

To: 1) Tony Lord  
2) Anne Hemming  
3) Phil Hope

From: Anthony Burd  
Principal Fire Professional  
Buildings Division  
18/A PH  
x5730

28 February 2005

## CONSULTATION ON PART B OF THE BUILDING REGULATIONS AND APPROVED DOCUMENT B (FIRE SAFETY)

### Issue

1. To seek your agreement to publish the consultation package on Part B of the Building Regulations and Approved Document B (Fire safety), subject to clearance by DA committee and, as the cost of the proposed measures would exceed £20m, by the Panel of Regulatory Accountability (PRA).

### Recommendation

2. That you write to DA Committee and PRA (draft letter attached at Flag A) requesting their agreement to publish the consultation package comprising:
  - Draft covering letter to consultees (Flag B)
  - Regulatory Impact Assessment (RIA) (Flag C)
  - Response questionnaire (Flag D)
  - Revised drafts of AD B with proposed amendments shown in track-changes (Flags E1 and E2)

### Timing

3. We are committed to publishing the consultation "in the spring". It would be useful to have clearance from DA and PRA before any possible purdah period begins. Cabinet Office have advised that, given the tight timescales, it would be possible to write to them jointly. **It would therefore be helpful if you could write to them by Friday 4 March.**

### Presentational Issues

4. This submission has been cleared in draft with Press Office and Legal. The outcome of the review is eagerly awaited by stakeholders and generally we expect a positive reaction. We anticipate that publication of the consultation will attract the interest of the specialist press so appropriate briefing will be required. A further submission will be made on this nearer the time. Some of the proposals could provoke a significant response. These issues are discussed in paragraph 23.

### Background

5. AD B was last subject to significant technical review during the period 1997 to 1999, with the resulting changes coming into force on 1 July 2000. This edition was subsequently amended in 2002 to give visible recognition to the new European

harmonised product standards and the supporting test standards that underpin the Construction Products Directive. These amendments came into force on 1 March 2003 and have since been consolidated into the main document.

6. However, the "European amendments" did not amend any of the existing technical guidance in the 2000 edition of AD B. A major review of the wider technical elements of the fire safety aspects of the Building Regulations and AD B was announced in the White Paper "Our Fire and Rescue Service". This sets out the Government's desire to reduce the number, size and impacts of fires (particularly reducing the number of deaths and injuries) by moving much more towards a fire prevention strategy. Building Regulations is seen as one of the main strands for delivery of this strategy, alongside Community Fire Safety and the Reform of Fire Law.
7. This review draws upon the findings of recent research and experience and takes account of a number of proposed legislative and procedural changes. These include:
  - changes in construction methods and trends (e.g. a trend towards larger single storey warehouses);
  - actual incidences of fire;
  - relevant research findings;
  - new or amended standards (eg a new standard for residential sprinklers, BS9251); and;
  - changes to other policies and legislation which have an effect on fire safety in buildings (eg DfES has recently published for consultation its own, more detailed guidance on fire safety in schools).
8. In particular, we commissioned a number of pieces of research to look at various aspects of fire safety such as the effectiveness of sprinklers in residential premises and the ventilation of common access corridors. Also, following the World Trade Centre (WTC) incident of September 11 2001, ODPM commissioned a number of pieces of research concerned with fire safety in tall buildings, as directed by the Building Disaster Assessment Group (BDAG). The results of all this research have been considered when preparing this revision of AD B and, where not already in the public domain, will be published alongside it.

#### Consideration

9. The consultation package and particularly the proposed measures, have been considered in detail by the BRAC Part B Working Party. It was discussed by main BRAC on 16 February at which the decision was taken to commend it to Ministers. Officials have also liaised with colleagues in HSE, DEFRA, DfES, DH and Devolved Administrations in preparing this package. In addition the RIA has been cleared by Cabinet Office Regulatory Impact Unit and the DTI's Small Business Service.

#### *Proposed Amendments to Building Regulations*

10. It is proposed to introduce a new general Regulation into the Building Regulations that would require builders/developers of non-domestic buildings to pass on relevant information about fire safety design and procedures for operating and maintaining



the building's fire protective measures to the owner/occupiers. (NB. This would not apply to dwellings, although this may be picked up in the future as part of the "Home Information Pack", (formerly the "Sellers' Pack") being introduced as a result of the Housing Act 2004).

11. This would help to reduce risks of casualties that might occur as a result of failure to adopt appropriate management procedures for the design of the building or through failure to maintain protective measures. This is seen as particularly important given the greater use of, and increasing complexity of, fire engineering in building design, and was highlighted by a recently completed ODPM project that looked at the importance of fire safety information being available throughout the life of a building.
12. There would also be potential cost savings as drawing this information together at the construction stage would reduce future costs of sourcing and assessing this information at a later date. (For example, if a different contractor/client is involved between base-build and fit-out). It would particularly assist owners/occupiers in the production of their risk assessment under the terms of the Regulatory Reform (Fire Safety) Order (RR(FS)O), expected to come into force at about the time that the revised AD B is published.
13. There are no proposed changes to the requirements of Part B of the Building Regulations, the review has concluded that these are broadly sound. However, in the questionnaire we do ask whether consultees would wish to revise functional requirement B3 to address fixed fire fighting equipment (eg sprinklers).
14. It is not proposed to make any other changes to the Building Regulations at this time so as to take account of the provisions of the Sustainable and Secure Buildings Act 2004, as further research will need to be carried out to examine the evidence for change and to assess the practical implications.
15. If the proposal to introduce a new national maximum size of unsprinklered compartments in warehouses is taken forward (see Annex A), the relevant parts of Local Acts would need to be repealed using a Statutory Instrument.

#### *Proposed Amendments to AD B – Format*

16. The first, and most obvious, change proposed to AD B is the splitting of one document into two volumes, dwellings and non-dwellings. This change arose from the ODPM's informal consultation with stakeholders (the Forward Look) and was intended to make the guidance more accessible for smaller firms that specialise in domestic work. However, due to the amount of technical information that is common to both dwellings and non-dwellings, neither volume is particularly small. The WP has therefore recommended that the consultation should proceed on the basis of two volumes but to ask the specific question as to whether AD B should revert to one volume or perhaps be further divided so as to provide three volumes: dwellings, non-dwellings and a free-standing technical annex.
17. Another formatting change is the intention to more clearly highlight the proposed changes and the reasoning behind them. For the purposes of consultation, it is intended to use a different colour for amended text, as well as strikeout where the change is a deletion. Text boxes in AD B will be used to identify the reasoning



behind significant changes for the purpose of consultation. Further consideration will be given to how this might be taken forward in the final document.

#### *Proposed Amendments to AD B - Content*

18. There are a number of proposals that are being put forward for inclusion in the consultation package on the basis that the Government **intends** to make the amendment, subject to the outcome of the consultation. These include a number of *drafting amendments* (such as rewriting the section on concealed spaces to make it easier to understand) and the introduction of *alternative options* to provide for greater design freedoms (for example, the ability to use sprinklers as an alternative to a secondary escape from houses with a storey over 7.5m above ground level). It also includes a number of *significant proposals* – these are summarised at Annex A and are discussed further in the RIA.
19. In addition there are a number of proposals that are being put forward for inclusion in the package on the basis that the Government is **minded** to make the amendment, subject to the outcome of the consultation. This approach has been adopted where the case for action is not clear cut and further evidence is needed before deciding on the way forward. We are therefore explicitly seeking further information on the potential impacts, particularly the costs and benefits, of these proposals. This will allow us to open up the debate on these issues and to retain greater flexibility in decision-making.
20. These proposals are:
  - *Provide for sprinkler protection in high rise apartments and residential care homes* – The “Effectiveness of Residential Sprinklers” project found that, although it would not be cost effective to install sprinklers in all residential properties, it might be cost effective to do so in certain types of higher risk properties, particularly tall blocks of flats (30m+) and residential care homes. However, further analysis of the underlying data from this and other research projects has indicated that this may not be a clear cut proposal (for example, fires tend to start on the ground floor of apartment buildings, irrespective of height). There may also be alternative approaches that are just as effective and much less costly, for example, properly fitted closed fire doors.
  - *Provide for fire protection of corridors in warehouses* – the recent growth of “self-storage warehouses” are seen by many as particularly high risk. This is due to the fact that, unlike other types of warehouse (generally large, relatively open sheds), occupants are likely to be infrequent visitors rather than employees and unfamiliar with often very complex layouts. This is coupled with an unknown and potentially very high fire loading. BRAC have supported the proposal to introduce a provision for fire resisting corridors in warehouses. However, the RIA shows that this proposal would be expensive and further information is required before a final decision can be made.
21. Another significant proposal is in respect of **schools**. DfES have written a new Building Bulletin 100 (BB100) on “Designing Against the Risk of Fire in Schools” and will apply to new-build and refurbished schools. It has been drafted so as to address both life safety and property protection issues (ie it goes beyond the current locus of Part B) and emphasises the need for risk assessments, including for



example, the need to consider whether the installation of sprinklers is justified. It is therefore proposed that AD B will, in future, simply cross-refer to BB100 with respect to schools in the same way that it refers to Health Technical Memoranda (HTMs) with respect to healthcare premises and the draft AD B has therefore been written on that basis.

22. However, there have been considerable delays to the DfES publication of BB100. If BB100 is not in the public domain when the AD B consultation is published this approach may need to be reconsidered. One way may be to consult on the proposed change to AD B as currently drafted, subject to the outcome of the BB100 consultation. You wrote to Derek Twigg at DfES on 15 February to seek assurances that BB100 would be in the public domain shortly but to date no formal reply has been received. However, we understand from officials that they may be in a position to publish BB100 around the end of March.

#### *Proposed Amendments - Presentational Issues*

23. The most likely areas of potential interest and/or concern are:

- *Sprinklers* (see paragraph 19) – the issue of sprinklers, particularly in care homes and tall buildings, is a highly sensitive area, not least because of the Rosepark Care home fire in Scotland in January 2004 and the recent fire in a block of flats in Stevenage (although, it should be noted that both buildings were built some time ago under previous, less onerous, Building Regulations.) As a consequence of the Rosepark fire, the Scots have already introduced a similar provision in their new mandatory requirements, which come into force in May (my submission of 11 January refers) and there is considerable pressure for us to follow suit. There is also likely to be pressure from certain sectors of industry to make the measures apply more widely (eg to provide sprinklers in all new dwellings, schools etc).
- *Self-closing devices on doors in dwellings* (see Annex A) - the proposal to remove this requirement could generate considerable interest, not least because of the impact this may have on door closer manufacturers.
- *"Proactive" measures* – there are several proposals for non-domestic buildings which seek to minimise future rather than historic risks and are arguably not cost effective. These include, *inter alia*, the proposal for protection of corridors in warehouses (see paragraph 19) and a number of proposals arising from the BDAG work. We are proposing to consult on the former on the basis that we are minded to introduce it. For the latter, given the impacts this could have on firefighter safety and the fact that a fire in a tall building could impact on large numbers of people, we are proposing to consult on the basis that we intend to introduce the measures although the final decisions will still be subject to consultation.

#### *RIA*

24. Overall the proposals in the RIA are not deemed to be cost effective in purely economic terms using the agreed values of lives saved and injuries prevented. However, the issue of fire safety is a particularly emotive one and there are

additional benefits in terms of peace of mind etc that are unquantifiable and contribute to the justification for action.

25. It is also worth flagging that there are a number of proposals that the RIA does not show to be cost-effective, primarily those affecting non-domestic properties that are considered to be proactive measures. As well as the proposals referred to above where we have adopted the "minded to" approach, there are several proposals that relate to tall buildings and/or which have resulted from the BDAG work (see paragraph 7).
26. These proposals appear very expensive because there are no quantifiable benefits as there have been no incidents of this type in the UK. However, if there were to be a major incident in that type of building, the impacts could be disproportionately large (eg WTC incident, Madrid tower block fire). Also the BDAG work has shown that there could be negative impacts on firefighters if these proposals were not implemented. It is therefore proposed to consult on the basis that we intend to make these changes, subject to consultation.

#### *Timetable*

27. It is intended that the consultation process would run for 3 months and a revised AD B, together with any amended regulations, would be published in spring 2006 to come into force by the end of that year.

#### Conclusion

28. We believe that the package provides a good basis for consultation and that DA agreement should be sought for publication at the earliest opportunity. Should you wish to do so we would be happy to meet with you to discuss any of the issues raised in this submission and how the review of Part B feeds into the overall ODPM fire agenda.

**Anthony Burd**

cc: at 3 - only those marked \* will receive Flags E1 and E2 (available hard copy only)

Deputy Prime Minister\*  
Nick Raynsford\*  
Special Advisers\*  
Mavis MacDonald\*  
Richard McCarthy  
Jeff Channing\*  
Clive Norris\*  
Sir Graham Meldrum\*

Mike Larking  
Geoff Bowles  
Diana Kahn\*  
Andy Jack  
Terry Pretious  
Cath Reynolds  
Dave Lawrence  
Marie Winckler

Adam Bond  
Katherine Mackenzie  
Peter Wycherley  
Denis Purshouse  
Lynne Nasti  
Sian Williams  
Tracey Cull



## **Annex A – Significant Proposals for Changes to Guidance in AD B**

### *Remove provision for self-closing devices within apartments and dwellinghouses (except garage doors and those opening onto common escape routes)*

The use of self-closing devices on fire doors has been queried because some types do not effectively close the door and their use can reduce the fire resistance of the door. Further, householders regularly complain that these devices are a hazard to children and are a nuisance to other occupants. As a result such closers are often disabled or removed soon after occupation. By not requiring the use of such devices, resources (estimated at c£14m) may be better targeted at other measures. The need to close doors, especially at night, is referred to in AD B and is a key message in community fire safety programmes.

### *Amend the provisions for smoke ventilation of common access areas in apartment buildings*

The new guidance on the installation of smoke ventilation in the common access areas of apartment buildings would provide more effective protection for the occupants and reflects many aspects of current practice.

### *Provide for an additional smoke alarm in apartment buildings and dwellinghouses*

The proposal is for an additional smoke alarm in the main bedroom as this would be less susceptible to false alarms than one in the lounge and would have the benefit of being an additional sounder. It is anticipated that this will help to prevent a significant number of deaths and injuries.

### *Provide for a suitable system of smoke alarms where an extension is proposed*

This clarifies existing guidance to make explicit reference to the need to consider the provision of a suitable system of smoke alarms when an extension is proposed which is widespread common practice, but by no means universal.

### *Remove the separate guidance on loft conversions in dwellinghouses*

This would remove the separate guidance for loft conversions in 2-storey houses so that they should be treated in the same way as for a new build 3 storey house. This would effectively require the provision of a protected stairway in all cases. This will provide clarity and consistency.

### *Provide for cavity barriers in dwellings and non-dwellings*

This would introduce a requirement for cavity barriers in floor voids and enhance the requirement for cavity closure to ensure adequate fire protection. With respect to floor voids the buildings affected are likely to be the in the non-domestic sector and for dwellings this would have most impact on cavity closure around windows and doors. This broadly reflects current good practice.

### *Introduce provisions for measures on inclusive design*

These proposals (eg for emergency voice communicators in refuges) bring AD B into line with the Approved Document M as well as other supporting British Standards and are also required to help businesses meet their duties under Part III of the Disability Discrimination Act 1995.



*Amend the provisions for fire fighting shafts*

This would remove the provision for fire fighting shafts in buildings over 7.5m high but less than 18m from Purpose Group 7(a) - storage buildings, but introduce it to Purpose Group 5 - assembly and recreation buildings. On balance this would save lives because the casualty risk in Purpose Group 5 is greater and more buildings of this type are constructed each year. This proposal is intended to target resources on those buildings with a greater risk of fire casualties.

*Introduce a maximum unsprinklered compartment sizes for warehouses (Local Acts)*

The proposal would repeal (via an SI) those parts of Local Acts in respect of the maximum unsprinklered compartment size for storage and industrial buildings and introduce a single, national limit. This would ensure consistency of approach across the UK and remove local distortions in the location of such buildings. Furthermore, whilst statistics indicate that this type of building is not currently a major risk, as warehouses are becoming increasingly large, the risk of death and/or injury is increasing. The proposal can, therefore, also be seen as a proactive measure to reduce future risks of death and/or injury.

*Provide for dry rising mains in tall buildings*

Work on fire safety in tall buildings in the light of the World Trade Centre (WTC) incident showed that firefighters may not be able to penetrate safely more than 34m into a compartment to rescue a casualty. This conflicts with current guidance in AD B which suggests that firefighting shafts should be arranged such that this distance is no more than 60m. The proposal to amend the guidance to reduce the distance to 45m by installing additional dry rising mains in unsprinklered buildings is intended to go some way towards addressing this potential conflict. Other measures will include consideration of changes to firefighters clothing, equipment and procedures. Whilst statistics indicate that these issues are not a problem in the UK, there is evidence that they may increasingly become so as the number of high rise buildings, and the height to which they are built, increases. The proposal is, therefore, a proactive measure to ensure that in the future fire fighting and search and rescue operations can be more effective.

*Discounting stairs in tall buildings with phased evacuation procedures*

The proposal to discount a stair in tall buildings with phased evacuation also stems from research undertaken in the light of the WTC incident. The relationship between stair width and evacuation requirements of buildings has shown that there is a potential conflict between persons escaping down a stair and firefighters undertaking firefighting and search and rescue operations within the same stair enclosure. Whilst statistics indicate that these issues are not a problem in the UK, there is evidence that they may increasingly become so as the number of high rise buildings, and the height to which they are built, increases. The proposal is, therefore, a proactive measure to ensure that in the future means of escape for occupants and fire fighting and search and rescue operations can be more effective.

*Design compartment walls to take account of deflections during a fire*

The proposed amendment incorporates into AD B existing guidance (BS5950 Part 8 and SCI Publication 288) already in the public domain.