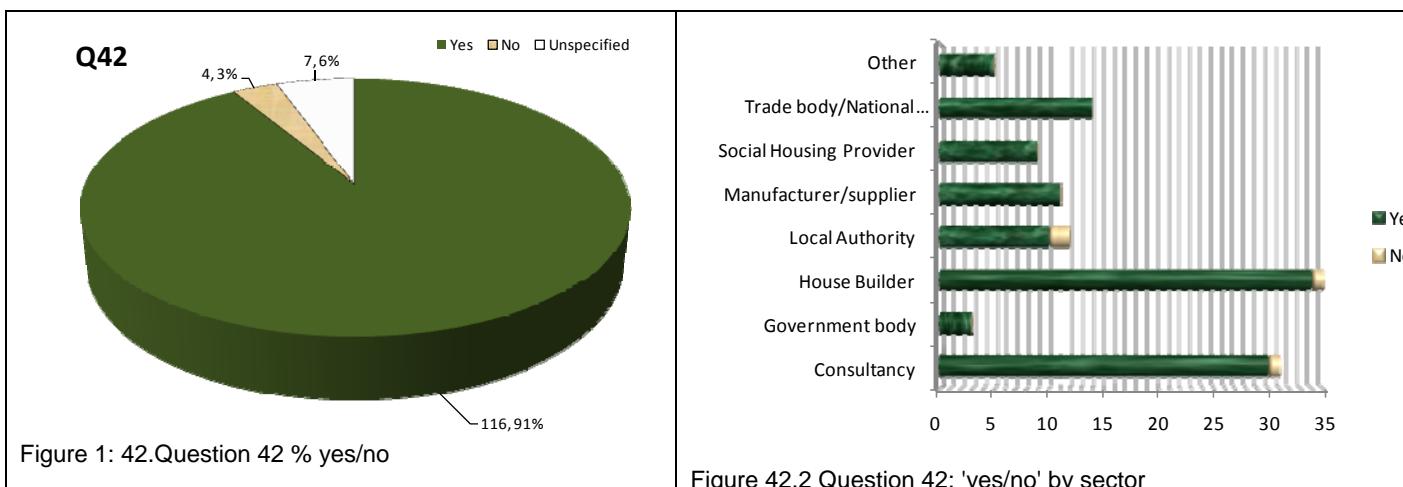
The significance of embodied energy as an issue was generally agreed on, and those in favour of its inclusion within the Code put forward a number of suggested approaches. There was some concern expressed however as to how it would be assessed, given the technical difficulty of the issue. This concern was also highlighted by those respondents who did not think this issue should be considered by the Code. Few comments were provided on the Construction Products Directive, all of which stated that Code should align with the Directive.

Reducing CO<sub>2</sub> emissions from accidental fire provided an almost unanimous response that this issue was not significant enough to be considered by the Code, with some stating that fire protection measures should remain the responsibility of Building Regulations only. Responses from fire services contradicted this viewpoint and a strong argument was put forward for the Code to be strengthened with regards to life safety issues.

Most respondents agreed that climate change adaptation and embodied carbon of building products are important issues and there is general support for their inclusion in future versions of the Code. There was considerably less support for the issue of CO<sub>2</sub> emissions associated with accidental fire; however responses indicated that this issue hadn't been fully thought about in terms of the indirect CO<sub>2</sub> emissions that can occur as a result of fire. As expected, a strong argument was put forward by several fire services for the inclusion of fire protection measures. The detailed responses also included social issues relating to fire, which wasn't directly covered by the consultation question but was considered by the fire services to be a Code issue.

## Question 42:

**Do you agree that the appropriate metric for the energy efficiency standard to support the regulatory definition of zero carbon homes should be based on the amount of energy demand for space heating and cooling per square metre per year? If not, why not?**



This question addressed how many elements of energy use should be included into the energy efficiency standard within the regulatory definition. The proposal is that it should include dwelling energy demand only, and not the efficiency of appliances supplying that demand (e.g. gas boilers), which are addressed in the total carbon figure.

### Comments on responses to question 42

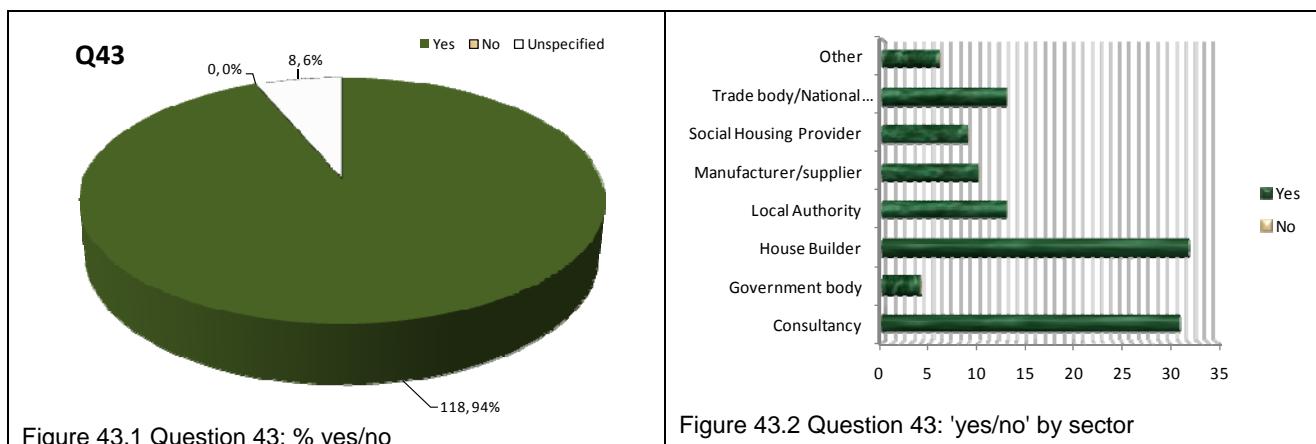
In total 127 responses to this proposal were received. A clear majority (91 per cent) agreed with the proposal with only four respondents stating disagreement; however none provided a comment to explain this view. A small proportion did not provide a direct preference, but from their written responses it was evident that most supported the proposed metric. There was a consensus that the proposed metric is easily understood, measurable, well established and recognised in the industry. It was also considered that this method will provide a performance based metric which is consistent with the highest levels of energy efficiency.

Of those who disagreed, the comments provided suggested that the proposal either wasn't fully understood or that the respondents had concerns outside of the relevance of this particular question.

There is overwhelming support for introducing this metric as an energy efficiency standard that is simple, well established, measurable and comparable.

### Question 43:

**Do you agree that it is right to focus on fabric and passive energy efficiency measures within the energy efficiency standard and to capture the efficiency of heating and cooling appliances and systems, mechanical ventilation, heat recovery and gains from hot water via carbon compliance? If not, why not?**



A key aspect of the Code is that it signals future regulations on zero carbon homes – a standard which will apply to all new homes from 2016. A three step approach to reaching the zero carbon homes standard was proposed. This is based on:

- a high level of energy efficiency in the fabric and design of the dwelling
- ‘carbon compliance’ – a minimum level of carbon reduction to be achieved from energy efficient fabric and on-site technologies (including directly connected heat networks) and
- ‘allowable solutions’ – a range of measures available for achieving zero carbon beyond the minimum carbon compliance requirements

In accordance with this, regulatory standards proposed considering the dwelling energy demand, the efficiency of appliances supplying that demand, and the efficiency with which primary energy is converted into the energy supplying those appliances (e.g. the efficiency of the electricity generation, transmission and distribution system used to run central heating pumps). The standard would take into account energy demand for space heating and cooling alone and therefore focus on the fabric of the dwelling (including passive design measures). The remaining will be addressed in carbon compliance.

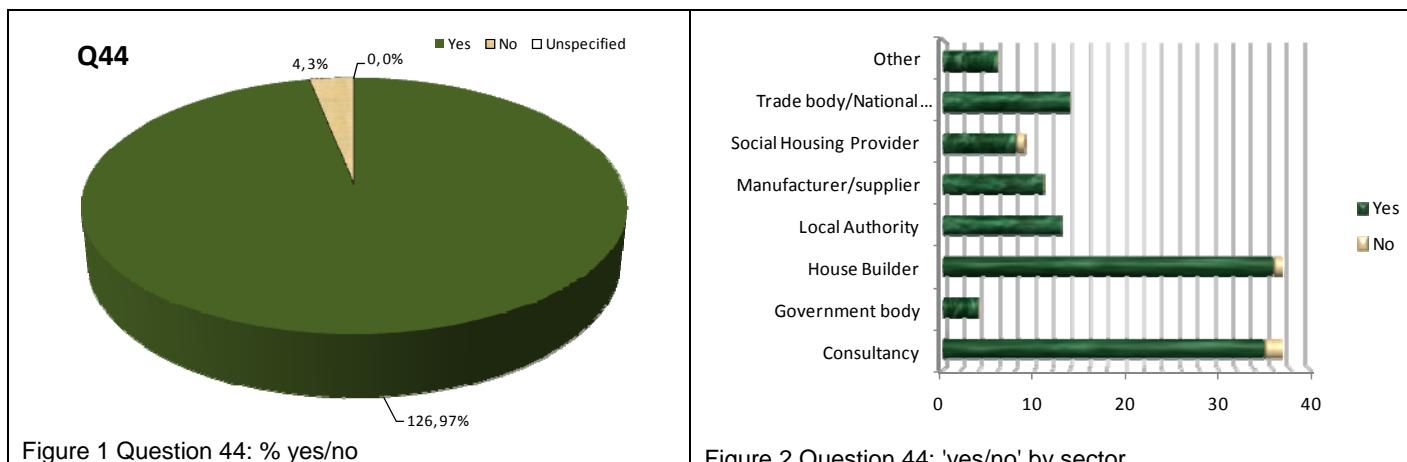
### Comments on responses to question 43

In total 126 responses to this proposal were received with a clear majority (94 per cent) showing support for the proposal and no responses stating disagreement. All of the indirect responses (8 in total) agreed with the proposed measures. Therefore it has been assumed 100 per cent agreement with the proposal.

There was general agreement that the proposed approach provides an acceptable distinction between fabric efficiency and heating and cooling systems. House builders in particular stated that the approach was appropriate and considered it correct to focus on fabric and passive energy efficiency measures first before adding technologies.

#### Question 44:

**Do you agree that it is right to differentiate the level of the fabric energy efficiency standard (expressed in kWh/m<sup>2</sup>/year) according to the type of dwelling? If not, why not?**



One of the questions considered was whether either of the specification or the standard expressed in kWh/m<sup>2</sup>/year should be held constant across all dwelling types. This was particularly relevant for detached homes. Detached homes have more exposed walls than other dwelling types and are therefore inherently less energy efficient for any given volume. To require all homes to have the same minimum standard, in terms of kWh/m<sup>2</sup>/year would either mean an extremely demanding standard for detached homes or a relaxed standard for other dwelling types. On the other hand, the group also noted that equalising the specification across dwelling types would mean that detached houses would be permitted to consume considerably more energy per square metre than other dwelling types. This raised the potential issues of fairness.

#### Comments on responses to question 44

In total 130 responses to this proposal were received. Similarly to questions 42 and 43, a clear majority (97 per cent) supported the proposal. However, although agreeing with need for differentiation between dwelling types, several comments were received stating that the current proposal is too simplistic and should consider additional factors.

Those who disagreed (four respondents out of 130) were concerned that this proposal may encourage less efficient built forms which is the opposite of what is intended, i.e. that larger detached houses should be made to work harder.

### Question 45:

**Do you agree that the regulatory standard applicable from 2016 should (based on consultation SAP 2009) be 39 kWh/m<sup>2</sup>/year for apartments and mid-terrace houses and 46 kWh/m<sup>2</sup>/year for semi-detached houses? If not, do you think it should be (a) more demanding - for example equivalent to the Specification C- considered by the task group or (b) less demanding - for example equivalent to the Specification A considered by the task group?**

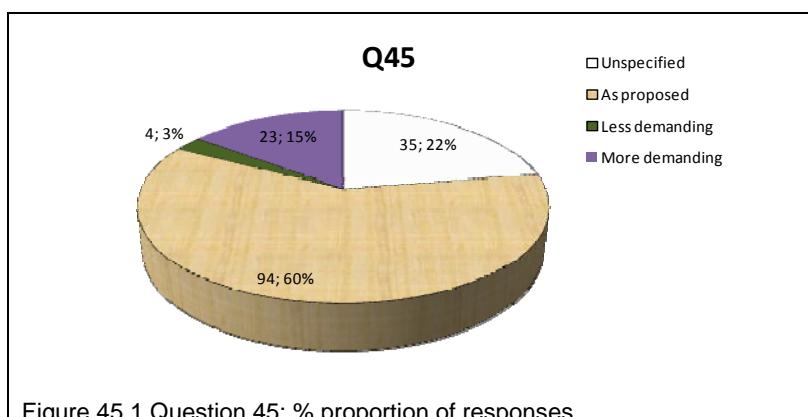


Figure 45.1 Question 45: % proportion of responses

### Comments on responses to question 45

In total 156 responses to this proposal were received. The majority (60 per cent) stated agreement with the proposed standard, whereas 15 per cent felt it should be more demanding and only 3 per cent of respondents suggested it should be less demanding. There were a large proportion of unspecified responses, however analysis of the comments indicated that most respondents were in support of the proposed benchmark, whilst some stated that they could not answer without the SAP09 tool (which was unavailable at the time).

Those in favour of more demanding benchmarks generally thought the proposed benchmark would be easily achievable and not ambitious enough to achieve zero carbon in the near future. However, house builders tended to disagree with most stating that they found the standard challenging but appropriate. Some abstained from answering until the new SAP09 tool was available.

The majority of the respondents either agreed, or preferred more demanding standards since there was concern that the proposed standards would not be challenging enough to deliver zero carbon homes in 2016.

### **Question 46:**

**Do you agree that the regulatory standard applicable from 2016 should (based on consultation SAP 2009) be 46 kWh/m<sup>2</sup>/year for detached houses? If not, do you think it should be (a) more demanding - for example equivalent to the Specification C considered by the task group or (b) less demanding - for example equivalent to the Specification B considered by the task group?**

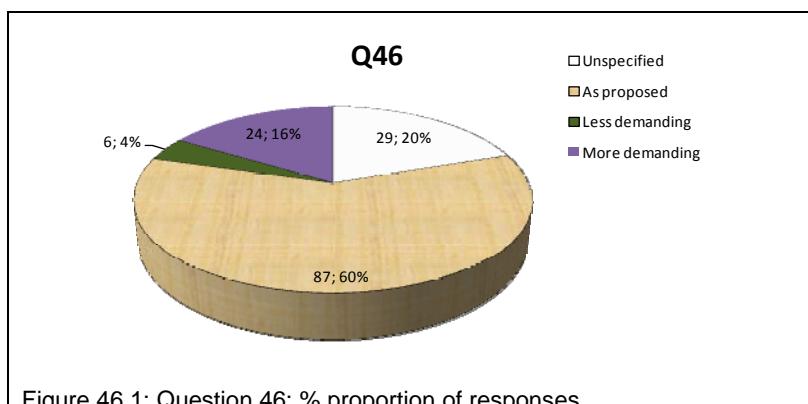


Figure 46.1: Question 46: % proportion of responses

### **Comments on responses to question 46**

As expected, the responses to question 46 are comparable with the responses to question 45, with again 60 per cent stating agreement with the proposal and 16 per cent suggesting the standard should be more demanding. In total, 146 responses were received to this question (156 were received for question 45) so it is assumed that some respondents felt their view had been provided already. The written responses reflected the views expressed for question 45.

Similarly to question 45, the majority of respondents either agreed or suggested more demanding standards.

### Question 47:

**Government is minded to introduce interim requirements from 2013. Do you agree? What approach would you support, bearing in mind the considerations and ideas set out in paragraphs 220-221?**

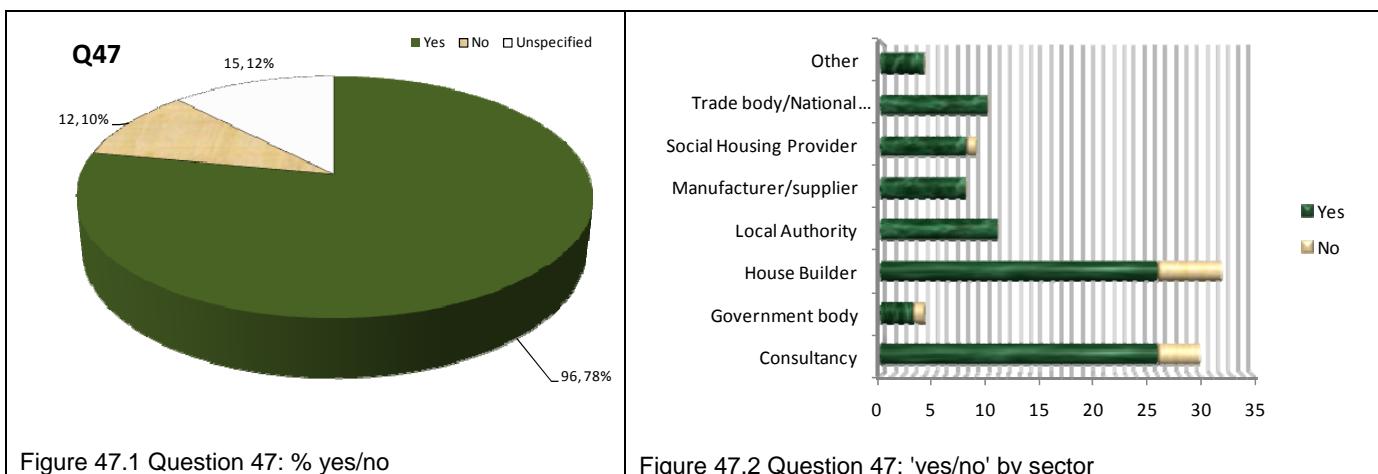


Figure 47.1 Question 47: % yes/no

Figure 47.2 Question 47: 'yes/no' by sector

Government is minded to introduce interim requirements from 2013. This should be based on either a performance standard or a testing and monitoring programme. The former approach locks in a certain level of energy savings into homes built from 2013, provided that the standards are achieved in practice. The latter approach may or may not achieve the same level of energy savings but, by giving industry a greater understanding of how to build low energy homes, could potentially put industry on a more robust path to achieving energy savings from 2016, when the zero carbon standard comes into effect.

### Comments on responses to question 47

In total 123 responses to this proposal were received. The majority (78 per cent) agreed with the proposal with only 10 per cent disagreeing.

Those in favour consider that an interim requirement in 2013 would support industry in exploring approaches and developing robust path towards 2016 zero carbon homes.

Both of the proposed options (testing and monitoring, and building fabric improvements) were given support; however, testing and monitoring was shown to be the most favoured approach by a large proportion of the respondents, including house builders.

The minority of respondents who disagreed felt mainly that there was not a significant enough period of time between 2013 and 2016 to allow for interim requirements, or stated a preference to delay testing new approaches for as long as possible.

There is strong agreement with the proposed interim requirements from 2013, which largely reflects the responses provided to question 2 of the consultation which also addressed an interim step. The preferred method appears to be testing and monitoring, rather than having a performance standard.

#### **Question 48:**

**Are the proposals set out in this chapter likely to result in any seriously adverse unintended consequences that are unlikely to be addressed through the research requirements identified in paragraph 217?**

*Mostly written responses were provided to this question therefore it is not appropriate to include analysis charts.*

#### **Comments on responses to question 48**

In total 104 responses to this proposal were received, mostly as written responses. Of those that did state directly, 34 per cent agreed with the question whereas 13 per cent did not agree. Based on the written comments from the remaining respondents, the majority suggested that unintended consequences were likely (or suggested further research); although a large number were either not aware /did not know any unintended consequences, or did not expect any adverse and unintended consequences. Remaining participants either did not answer or their answers were found to be irrelevant to the question.

Of those who considered that unintended consequences would occur, the main issues were categorised as follows:

- Cost
- Impact on small developers
- Indoor air quality and occupant wellbeing
- Occupier behaviour and ongoing management

Q48 invited respondents to suggest further research ideas and many suggestions were put forward based on the respondents' concerns and interests. In addition to the main areas listed above, a number of other topics were raised as issues that may require further research. All comments and suggestions submitted have been considered, where relevant.

## Annex A: List of respondents

Note: multiple responses were received from some organisations, particularly where regional offices responded to the consultation. Where this is the case the organisation has only been listed once in the table below. In addition, two responses were received where an organisation name wasn't stated. It has been assumed that these were responses from individuals.

24 Acoustics	Fairview New Homes	PassivSystems
4NW	Federation of Master Builders	Peak District Council
Access Included	First Wessex Housing Group	Persimmon
Aedas	Future Create	Peveril Homes
AES Southern Ltd	Galliford Try	Plus Dane Group
Alan Saunders Assocs	Genesis Housing Group	Price & Myers
Asset Skills	Gentoo Homes	Proudlock Associates
Association for Conservation of Energy	Good Homes Alliance	PRP
Association of Manufacturers of Domestic Appliances	Grainger plc	Purcell Miller Tritton
Association of Chief Police Officers	Habinteg Housing Association	R Dawson Architect
Aster Group	Haines	R2BC
Aylesbury Vale Council	Halton Housing Trust	Redrow
Barratt Homes	Hampshire Council	RIBA
BEAMA	Haringey Council	Rickaby Thompson Assocs
Bedford Council	Heating and Hot Water Industry Council	Robust Details Ltd
Bellway	Hill Partnerships	Rockwool
Berkeley Group	Hilson Moran	Rogers and Haynes Architects
Bioregional	HMH Architects	Royal Borough Windsor & Maidenhead
BLP Insurance	Hoare Lea	Rushcliffe Council
Bovis Homes	Home Builders Federation	Saint Gobain
BRE Global	Home Group	Scottish and Southern Energy
British Sugar plc	Homes and Communities Agency	Screef Construction Products UK
British Precast Concrete Federation	House Builders Association	Sheffield Council
Bromford Group	HTA Architects	SIG plc
BRUFMA	Hull Council	Somer Community Housing Trust
BSI	Ideality Consultants	South Yorkshire Housing Assoc
Buro Happold	Inbuilt	Southern Housing Group
Calor	Islington Council	SPONGE
Carbon Plan	Kier	Staffordshire Fire and Rescue Service
Celotex Insulation	Kingspan	Stroma
Chesterfield Council	Knauf Insulation	Surrey Police
Chorley Council	Land Securities	Sustainable Services Ltd
Clancy Consulting	Lark Energy	Tayeco Ltd.
Cole Jarman	Lend Lease	Taylor Wimpey
Combined Heat and Power Association	Lichfield Council	Terence O'Rourke
Concrete Block Association	Lovell	Tester Associates
Construction Products Assoc	McCarthy & Stones	Thames Valley Police
Cornwall Council	Metropolitan Police	Thames Water
Corus Group	Michael Hodgkinson Consultancy	The Concrete Centre
Countryside Properties	Mid Suffolk	The Steel Construction Institute
Create Consulting	Monier	Town & Country Planning Association
Creative Environmental Networks	National House Building Council	UG Green Building Council
Crest Nicholson	NOMA Architects Ltd	University of East Anglia
Croudace	North East Housing Board	Walker Beak Mason
Croydon Council	Northern Ireland Housing Executive	Waltham Forest Council
Dovista	Northgate	Waterwise
Drivers Jonas Deloitte	Northumbrian Water Scientific Services	West Berks Council
E.ON Engineering	npower	West Yorkshire Police
ECD Architects	NW Leicestershire Council	Wildthing Consultants
EDCM Consultancy	Orbit Group	William Lacey Group
Eden Housing Association	Origin Housing	Wilmott Dixon
Edinburgh Napier University		Workingham Council
Energy Saving Trust		WSP
Environment Agency		Wycombe Council
Evans Jones		
Explore Living		

## Annex B: Categorisation of responding organisations

Organisation type	Count for org type	% of respondents	Total %	Category
Consultancy	38	19.1%	28.6%	<b>Consultancy</b>
Architect	8	4.0%		
Assessor - individual	1	0.5%		
Property Consultant/Manager	3	1.5%		
Individual	7	3.5%		
House Builder	36	18.1%	18.6%	<b>House Builder</b>
Contractor	1	0.5%		
Local Authority	24	12.1%	12.1%	<b>Local Authority</b>
Social Housing Provider	16	8.0%	8.0%	<b>Social Housing Provider</b>
Trade body/National Representative	19	9.5%	9.5%	<b>Trade body/National Representative</b>
Manufacturer/supplier	17	8.5%	10.6%	<b>Manufacturer / Supplier</b>
Utility	4	2.0%		
Police	7	3.5%	7.5%	<b>Government Body</b>
Government body	6	3.0%		
Fire Service	2	1.0%		
NGO/Charity	3	1.5%	5.0%	<b>Other</b>
Accreditation body	2	1.0%		
Higher Education	2	1.0%		
Unknown	2	1.0%		
Insurer	1	0.5%		
	199		100.0%	

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