

Number: WG31858

Welsh Government Consultation – summary of responses

Building Regulations Update - Approved Documents A, B & C 2016

Approved Document A (Structure)
Approved Document B Volume 2 (Fire Safety)
Approved Document C (Site Preparation and Resistance to Contaminants and Moisture)

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Introduction

This report provides a summary of the responses to the consultation 'Building Regulations Update - Approved Documents A, B & C 2016' (opened on 29 September 2016 and closed on 22 December 2016) and is structured around the questions set out in the consultation. We have carefully considered the responses to the consultation in finalising this policy.

The views reported in this summary are those expressed by the respondents to the consultation and do not necessarily reflect those of the Welsh Government.

Building Regulations

Building Regulations control certain types of building work, principally the erection and extension of buildings and provision or extension of certain services or fittings, chiefly to ensure that buildings meet certain standards of health, safety, welfare, convenience and sustainability.

Compliance with the Building Regulations is the responsibility of the person carrying out the work and the building control system helps to ensure that the required level of performance has been met. The role of a building control body, either the local authority or a private sector Approved Inspector, is to act as an independent third-party check to help achieve compliance. As an alternative to third-party checking by building control, some types of work may be self-certified as being compliant by installers who are registered as a member of a competent person self-certification scheme and have been assessed as competent to do so.

Building Regulations greatly influence how our buildings are constructed and used. As such, they help to deliver significant benefits to society. Regulation can also impose costs on both businesses and individuals. The "functional" nature of the Building Regulations, by having regulation setting out the broad requirement rather than prescribing how it must be achieved, seeks to minimise this cost and also ensure innovation is not hindered. Guidance in the Approved Documents that accompany the Regulations then sets out some of the ways that these requirements can be met although it does not have to be followed if the required level of performance can be shown to be achieved in a different way. This approach provides clarity for building control bodies and industry alike.

Consultation Overview

The Welsh Government issued a consultation paper entitled "Building Regulations Update – Approved Documents A, B & C 2016". The scope of the consultation was to seek views and gather further evidence on proposals to update the current Building Regulations Approved Documents A, B & C to align with Euro-based Regulations.

The draft amendments to the Approved Documents were contained within the consultation to set out the proposed updates. The consultation stage Impact Assessment was also published and further evidence was sought to inform a final stage Impact Assessment.

The Respondents

Overall there were 12 respondents to the consultation. Respondents who completed the consultation response form were asked to assign their organisation to one of the nine types identified on the form (with 'other' as an additional option.) Table 1 shows the number of response forms received from each sector.

Table 1: Details of Respondents

Building Control Bodies	5
House Builder	
Designer / Engineer / Surveyor	1
Builder / Contractor	
Commercial Developer	
Individual Respondent	1
Communications Sector	
Property Management	
Manufacturer / Supply Chain	1
Other: (Trade Body)	4
TOTAL	12

Of the 18 questions asked, the respondents' reply is summarised in Table 2. Some respondents did not record a response to every question; percentages of yes versus no are calculated according to the total responses recorded. Questions asking for additional comments have been excluded and noted in the table accordingly.

Table 2: Consultation Responses

Question		YES %	NO %
Q1	Do you agree that the structural design standards currently referenced in Approved Document A (&C) should be replaced by the Eurocodes-based British Standards with their National Annexes as proposed?	70	30
Q2	It is generally accepted that use of the Eurocodes-based British Standards with their National Annexes and non-conflicting complementary information provides at least an equivalent level of safety and serviceability to the withdrawn British Standards currently referenced. (If no, do you have evidence that this is not the case?)	88	12
Q3	We believe that our approach in Annex B to referencing BSi Published Documents provides essential and helpful additional Information in support of Eurocodes implementation. Do you agree?	73	27
Q4	Do you agree that the actual cost of constructing buildings using standards based on Eurocodes are neutral overall?	71	29
Q5	Do you agree with the estimated transitional costs?	75	25
Q6	Do you have information supporting or refuting the assessment of the benefits associated with referencing Eurocodes-based standards?	22	78

and the adjusted calculation procedure in Diagram 7 provide equivalent safety to the current guidance?	0
Factor O given in Diagram 6, Figure 3 provides equivalent	0
Q9 The changes proposed to Section 5 guidance, particularly in referencing Eurocodes-based British Standards for structural design, are intended to provide an equivalent level of safety and robustness to the current approach based upon withdrawn British standards. Do you agree?	0
from 70m² to 100m² to align guidance with BS EN 1991- 1-7 "General actions – Accidental actions" introduces no significant additional risks?	0
ISE Practical Guide to Structural Robustness and Disproportionate Collapse in Buildings as an alternative approach reference?	0
Q12 Do you agree it would be a helpful change in line with industry practice to amend the guidance in Approved Document A (2E4) to a three-tier graduated approach for minimum foundation depths in clay soils?	22
Q13 Do you agree that the proposed amendments to Table 11 are reasonable and maintain necessary standards of safety?	0
Q14 Do you think the proposed new Diagram 27A is necessary to illustrate the changes to Table 11?	0
	0
	0
guidance within Approved Document C?	
refine our analysis, including the working assumptions in the Impact Assessment, post consultation?	89 67

Summary of responses and Government response

Implementation through the Building Regulations

The consultation outlined the Welsh Government's proposals to update Approved Documents A, B & C in line with the updating of technical standards undertaken in 2013 by the Department for Communities and Local Government (DCLG) in England. Further, the consultation made particular reference to Eurocodes upon which the technical standards are based as being relevant to the Regulations. The intention is to transpose European requirements into the Building Regulation technical guidance as closely as possible.

Approved Document A (&C)

The consultation

The consultation proposals for Approved document A (&C) concerned changes to the structural engineering standards referenced. The Welsh Government wished to ascertain whether updating their Approved Documents in line with Eurocodes (to ensure harmony and greater standardisation pan-Europe) will continue to ensure buildings are structurally safe for people in and around them, and in a most cost-effective manner.

Question 1 asked whether respondents agreed that the structural design standards currently referenced in Approved Documents A & C should be replaced by the Eurocodes-based British Standards with their National Annexes as proposed.

Of those responding to Question 1, 70% answered yes. The consultation invited comments from those 30% which responded no. A summary of these responses follows:

- Keeping Regulations as up to date as possible is supported; however, recommendations are sought for building control bodies (BCBs) as to how they may assess project compatibility with Eurocodes 'including UK National Annexes' if used as part of a submission.
- Further, comments suggested if BCBs met with projects which mix-and-match supported and un-supported British Standards moving forward past 2017, these are to be supported with further evidence demonstrating compliance to current Regulations.

Question 2 asked whether respondents had evidence against the generally accepted case that use of the Eurocodes-based British Standards with their National Annexes and non-conflicting complementary information provides at least an equivalent level of safety and serviceability to the withdrawn British Standards currently referenced. 88% of respondents answered yes. One registered response was from two respondents:

- No evidence Eurocodes lead to more or less safe or serviceable buildings.

Question 3 asked respondents whether they agreed with the Welsh Government insofar as their approach in Annex B to referencing BSi Published Documents provides essential and helpful additional information in support of Eurocodes implementation. 73% of respondents agreed. Comments included:

- Eurocodes and their national annexes do not cover the design and detailing rules for many traditionally used materials contained in British Standards.
- Welsh Government should encourage reference to BCA Technical Guidance Notes
 21 & 22 and incorporate this guidance into Approved Document A as a suitable method of demonstrating compliance.
- Reference was raised to Codes of Practice BS 5534: 2014 and A.1: 2015.

Government Response

The Welsh Government acknowledges the comments in relation to assessment. It is probable that some structural designs will continue to be completed using the withdrawn British Standards. Given the functional nature of Building Regulations, this approach may be considered appropriate by Building Control Bodies, particularly for smaller, less complex, low risk designs. We intend to provide guidance in relation to this when the proposed amendments are published.

The Welsh Government also notes the comments in relation to potential additional references not currently in the Approved Document A (AD-A), however, this AD-A update is focused on standards that are Eurocodes-based and the changes made to AD-A in England. Due to the potential economic impact of referencing these additional standards, they would need to be subject to an impact assessment, and therefore, the recommendations relating to additional guidance will be considered in any future review of AD-A.

Impact Assessment

The Welsh Government want to ascertain their belief that implementing changes to Building Regulations guidance in line with Eurocodes will not introduce additional costs of constructing buildings as compared with using existing Approved Documents.

Question 4 asked respondents whether they agreed that the actual cost of constructing buildings using standards based on Eurocodes are neutral overall. 71% agreed. Comments in response included the following:

- There has been no evidence from England that using Eurocodes introduces any increase in building costs.
- No evidence to support or refute this.
- Possible consultant fees could be required to check new designs and software.
- Calibration exercises may need to be taken to see design outcomes were broadly equivalent to established practices.

Government Response

A 71% agreement rate, in conjunction with neutral or tentative responses, largely supports the Welsh Government's view that increased costs are unlikely, yet remain unproven. In the Welsh Government's view, any costs will be the result of a natural

transition between standards and will be a 'one off,' not leading to on-going costs or increased costs to constructing buildings.

Question 5 asked respondents to comment on a selection of identified estimated traditional costs, with an aim to ascertain if respondents agreed with them. 75% of respondents did agree with them. Comments in response included:

- Some construction firms will build regardless of changes in Building Regulations, and only be informed of changes through the local Building Control officer.
- The electrical industry is used to the concept of updating working practices to align with current standards.
- The identified costs make little allowance for Building Control Bodies which may or may not employ their own engineers, who will introduce increased costs due to additional training.
- It may be necessary to provide training to building control surveyors in respect of the differences between Eurocodes and British Standards.

Government Response

The 75% approval rate of the Government's estimates for transitional costs, along with the comments, demonstrates a broad recognition the preliminary estimations of transitional costs are largely accurate. Some respondents expressed concern the transition would incur training fees, which would be passed onto the industry. The Welsh Government feels these costs are to be minimal, and spread over many projects, leading to a neutral cost to construction. The Welsh Government will continue to monitor the costs through the transition to Euro-based codes.

Question 6 aimed to ascertain the overall benefits for the industry by moving toward Eurocodes-supported guidance, and asked if any respondents have information supporting or refuting the assessment of the benefits associated with referencing Eurocodes-based standards. 2 respondents answered yes with the following comments:

- [We] agree with the envisaged benefits in having a common system of structural design codes.
- These transitional provisions are limited to one year's grace for developments in Wales.
- In England, a significant proportion of projects are still designed to withdrawn British Standards, and this is likely to be the case beyond 2018.
- It is recommended Welsh Government liaise with DCLG to ensure a consistent approach across both England and Wales.

Government Response

The Welsh Government proposes to provide guidance in relation to the use of withdrawn standards upon publication of the amendments, in order to adapt to the new Eurobased-codes system smoothly. The Welsh Government acknowledges the respondents' assertions that previous transitions in England may be continuing past the grace period.

Other Eurocodes-related changes

The Welsh Government are looking to update Section 2 of the current guidance in regards to how wind loads on buildings and building heights are calculated. Amendments are proposed to bring the technical guidance into line with the Eurocodes-based British Standards structural design approach. The amendments include a revised wind map, a revision of the associated calculation approach, and a graphical option for assessing orography Factor O. The intent is to provide economy of design for sites where orography is a significant factor whilst not affecting safety.

Question 7 asked if respondents agreed the proposed changes to Diagram 6 and the adjusted calculation procedure as shown in Diagram 7 provide equivalent safety to the current guidance. 100% of respondents said yes, with the following caveat:

- There seems to be a misprint; under the column headed 'Town Sites, Distance to the Coast >50km', a figure of 87.5m is shown against Factor S34. This should read either 8.5m or 7.5m.

Question 8 asked respondents whether they agreed the new optional procedure for determining Factor O given in Diagram 6, Figure 3 provides equivalent safety and economy of design. 100% of respondents said yes. The comments are summarised as:

- The optional procedure is welcomed and avoids the step changes of Table A without having to employ a specialist to carry out the wind load analysis.

Government Response

The Welsh Government welcomes the general acceptance and support of the proposed updates. The Welsh Government will review Diagram 7, Table c and correct as appropriate.

Robustness and Disproportionate Collapse

In terms of guidance on robustness and disproportionate collapse, the Welsh Government proposes a raft of updates to Section 5. These were outlined in the consultation document and illustrated in Annex B.

Question 9 asked if respondents agreed the proposed changes to Section 5 guidance provide an equivalent level of safety and robustness to the current approach which is based upon withdrawn British Standards. 100% of respondents answered yes with no additional comments other than those in support of this change.

Question 10 focuses upon one particular change to the current approved document, in relation to changing the area limit in Diagram 24 from the current 70m² to 100m² to align with BS EN 1991-1-7. The Welsh Government asked if respondents agreed this change did not introduce significant additional risks. 100% of respondents replied yes, with no respondents able to introduce further evidence to the contrary.

Question 11 asked respondents whether they agreed that it is helpful to include reference to the ISE Practical Guide to Structural Robustness and Disproportionate Collapse in Buildings as an alternative approach reference. Again, 100% of respondents replied yes. The following comments were appended:

- This is a developing area of knowledge and guidance needs to be promoted.
- Welsh Government would do well to include reference to Building Control Alliance Technical Guidance Notes 21 and 22, both of which provide additional interpretation to Section 5.
- [We] recommend these Notes are included into Building Regulations as additional ways of demonstrating compliance.

Government Response

The Welsh Government acknowledges the generally supportive comments to the proposed updates.

Comments were made in relation to referencing Building Control Alliance Technical Guidance Notes 21 and 22. The guidance notes appear to outline an interpretation of the requirements which may be helpful for Building Control Bodies to consider when deciding compliance. Interpretation of requirements is a matter for the Building Control Body to determine, therefore, it has been decided not to include these as a reference within the statutory guidance document.

Other Changes

The Welsh Government highlighted a conflict between guidance offered in Approved Document A and Approved Document K in terms of wall cladding and the protection from falling, collision and impact, and looks to address this conflict with an update to Paragraph 3.5 of Section 3 of Approved Document A. Further, the Welsh Government is minded to amend the guidance in paragraph 2E4 to a three-tier approach for minimum depth of strip foundations, bringing guidance in line with current industry practice.

Question 12 asked respondents if they agreed it would be helpful to amend guidance in Approved Document A (2E4) to a three-tier graduated approach for minimum foundation depths in clay soils. 78% replied yes. Of the two who replied 'no,' a comment was left as below:

- Attention should be drawn to the need to increase these minimum depths to allow for planting.

Government Response

The Welsh Government welcomes the support of the proposals to amend the guidance. The comment regarding that the minimum depths may need to be increased to allow for new planting is noted, and therefore, it is proposed to add a line at the end of paragraph 2E4 to highlight this.

Additional Comments

In addition to the comments received for each question, some respondents took the opportunity to submit general comments related to the recommended updates to Approved Document A.

One respondent commented that, despite not having expertise to comment on individual update recommendations (Q1-12), they supported the continued move toward harmonised European standards and codes.

Another respondent recognised these updates mirror those appearing in the English Approved Document A (2013) and therefore it would be sensible to also consider changes to (i) the guidance on strip footings where clay soils are split into low, medium and high shrinkage (Clause 2E4, pp 37) and (ii) the use of Guidance Materials and Workmanship covering the appropriate use of products bearing CE marking, etc.

One comment noted no questions had been asked regarding loadings associated with the re-covering of roofs, referencing recent industry discussion in relation to the fixing of solar panels to existing roofs and the difficulty in aligning the 15% increase in loading and subsequent justification for this figure.

Another comment noted it is the Welsh Government's intention to release the amendments as amendment slips instead of as updated documents. This, the commentator suggests, is not an ideal scenario and could lead to confusion as builders, designers and building control boards would all have to reference both the Approved Document and the amendment slips in order to understand the full guidance. The recommendation is for the Welsh Government to release the amendments as updated Approved Documents.

Additionally, a comment points out Approved Document A does not make similar reference to the structural performance requirements of roof claddings as it does to the structural elements of the roof including wall claddings. There is, the respondent claims, much field of evidence to suggest failures of roof claddings during high wind loads are more common than failures of the roof structure itself. Thus, Section 4 (Roof Covering (Cladding)) should be revised in line with the recommendations of Section 3 (Wall Cladding) in addition to the current requirements when re-covering roofs.

Finally, the respondent points out the omission of a reference to BS5534 (Slating and tiling for pitched roofs and vertical cladding – Code of Practice) in Annex B of the Approved Document A is an anomaly which should be corrected in this amendment, as BS5534 has recently been revised (2014 & A.1:2015) and now references relevant Eurocodes.

Government Response

The Welsh Government notes the general overall acceptance of moving toward increased European harmonisation. The proposed updates to the Approved Document A in terms of Clause 2E4 (pp37) and guidance regarding the appropriate use of materials with a 'CE' marking are to be undertaken.

The Welsh Government notes the comment regarding amendment slips for consideration in any future reviews of Approved Documents. In terms of guidance regarding roof claddings versus roof structure, this will also be considered by Welsh Government in any future review of AD-A.

The recommendation for BS5534:2014 to be included and referenced in Approved Document A is noted, however, this AD-A update is focused on standards that are Eurocodes-based and the changes made to AD-A in England. Due to the potential economic impact of referencing additional standards, they would need to be subject to an impact assessment, and therefore, this recommendation will be considered in any future review of AD-A.

Approved Document B (Volume 2)

The Consultation

This consultation proposed amendments to Approved Document B in relation to guidance associated with lighting diffusers and wall coverings. It proposed the same changes as DCLG has made for England. DCLG highlighted the reduced costs to development and manufacturers together with energy and carbon savings; therefore, as Welsh construction outputs are approximately 4% of those of England and given the scale of benefits identified with the English changes, the Welsh Government does not propose to undertake a similar impact assessment practice. In the Welsh Government's view, such an exercise would arrive at a similar conclusion.

Questions 13 & 14 propose changes to the guidance regarding the use of acrylic light diffusers. The existing guidance was developed some time ago, and since then, lighting technology has changed considerably and requirements for energy efficiency have become more stringent. These changes look to relax the restrictions on the use of acrylic light diffusers.

Question 13 asked whether or not respondents agreed that the proposed amendments to Table 11 are reasonable and maintain necessary standards of safety. 100% of respondents answered yes, with no further comments made.

Question 14 asked if the proposed new Diagram 27A is necessary to illustrate the changes to Table 11. 100% of respondents answered yes, with no further comments made.

The second part of the consultation for amendments to Approved Document B related to the recent changes in European standards for wall coverings. From 1 July 2013 manufacturers of wall coverings have to test and label their products in accordance with harmonised European standards and classification systems before they place them on the market. Prior to this, anomalies between the British Standard classification system and European system for thin wall coverings were inconsequential because the use of European standards and CE markings had been voluntary in the UK and therefore building control could choose to accept a Class O regardless of its counter-European classification. For clarity and to align Welsh Building Regulations with England and Europe, the Welsh Government proposes to append a new note to the existing Table 10 *Classification of linings* in Approved Document B. This appendage is not intended to reduce standards of safety nor change the need to CE mark products in accordance with the Construction Products Regulation.

Question 15 asked respondents if they agreed that the proposed amendments to Table 10 are reasonable and maintain the necessary standards of safety. 100% of respondents answered yes, with the following comment:

- [We] strongly support the proposed amendments to Table 10, which we believe will help improve the level of compliance with fire safety regulations by providing greater clarity. On the wider issue of fire safety, the most recent statistics - which show fire fatalities rising in the UK as a whole - provide a stark reminder of the need to maintain and improve fire safety in our buildings.

It is known that smoke and noxious gas is the most significant cause of fatalities in a fire. We recommend that for any future review of Approved Document B, the Building Regulations team considers the levels of smoke released and the resulting potential to improve life safety by revising the limitations on those levels.

Government Response

The Welsh Government notes the support for the amendments to current Approved Document B. In relation to the recommendation from one respondent, the Welsh Government are aware the European Commission is supporting a project to determine which Member States currently regulate for toxicity of smoke from Construction Products and which would regulate if the test methods and classifications were provided, etc. The Welsh Government is currently waiting until the outcomes are known before embarking on any discussions in this area.

General Comments

General comments were welcomed, and the following comments were received:

- It needs to be made clear that these changes only affect buildings other than dwelling houses.
- [We note] it is the Government's intention to release the amendments as amendment slips instead of as updated documents. This is not an ideal scenario and could lead to confusion as builders, designers and building control bodies would all have to reference both the Approved Document and the amendment slips in order to understand the full guidance. The recommendation is for Welsh Government to release the amendments as updated Approved Documents.

Government Response

The Welsh Government agrees with the comment requesting clarity in effect to the application of these changes to the non-domestic sector, and clarity will be provided in the text of the amendment slips.

The Welsh Government notes the comment regarding amendment slips, this revision to process will be considered in future reviews of Approved Documents.

Approved Document C

The Consultation

This consultation proposed changes to the guidance in Approved Document C in relation to Radon protection measures, site investigation, and guidance related to contaminated land and flooding.

Question 16 asked 'do you agree with the proposed changes to the radon guidance within Approved Document C?'

A quarter of respondents did not answer the question, but of the respondents that answered the question, 100% agreed that Approved Document C should be amended to reference the updated, 2015 version of BRE Report BR 211. Two respondents noted that although BR 211 was updated in 2015, the document still referred to 2007 versions of the radon maps. These are currently the most up to date versions and supersede the maps included in the previously referenced 1999 version of BR 211.

Question 17 asked 'do you have any evidence/ views that would be helpful to refine our analysis, including the working assumptions in the Impact Assessment, post consultation?'

A quarter of respondents did not answer the question, but of those that did, all but one respondent indicated that they had no additional evidence or views to contribute. The one respondent noted that following the radon map updates in 2007, DCLG published a circular letter in July 2008 advising of updated guidance on radon protective measures. Many practitioners would therefore have been following the updated maps and guidance since 2008.

Question 18 asked 'Would removing Annex A of Approved Document C cause problems?'

As the two questions above, a quarter did not answer the question, but of those that did, 67% said no and 33% said yes.

Those that responded 'yes' suggest that Annex A should be replaced to make specific reference to the statutory guidance dealing with contaminated land. Some of these acknowledge that the referenced contaminated land reports have been withdrawn and are therefore no longer current in relation to the statutory regime for contaminated land in Wales. However, it was felt that guidance in the Annex, particularly Diagram A1 provided a sensible link between the Building Regulations requirements and Part 2A of the Environmental Protection Act (EPA). It also made reference to further documents that offered more background against which to determine land as contaminated and hence demonstrate reasonable precautions had been taken. It was felt that Approved Document C, Section 2 should be significantly updated to provide specific measures to achieve compliance or Annex A should be updated to refer to current EPA guidance.

Government Response

It is correct that the 2007 radon map within BR211(2015) remains unchanged, the Welsh Government will look to incorporate any updated maps in future Approved Document C releases. In relation to Annex A and contaminated land, based on the positive responses received and to avoid confusion, the Welsh Government proposes to remove Annex A and instead reference revised (2012) EPA 1990 Part 2A for guidance as to what is, and what is not, contaminated land.

Additional Comments

One respondent noted that any updates to Approved Document C section 2 should make reference to verification being required for any remediation measures undertaken.

Two respondents noted that rather than issuing the proposed changes from the consultation as amendment slips, it would be preferable to issue updated Approved Documents, as it can otherwise cause confusion across industry.

One respondent noted that various standards that have subsequently been updated beyond 2013 and they thought the guidance should be amended to include the most up to date document versions.

[Note that the 2015 version of BR 211 is referenced in Part C]

Government Response

The Welsh Government notes the comment regarding amendment slips for any future reviews of Approved Documents. The Welsh Government also acknowledges the response regarding the availability of more recent updates to various standards; in this consultation we have prioritised updating current approved documents in relation to changes made in England and Euro-based standards. Due to the potential economic impact of referencing these additional or updated standards, they would need to be subject to an impact assessment, and therefore, the recommendations relating to additional or updated guidance will be considered in any future review of Approved Document C.

Next Steps

The Welsh Government would like to thank all those who responded to the consultation and contributed to the evidence collected.

The proposed amendments to the Approved Documents are to be published by the Welsh Ministers in June 2017, and they will apply to Building Regulation applications made/submitted after 1 September 2017.