

To: Yvette Cooper

From: Anthony Burd  
Principal Fire Professional  
Buildings Division  
18/A Portland House  
[REDACTED]

24 May 2005

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

### Issue

1. To seek your approval to publish the consultation on Part B of the Building Regulations which relates to fire safety and the supporting guidance in Approved Document B (AD B) – (see Annex A). Clearance to publish from Domestic Affairs Committee and the Panel for Regulatory Accountability is imminent.

### Recommendation

2. That you agree to the publication **as soon as possible** of the Part B/AD B consultation package comprising:
  - Covering letter to consultees
  - Partial Regulatory Impact Assessment (RIA)
  - Response questionnaire
  - Revised drafts of AD B with proposed amendments shown in track-changes

### Timing

3. **Urgent** - the published commitment is to launch the consultation "in spring 2005".

### Presentational Issues

4. The outcome of the review is eagerly awaited by stakeholders and generally we expect a positive reaction. An early launch would minimise the risk of increased lobbying on a number of issues (such as the need for sprinklers in residential care homes, fire safety in warehouses and tall buildings issues) which could rapidly become an uncontrolled and poorly-informed debate.
5. We anticipate that publication of the consultation will attract the interest of the specialist press so appropriate briefing will be required. The main areas of interest are likely to be residential sprinklers, tall buildings and the proposal to remove the provision for door closers. A further submission from DoC regarding this and the practical implications of the launch will follow in due course.

### Background

6. A major review of the fire safety aspects of the Building Regulations and AD B was announced in the White Paper "Our Fire and Rescue Service" in June 2003. This sets out the Government's desire to reduce the number of fires that currently occur by moving much more towards a fire prevention strategy. The Building Regulations are seen as one of the 'main strands' for delivery of this strategy, alongside Community Fire Safety and the Reform of Fire Law.

7. The review has considered fire safety in all types of premises including dwellings, residential care homes, schools and warehouses. It has also considered the important role that sprinklers and other types of fire protection measures may have. The review has been taken forward on an evidential basis, drawing on the findings of recent experience (such as the World Trade Centre incident) and relevant research (see Annex A) which we intend to publish alongside the consultation. It also takes into account the results of stakeholder engagement.
8. The proposed changes fall into 2 broad categories:
  - proposed amendments to legislation (see Annex B)
  - proposed amendments to the format and content of AD B – (see Annexes C and D)
9. The proposed changes to the content of AD B can be further broken down into:
  - those 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 domestic 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 C and are discussed further in the Regulatory Impact Assessment (RIA).
  - those that are being put forward for inclusion on the basis that the Government is “**minded to**” make the amendment, subject to the outcome of the consultation (see Annex D). 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.

### Consideration

10. There is considerable expectation from stakeholders that the consultation will be published shortly. A number of potential lobbying campaigns are, we believe, on hold awaiting the consultation. Early consultation would reduce the possibility of significant lobbying as set out in paragraph 4 above.
11. Also, the potential impacts of not consulting on the proposals for tall buildings at this stage, even as “minded to”, could be significant:
  - Increased pressure from the Fire & Rescue Service (F&RS) and the Fire Brigades Union (FBU) in the form of press notices, campaigns, lobbying and further suggestions that the Government are 'burying' the outcomes of Buildings Disaster Assessment Group (BDAG) research (both F&RS and FBU were on the steering group for this research).
  - A probably small number of firefighter deaths, but which could nevertheless have been avoided.
  - Severe criticism of Government if significant public deaths or losses occur, which could have been mitigated by the measures proposed.

## Conclusion

12. In summary, we believe that there is a case to go to consultation at this stage so as to lead an informed debate and to further engage stakeholders in a positive way.
13. If you would like to have a meeting to discuss these issues or if you would like to see a copy of the full consultation package then we would be happy to provide them.
14. This submission has been cleared with DoC and Legal.

**Anthony Burd**  
Buildings Division

cc: at 3 -

Deputy Prime Minister  
David Milliband  
Phil Woolas  
Jim Fitzpatrick  
Baroness Andrews  
Special Advisers  
Mavis MacDonald

Richard McCarthy  
Jeff Channing  
Clive Norris  
Sir Graham Meldrum  
Anne Hemming  
Tony Lord  
Diana Kahn

Cath Reynolds  
Dave Lawrence  
Marie Winckler  
Adam Bond  
Katherine Mackenzie  
Lynne Nasti  
Tracey Cull

## Annex A – Background

### Building Regulations

The Building Regulations 2000 apply in England & Wales, to building work, typically the erection, extension or material alteration of a building. Separate legislation applies in Scotland and Northern Ireland.

They seek to ensure reasonable standards of health and safety for persons in or about buildings, by providing **functional requirements** for building design and construction in terms of what is appropriate, reasonable or adequate. Fire safety is covered in Part B, the requirements of which are broadly:

**B1** - to provide appropriate **means of early warning** of fire (eg through provision of smoke detectors) and appropriate **means of escape** to a place of safety in case of fire (eg through provision of fire exit routes and emergency egress windows)

**B2** - to reasonably **inhibit the spread of fire** within the building by controlling the **lining materials** used for partitions, walls, ceilings etc (eg by specifying appropriate classifications to be met by materials/products)

**B3** - to reasonably **inhibit the spread of fire** within the building by controlling the **internal structure** in terms of stability, walls common to more than one building (eg in a terrace), compartmentation, sprinklers and concealed spaces (eg through identifying maximum compartment sizes, requiring cavity barriers etc)

**B4** - to ensure that the **external walls and roof of the building** can adequately **resist the spread of fire** over them (eg through setting standards for cladding and roof materials, minimum space separation between buildings etc)

**B5** - to provide **reasonable access and facilities for the Fire and Rescue Service** (eg road access for F&RS vehicles, provision of fire mains/firefighting access shafts etc)

The interpretation of the Building Regulations is a matter for the relevant Building Control Body and, ultimately, for the Courts. However, Approved Document B (AD B) gives **practical guidance on one way** of meeting the functional requirements of the Building Regulations with respect to Part B.

### Review of Approved Document B

AD B was last subject to significant technical review during 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.

However, the “European amendments” did not amend the technical guidance in the 2000 edition. A major review of the wider technical elements of Part B 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.

The current review of AD B is considering fire safety in all types of premises including dwellings, residential homes, schools and warehouses. It has also considered the important role that sprinklers and other types of fire protection measures may have.

### The Evidence Base

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;
- actual incidences of fire;
- relevant research findings;
- new or amended standards (eg a new standard for residential sprinklers; and;
- changes to other policies and legislation which have an effect on fire safety in buildings.

In particular, we commissioned a number of pieces of research to look at aspects of fire safety such as:

- Effectiveness of Sprinklers in Residential Premises
- Smoke Ventilation of Common Access Areas of Flats and Maisonettes
- Fire Suppression in Buildings using Water Mist, Fog or Similar Systems
- The Integrity of Compartmentation in Buildings During a Fire
- A Review of the Guidance in AD B on the Provision of Cavity Barriers
- Fire Resistance Requirements for Dampers and Ducts
- The Production of Smoke and Burning Droplets from Wall and Ceiling linings

Following the World Trade Centre incident of September 11 2001, ODPM Fire and Rescue Service Directorate 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.

### Stakeholder Involvement

The review has drawn on the views of a wide range of stakeholders through the Backward Look (at the implementation of the last version of AD B) and Forward Look (at what stakeholders would like to see in a future AD B), including web-based questionnaires and stakeholder workshops.

The draft consultation package was considered by the main Building Regulations Advisory Committee (BRAC) following detailed work by its technical Part B Working Party. Officials have also liaised with colleagues in HSE, DEFRA, DfES, DoH and Devolved Administrations. The RIA has been cleared by Cabinet Office Regulatory Impact Unit and the DTI's Small Business Service.

Clearance to proceed has been given by DA and PRA, subject to a few small changes to the RIA, discussed informally at official level.

It is intended that the consultation process would run for 3 months (maybe longer if we enter the month of August) and a revised AD B, together with any amended regulations, would be published in first half of 2006 to come into force by the end of that year.

## **Annex B – Proposed Amendments to Legislation**

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 protection 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).

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 research project that looked at the importance of fire safety information being available throughout the life of a building.

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.

There are no proposed changes to the five (B1 -B5) technical legal requirements of Part B of the Building Regulation, 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 (Internal fire spread structure) to address fixed fire fighting equipment (eg sprinklers).

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.

If the proposal to introduce a new national maximum size of unsprinklered compartments in warehouses is taken forward, the relevant parts of Local Acts would need to be repealed using a Statutory Instrument.

## **Annex C – Significant Proposals for Changes to AD B – “Intend to”**

**Format of AD B** - It is proposed to split AD B into two volumes, dwellings and non-dwellings. This arose from our 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 common to both dwellings and non-dwellings, neither volume is particularly small. We therefore intend to consult 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.

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.

**Residential Sprinklers** – The new guidance clearly indicates to the reader that we have made considerable in-roads in promoting the use and benefits of such installations. There are a number of proposed amendments which will provide alternatives to existing AD B provisions. For example, the potential to provide sprinkler protection instead of an alternative escape route where currently provided in both houses (typically 4 storeys and above) and multi-storey apartments. These new options will provide greater design freedoms and promote innovation and may, in some cases, produce a cost saving compared to current alternatives without compromising safety.

**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.

**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 (Access to buildings and facilities) 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.

***Introduce a maximum unsprinklered compartment sizes for warehouses (Local Acts)***- The proposal would repeal (via a Statutory Instrument) 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.

***Design compartment walls to take account of deflections during a fire*** - The proposed amendment incorporates into AD B existing guidance (BS5950 Part 8 and Steel Construction Institute Publication 288) already in the public domain.

***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.

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. In March DfES Ministers assured ODPM that BB100 would be in the public domain shortly but to date nothing has been published.

A further submission on fire safety generally in schools will be submitted in due course.

## **Annex D - Proposals for Changes to AD B - "Minded to"**

### ***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 and enclosed premises. 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 such warehouses. However, the RIA shows that this proposal would be expensive and further information is required before a final decision can be made.

***Loft Conversions Guidance*** – 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. We have particularly invited stakeholders' views on this proposal, especially in relation to the effect this may have on some existing 'open-plan' type properties.

***Door Closing Devices to Dwellings*** – The draft 'Dwellings' AD suggests removing the need for self closing devices within houses and apartments (with the exception of doors to integral garages and those doors onto common escape routes in apartments). The reason for this change is because door closers can present a hazard to children; they can interfere with the day-to-day convenience of the occupants and many of our stakeholders tell us they are often disabled soon after occupation. By not requiring the use of such devices, resources (estimated at c£14m) may be better targeted at other measures. However, the fire safety benefits of closing doors, particularly at night, remain. The need to close doors, especially at night is referred to in AD B and it is proposed to reinforce this message through Community Fire Safety programmes (national and local) and the guidance already contained on our 'Firekills' website. We have therefore specifically asked for stakeholders' views on this particular proposal.

***Tall Buildings*** – Work on fire safety in tall buildings in the light of the World Trade Centre (WTC) incident has given rise to a number of proposals including the need to improve equipment and operating procedures. Those which impact on the Building Regulations are:

- ***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.

- *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.