

# Asbestos in Schools

## Government Policy Review Call For Evidence

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### Review of Government Policies.

On 31<sup>st</sup> January the Department for Education (DfE) launched a review of the Government's policy of managing asbestos in schools. They want to hear opinions and ideas from anyone with an interest in this important subject.

In particular, they would like to hear from those that are involved in the day-to-day management of asbestos in schools, about their experiences and how they think DfE can support schools to fulfil their responsibilities. All evidence should be submitted by 31<sup>st</sup> March 2014.

**Please respond fully and circulate the call for evidence as widely as possible.**

- The review calls for evidence from all organisations and individuals with an interest in the issue.
- That includes local authorities, schools, teachers, support staff, governors, unions, parents, epidemiologists, scientists, risk experts, asbestos consultants, politicians, victims, doctors, solicitors, coroners- everyone who is involved with, or has been affected by asbestos in schools.
- It is essential that DfE is provided with wide ranging evidence that clearly shows the scale of the problem and whether or not their present policies are working.
- Much of the evidence of failures in asbestos management and the exposure of staff and pupils is of a confidential nature. That evidence, however, is essential so that the true picture is provided.
- The confidentiality of the evidence will be respected, so please submit it in a manner that achieves that and where necessary with names and locations removed.
- The consultation questions are of a limited nature. Do not be restricted by them. If you have something to say then please say it.
- This is the chance to make a fundamental difference to Government policies on asbestos in schools.
- Links:
- [DfE Policy Review: Asbestos management in Schools. Call for evidence closes 31 March 2014.](#)
- [Policy review: asbestos management in schools call for evidence document.](#)
- Complete a [response form](#)

### Background and Recommendations

#### Executive summary

1. Successive Governments have found the problem of asbestos in schools is 'too big to handle,' consequently they have adopted short term policies that maintains the status quo. However that does not address the underlying problems, instead long term strategic thinking and policies are needed.
2. The review of Government policies provides the opportunity for organisations and individuals to submit evidence of the present situation in schools. It will also allow them to make recommendations on how matters can be improved and how long term policies are essential if the problem of asbestos in schools is to be finally resolved.
3. This paper gives a background to the present asbestos problem in schools. It shows the flaws in present policies and makes recommendations.
4. Britain has the worst mesothelioma incidence in the world, it is thought that this is because we imported more amosite (brown asbestos), than any other country. More than three quarters of the schools in Britain contain asbestos, and amosite was extensively used, often in locations vulnerable to damage from pupils. A report by the Medical Research council (MRC) concluded that *"It is not unreasonable to assume that the entire school population has been exposed to asbestos in school buildings."*

5. Because the Government's policy is to manage asbestos for the remaining life of the building rather than removing it, most of it remains in situ. In the 1980s the Association of Metropolitan Authorities had a policy of identifying the most dangerous asbestos and progressively removing it, because they considered it was not only safer but in the long run it was cheaper.
6. In 1986 USA carried out an audit of asbestos in their schools and assessed the risks to the occupants. They concluded that a thousand people would die over a thirty year period from asbestos exposure at school and that 90% of those would be amongst the pupils. They accepted the increased vulnerability of children to asbestos and consequently introduced stringent laws specifically for schools so that they have the resources to effectively manage their asbestos. This included a policy of informing staff and pupils, mandatory training, a system of inspection and providing funds.
7. In 2013 The Australian Government adopted a National Strategic Plan to eradicate asbestos and eliminate asbestos disease from their country. The plan will address all the key aspects including setting a timeline for the safe removal of asbestos from public and commercial buildings with priority being given to schools. This is precisely the fundamental review of policies and long term strategic thinking that is needed in Britain.
8. Asbestos consultants visit most schools in Britain and they conclude that the many are neither effectively nor safely managing their asbestos. Despite this asbestos training for school governors and staff is not mandatory. This has resulted in numerous asbestos incidents where staff and pupils have been exposed to cumulatively significant levels of fibres, sometimes regularly from common classroom activities.
9. The Government has cancelled the system of determining whether local authority schools are managing their asbestos and only inspect a tiny proportion of schools outside local authority control. As increasing numbers are leaving local authority control to become academies or free schools, the responsibility for ensuring they are safe rests on the governors, who invariably do not have the knowledge or expertise to ensure asbestos is allocated the resources it warrants.
10. Significant numbers of school teachers, support staff and former pupils have died and are dying of the asbestos related cancer mesothelioma. In 2013 The Government's advisory committee on cancer concluded that children are more vulnerable to the dangers of asbestos than adults, the younger the child the greater the risk. To put it into perspective, evidence was given by a leading epidemiologist to an Education Select Committee hearing in 2013 that between two and three hundred people could die each year because of their asbestos exposure experienced as a child at school. Over a twenty year period that equates to between four and six thousand deaths. The risks to pupils are such that in general asbestos risk insurance is not available for schools.
11. Unlike the USA the British Government have never assessed the scale of the problem and have excluded asbestos from the present audit of the condition of school buildings, despite the fact that it is probably one of the most expensive items when a school is maintained or refurbished. This means that their financial forecasts will be meaningless.
12. The Department for Education bases its policy on advice from the Health and Safety Executive (HSE). HSE have treated schools as any other workplace and have applied workplace regulations and asbestos fibre control levels on schools without regard for the increased risks to children. Despite evidence to the contrary they have advised the Minister that the risks from asbestos in schools are very low and that staff and pupils are not at risk.
13. There is a lack of transparency and, because the risks are played down, the public are generally unaware that there is a problem, which has meant that successive Governments have felt able to indefinitely delay taking the necessary action to make schools safe. This position is no longer sustainable and the review of policy provides the opportunity for the Government to adopt policies that really will ensure that the occupants of schools are safe from the dangers of asbestos.

**The Problem**

- 14. There is a serious problem of asbestos in schools. In February 2012 the All Party Parliamentary Group on Occupational Health and Safety stated that this is a national scandal and urgent action is required.<sup>1</sup>
- 15. More than three quarters of schools contain asbestos,<sup>2</sup> all the asbestos is old and much of it is deteriorating. 14,210 schools were built during the period 1945-1975 when the use of asbestos was at its height, and many others were refurbished. Amosite was used extensively in their construction, some contain blue asbestos (crocidolite), and the majority contain white asbestos (chrysotile).<sup>3</sup>
- 16. Britain has the highest mesothelioma incidence in the world at more than twice that of France, Germany or the USA. An HSE report concluded that is because we imported more amosite than any other country.<sup>4</sup> All types of asbestos can cause the asbestos cancer mesothelioma, but amosite is up to 100 times more likely to cause the disease than chrysotile, and crocidolite is up to 500 times more likely to.<sup>5</sup>
- 17. The occupants of schools are being exposed to asbestos and increasing numbers are subsequently dying from mesothelioma. The number of school teachers dying from mesothelioma in Britain has increased from 3 a year in the 1980s to 15 a year in the last ten year period. More than 267 school teachers have died of mesothelioma since 1980 with more than 140 dying in the last ten years.<sup>6</sup> Perhaps some have been exposed elsewhere, but many are known to have been exposed at school and because of teachers' career pattern the occupation recorded on their death certificate is likely to be the occupation in which the exposure occurred.<sup>7</sup>
- 18. The occupational statistics do not include mesothelioma deaths above the age of 74, although almost as many people die of mesothelioma above that age as below. Studies have shown that lower exposures on average have longer latencies,<sup>8</sup> and therefore in a profession such as teaching it is reasonable to assume that as many, or perhaps more, teachers have died over the age of 74. If so, the occupational statistics significantly understate the actual numbers of teachers who have died. School caretakers, cleaners, cooks, secretaries, teaching assistants, nursery nurses and former pupils have also died of the cancer.<sup>9</sup>
- 19. Schools are unique workplaces because they not only contain the workforce, but they also contain children who are more at risk from asbestos exposure than adults. Every child in the United Kingdom is required to attend school so the numbers facing potential exposure are much larger than in any other workplace. A report commissioned by the Medical Research Council examined the extent of asbestos in school buildings and concluded "*It is not unreasonable to assume, therefore, that the entire school population has been exposed to asbestos in school buildings... Exposure to asbestos at school may therefore constitute a significant part of total exposure.*"<sup>10</sup> It is equally reasonable to assume that the widespread exposure of a large number of people at a very young age has contributed to the exceptional mesothelioma incidence in Britain.
- 20. In 2011 the Supreme Court confirmed the judgment that Dianne Willmore had been negligently exposed to asbestos as a pupil at school and the exposure had materially contributed to her mesothelioma. They also accepted the expert medical opinion that there is no known level of exposure to asbestos below which there is no risk.<sup>11</sup>
- 21. Although it is known how many teachers have died it is not known, because of the long latency, how many children have subsequently died. On 7<sup>th</sup> June 2013 the Government's advisory Committee on Carcinogenicity (COC) published a report on the relative vulnerability of children to asbestos compared to adults. They concluded that children are more vulnerable, the younger the child the greater the risk. The lifetime risk of developing mesothelioma for a five year old child is about five times greater than an adult aged thirty.<sup>12</sup> The following table puts the increase in risk for younger children into perspective. The COC conclusion is based on the table:

*Increased mesothelioma risk to age 80<sup>13</sup> (~lifetime risk)*

Start age	0	5	10	15	20	25	30	40	45	50
Factor	7.0	5.3	4.0	3.0	2.1	1.5	1	0.4	0.2	0.1

- 22. Insufficient scientific research has been carried out to determine whether or not a child's physical immaturity makes them more vulnerable, so the Committee were unable to come to a conclusion over this aspect. However a

leading paediatrician warned that the juvenile lung is particularly susceptible to injury and that serious lung damage below the age of five would remain for life. He also strongly advised the COC that because knowledge is incomplete they must follow the precautionary principle as children are involved.<sup>14</sup>

23. At the Select Committee hearing in March 2013 Professor Peto, a leading epidemiologist and member of the COC, gave evidence. He confirmed that children are more vulnerable to asbestos exposure.<sup>15</sup> He also estimated that between 200 and 300 people could die each year of mesothelioma because of their asbestos exposure as children at school.<sup>16</sup> That would equate to up to 6,000 mesothelioma deaths over a twenty year period because of asbestos exposure as a child at school. That is clearly a matter of national importance, but it has never been properly addressed.
24. The estimates are based on the levels of exposure during the 1960s and 1970s and HSE claim that the present levels of exposure in schools are less now than they were then. However the claim is not based on sound evidence of past and present fibre levels in schools. The lack of sufficient data on airborne fibre levels, and in particular current fibre levels, in schools was highlighted by the COC. Most of the asbestos remains in place and so does the risk. All of it is now old and much is deteriorating as the school stock has been poorly maintained. The evidence is that asbestos incidents continue, consequently staff and pupils are still being exposed to asbestos, in some cases over a prolonged period of time.
25. For a detailed examination of the extent of asbestos in schools and the implications follow the link to the Asbestos in Schools Group (AiS) submission to the Committee on Carcinogenicity:  
<http://www.asbestosexposureschools.co.uk/pdfnewslinks/AiSreportonASBESTOSINSCHOOLS.pdf>

### **Government Policies – Flaws in Basic Assumptions**

26. At the February 2012 Parliamentary debate on asbestos in schools the Minister stated that *“We will review our policy on asbestos management and our advice to schools when we receive the (COC) committee’s report later this year.”*<sup>17</sup> The COC concluded that children are more at risk than adults. To date the increased risk to children has never been taken into account, but instead schools have been treated as any other workplace. The increased risk must underlie all future decisions and asbestos policies for schools.
27. The policy review is now taking place and it is essential that evidence is presented to the Government that shows that their present policies have failed over many years, they are outdated, do not give adequate protection for the occupants of schools and as a direct result large numbers of people are dying. The policies are a short term expedient and do not provide a long term solution. If schools are to be made safe there has to be a fundamental rethink of policy, but the signs are that the Minister and his civil servants at DfE and HSE are content that their present policies are working.
28. In November 2013 AiS accompanied a nursery school teacher, who is suffering from mesothelioma, to a meeting with the Minister of State for Schools. The teacher very eloquently and bravely explained to the Minister how Government policies have failed to ensure that children and staff in schools are safe. She gave evidence that present Government policies are not working and fundamental policy changes have to be made.
29. The Minister assured the teacher that if the evidence was that asbestos posed a risk to school staff and pupils then, regardless of cost, measures would be taken to ensure that schools were made safe. However he stressed his policy is based on HSE advice, and that advice is that schools are safe and staff and children are not at risk from asbestos in schools. He also claimed that in general schools are effectively managing their asbestos. Therefore on the evidence available to him he could not justify to the Treasury the need to spend large amounts of money on mitigating the effects of asbestos in schools.<sup>18</sup>
30. Most people would not consider that schools are safe and staff and children are not at risk when thousands of former pupils are likely to have died from asbestos exposure in schools, and that most of that asbestos remains in place. However flawed HSE’s advice to the Minister may be, it supports and justifies his policies. It provides the justification for the Government to maintain the status quo rather than addressing the very serious problem that is asbestos in schools. It saves the Government money.

31. There is extensive evidence that HSE advice is unsound. Evidence has been submitted to the DfE and HSE about ineffective and unsafe standards of asbestos management in schools, the disturbance of asbestos in schools, the increased risk to children and the subsequent deaths of school staff and former pupils. The Minister chose to overlook that evidence in the meeting.
32. The Government's policy on asbestos in schools is: *"Asbestos which is in good condition and unlikely to be disturbed or damaged is better left in place and managed until the end of the life of the building as this presents less risk of exposure to the occupants than the process of removing it."*<sup>19</sup>
33. Because successive governments have had the same policy most of the asbestos remains in situ. The longstanding policy is now flawed and outdated with the Education Capital Review concluding that *"Significant parts of the school estate were and are in an unacceptable state."* It is in a dilapidated state through lack of maintenance, long term under investment, fair wear and tear and vandalism. The CEO of PFS stated that 80% of the school stock is beyond its design life.<sup>20</sup>
34. All the asbestos is now old and, as the buildings have deteriorated, so has the asbestos they contain. Consequently much of the asbestos is no longer in good condition and has been disturbed or damaged.
35. The techniques of asbestos removal have also advanced in recent years so that if carried out correctly they do not present a risk to the occupants. Some schools have already had asbestos removed safely as have many other buildings including the Houses of Parliament, Department of Education offices and the Department of the Environment HQ.
36. In addition there is an ongoing risk to occupants as numerous asbestos incidents have occurred, and are still occurring in schools.<sup>21</sup> If asbestos is present then there will always be the possibility that it will be disturbed and asbestos fibres released.
37. Although the total removal of asbestos must be the goal, it cannot be achieved overnight. In the 1980s the Association of Metropolitan Authorities had a policy of phased removal by prioritising the most dangerous materials, as it is safer and, in the long run, it is also cheaper.<sup>22</sup> The practice stopped when the organisation ceased to exist, however phased removal remains the policy of Nottinghamshire. It also has been adopted as Government policy in Australia.
38. On 3rd June 2013 the Australian Federal Parliament passed legislation for the Asbestos Safety and Eradication Bill.<sup>23</sup> It underlines the Australian Government's commitment to solve their asbestos problem once and for all. It sets a benchmark for our Government in their review of asbestos policy in schools. This is precisely the fundamental strategic thinking that is urgently required in Britain.
39. The Bill establishes a national agency that will investigate the problem of asbestos in Australia. The Agency is tasked with implementing a strategic plan to eradicate asbestos and eliminate asbestos disease. A number of key objectives are laid out in a National Strategic Plan, amongst which it will establish *"Systems, timelines and processes for the prioritised safe removal of material containing asbestos from public and commercial buildings and the safe disposal of such material."*<sup>24</sup>
40. In introducing the Bill the Minister, Bill Shorten, said the government would work to *"ultimately remove asbestos from the Australian built environment....."* and he agreed in principle that removal of asbestos from schools will be prioritised, adding *"Obviously, exposure to children is particularly repugnant..."*<sup>25</sup>
41. Australia has adopted a strategic policy to eradicate asbestos and asbestos disease. The review of policy in Britain must seize this opportunity. We must adopt similar far reaching policies and take fundamental steps to eradicate the legacy of asbestos from schools to protect the most vulnerable people in our society – our children.
42. If phased removal is adopted as a national policy the problem will eventually be resolved, but if it is not adopted asbestos will remain a problem in schools indefinitely.

## Financial flaws in the policy

43. Effective asbestos management is a continuous drain on resources and the presence of asbestos in a school means that extra costs are incurred for even the smallest maintenance task. The services in thousands of buildings have passed their design life but, if asbestos is present, they can only be replaced if the asbestos is removed first. If a school is refurbished or demolished then the cost of asbestos remediation can be one of the major costs and considerable cost overruns have occurred through unexpected asbestos remedial and removal work.<sup>26</sup> However the scale of the asbestos problem in the nation's schools is not known so realistic financial forecasts for maintaining, refurbishing or replacing schools cannot be made.
44. The Schools Capital Review was critical that the government does not know the condition of its £110billion school estate. They recommended that *"The Department urgently needs to build up a better picture of the condition of the educational estate that it funds... The first step should be to collate all existing information sources and to establish a simple, well-designed database to manage this information."*<sup>27</sup> Despite the recommendation DfE has specifically excluded asbestos from the Property Data Survey Programme (PDSP) and will collate no information on asbestos into its database.<sup>28</sup> This will mean that any future financial forecasts based on the audit will be meaningless.<sup>29</sup>
45. DfE have stated that the decision to exclude asbestos could not be reversed until after the present five years contracts have expired, and at a meeting with the Minister in January 2013 DfE claimed that the condition surveys of schools was too far advanced to include asbestos.<sup>30</sup> Perhaps the excuses are valid if the intention was to include asbestos in the surveys of school buildings, however that is not the case. The proposal is that data on asbestos that is already available in schools and local authorities is entered on the DfE Asset Management Software system. Expert advice has been sought and there is no valid technical<sup>31</sup> or logistic reason that cannot be achieved, even at this stage of the process. In November 2013 the Secretary of State announced that the PDSP would be extended for a further eight months,<sup>32</sup> but once again asbestos has been excluded.
46. Data should be collated on DfE's Asset Management Software on asbestos in schools, so that the overall scale of the problem is known and those schools and local authorities with the worst asbestos problems can be identified. This would allow the government to make sound, long term financial forecasts. It would enable them to allocate proportionate resources so that the limited funds are targeted for maintenance, refurbishment or replacement at those schools in the greatest need and those that present the greatest risk.

## Training and Management flaws in the policy

47. Government policy relies on schools having rigorous and effective systems of asbestos management with the necessary resources available and all members of staff trained in asbestos awareness or asbestos management. However the evidence is that the policy has failed over a prolonged period of time.
48. Members of the asbestos consultants association visit thousands of schools throughout the country and they conclude: *"The evidence is that the system of asbestos management in many schools is not of an adequate standard, in some it is ineffective, in others it is almost non-existent, and in some it is at times dangerous... These are not minor problems that have crept in over recent years; rather they are fundamental problems that are endemic in schools in the UK..."*<sup>33</sup>
49. In 2011 HSE published the results of inspections they had carried out in academies and schools outside local authority control to determine their standards of asbestos management.<sup>34</sup> The inspections resulted in enforcement action being taken in 17% of schools for failures in asbestos management. More than half of the eighty schools that carried out their own maintenance and building work had failed to train their staff.<sup>35</sup>
50. Two previous rounds of inspections of local authority schools resulted in enforcement action being carried out for failing to manage asbestos in their system built schools. In the first round of inspections improvement notices were issued in 17% of schools<sup>36</sup> and in the second round they were issued to 24% of the 42 local authorities inspected, in addition the remainder were given formal guidance to improve their asbestos management. In some cases the local authorities had failed to follow critical asbestos guidance in all their schools.<sup>37</sup>
51. The Education Select Committee examined the evidence of enforcement action taken by HSE in schools for failing to manage their asbestos. A committee member put the enforcement action taken into perspective when he stated: *"If one in five or six schools required the equivalent of an enforcement notice because they were not*

*complying with safeguarding of children requirements, it would be on the front page of every single newspaper.*"<sup>38</sup>  
– But that is not the case with asbestos.

52. In October 2012 a Welsh secondary school was closed with immediate effect on receipt of a report that identified damaged asbestos, widespread asbestos debris and classroom heaters that were blowing asbestos fibres into the classrooms. The school had failed to safely manage its asbestos and had even failed to follow guidance that had been issued thirty years before that warned of the potential for asbestos fibre release from the heaters. The type of heaters was one of the most common in schools, therefore the Asbestos in Schools Group asked DfE to issue an urgent warning to all schools about the inherent dangers of these heaters. HSE advised DfE not to issue a warning as such a warning would *"divert resources."*<sup>39</sup> As at 20<sup>th</sup> February 2014 neither DfE nor HSE have issued a warning.
53. The Minister for Education at the National Assembly of Wales asked all local authorities *"To confirm that they were undertaking their statutory duties in accordance with the legislation, along with copies of Asbestos Management Plans."* After analysis of the returns the Minister stated *"I do not feel sufficiently assured at this stage that local authorities are discharging their statutory duties to manage asbestos and have sufficient plans in place."*<sup>40</sup> This adds to all the evidence that a significant number of schools are not safely managing their asbestos.
54. A relatively new problem is that increasing numbers of schools are leaving local authority control to become academies. By doing so they will normally lose the expertise of the local authorities, and in many cases the governors and school authorities do not have the training or expertise to effectively manage their asbestos. This is an increasing problem in academies and free schools where responsibilities particularly rest on the school governors. As at 1<sup>st</sup> February 2014 there are 3,657 academies open in England<sup>41</sup> and 126 free schools.<sup>42</sup>
55. In July 2013 HSE released a report that summarised the findings of a seconded headteacher who had carried out an investigation on behalf of HSE into 'The leadership of health and safety in schools.' He concluded that school leaders including headteachers, and in particular governors, were often not aware of their duties concerned with health and safety and he proposed mandatory training:  
  
*"That the ideal way to ensure that all school leaders are made aware of their leadership responsibilities for health and safety would be to implement a mandatory programme of health and safety awareness. Given the constantly changing educational environment of new initiatives and national strategies, it was not believed that anything other than a mandatory programme will ever sufficiently raise awareness of health and safety in schools for it to become a priority... This option would set a levelled programme with content aimed at strategic leadership of safety and health targeted at Governor/Duty Holders and Headteacher/Responsible Persons."*<sup>43</sup>
56. The report had been completed in July 2010 but HSE did not release it and had refused to do so under an FOI request.<sup>44</sup> HSE finally released a summary of the report three years later after a further FOI request.<sup>45</sup>
57. In 2013 the Education Select Committee took evidence on the role of school governing bodies. Their findings reflect those of the seconded headteacher. Although they didn't specifically look at health and safety training they did examine the general issue of training of governors and concluded that *"Too many governors have not received suitable training and we recommend that the Government require all schools to offer training to new governors."*<sup>46</sup>
58. As at February 2014 the seconded headteacher's and the Select Committee's recommendations have not been followed. AiS recommends mandatory training for governors, headteachers, teachers and support staff with the training tailored to the role of the individual.

### **No proactive inspections in local authority schools**

59. As Government policy is to manage asbestos then there should be a workable system in place to ensure that schools meet acceptable and safe standards.
60. If a comprehensive system of inspecting the standards of asbestos management had been in place at the school in Wales then their failure to manage their asbestos would have been identified many years before, and the asbestos exposure of generations of staff and pupils could have been prevented.
61. A second round of HSE inspections has recently been completed in England, Scotland and Wales for 150 schools outside local authority control, but this was a one off project that has inspected only 0.5% of all schools. Since

March 2011 Government policy has been that HSE are not allowed to carry out proactive inspections in local authority schools.<sup>47</sup> HSE were asked what system was in place to detect those LA schools that were not achieving satisfactory standards. HSE responded that they will only carry out an inspection after an asbestos incident has occurred or when a member of staff alerts them to a problem.<sup>48</sup>

62. This is not a satisfactory long term strategy for ensuring safe standards are achieved. There are a number of cases where school staff have expressed their concerns that asbestos in their school was not being managed safely. In some cases their lives have been made difficult, in one case a senior teacher and in another a school governor felt compelled to resign.<sup>49</sup>
63. If HSE carry out an inspection after an incident has occurred then the damage has already been done, and although as a result of the inspection standards may improve, if a policy of proactive inspections had been in place then the incident could have been avoided in the first place. The lack of adequate quality assurance for health and safety was noted by HSE's seconded headteacher who stated "*Quality assurance of health and safety standards by external agencies is not currently part of the approach taken to health and safety in schools. HSE's input to schools mainly resulted from incidents that were selected for investigation.*"<sup>50</sup>
64. It is HSE's designated role to inspect the standards of asbestos management in schools,<sup>51</sup> however they do not have an adequate system of fulfilling that role. In light of the increasing numbers of schools outside LA control HSE were asked if the LA's could take over the role. HSE replied that the duty was theirs and that LA inspectors would not be allowed to take on the role.<sup>52</sup>
65. OFSTED have a legal duty in their inspections of schools to assess "*the quality of leadership in and management of the school and the safety of pupils.*"<sup>53</sup> In 2011 DfE asked the Chief Inspector of Schools if he would include an assessment of the standards of asbestos management and the safety of the pupils from the dangers of asbestos. OFSTED responded that asbestos will not be part of their inspections.<sup>54</sup>
66. HSE and OFSTED are meant to carry out inspections to ensure that the occupants of schools are safe from the dangers of asbestos. However HSE will not do it in LA schools and they only inspect a tiny proportion of other schools. OFSTED inspections are meant to assess that pupils are safe, but they will not do it in the case of asbestos. LA inspectors are not allowed to inspect schools. There is therefore no workable system in place to determine whether schools are safely managing their asbestos and whether staff and pupils are at risk. Proactive inspections have proved their worth, and if schools are expected to manage their asbestos then there has to be a workable system in place to ensure that they do.
67. AiS recommends that pro-active inspections should be reinstated in all schools to determine the standards of asbestos management.

### **Workplace Control Levels should not be applied to schools**

68. Workplace airborne fibre control levels for asbestos are applied to the occupants of schools. This is unsafe and inappropriate as there is no known threshold exposure to asbestos below which there is no risk.
69. The Clearance Indicator is a workplace level for asbestos contractors, but, by default it has been adopted as a level at which classrooms can be re-occupied following work on asbestos or after an asbestos incident in a school. But it is not a safe level as a person will inhale 6000-10,000 fibres an hour. HSE advise it is not an acceptable environmental level for normal occupation, and the revised Approved Code of Practice reinforces this.<sup>55</sup>
70. The World Health Organisation acknowledged the absence of a known threshold and stated "*No threshold has been identified for the carcinogenic risks to chrysotile.*"<sup>56</sup> The HSE's Hodgson and Darnton paper on risks from asbestos exposure examined the various studies into the level of exposure that can cause mesothelioma and concluded "*All these observations suggest that relatively brief exposures may carry a low, but non-zero, risk of causing mesothelioma. Taking this evidence together we do not believe there is a good case for assuming any threshold for mesothelioma.*"<sup>57</sup> The evidence was re-examined by the government's advisory committee on science, WATCH, who in 2011 confirmed that "*The risk will be lower, the lower the exposure, but "safe" thresholds are not identifiable.*"<sup>58</sup>

71. A report commissioned by the Medical Research Council concluded that the background asbestos fibre level in schools with asbestos in good condition is 0.0005f/ml.<sup>59</sup> The courts and expert medical opinion is that for legal purposes exposures above that level are “significant” and can materially increase the risk of mesothelioma developing.<sup>60</sup> The Clearance Indicator is twenty times greater than the background level and will therefore in both medical and legal terms materially increase the risk of mesothelioma developing.
72. In 1979 the government’s advisory committee on asbestos warned about the increased risk to children *“As children can be expected to live longer than adults they have more chance of being affected by carcinogens with long latent periods.”*<sup>61</sup> In 1983 the Department for Education concluded that *“It may therefore be not unreasonable to suggest that in schools the levels should be lower than those for an “average” population and a factor of, say, 1/80<sup>th</sup> to 1/100<sup>th</sup> of the occupational limits should be adopted.”*<sup>62</sup>
73. The proposals have never been adopted, however the Netherlands Government have accepted the recommendations of a report by the Health Council of the Netherlands that considers that their present occupational levels are unsafe and recommends an occupational exposure limit for amosite some 300 times less than the EU level, and an environmental level at 3,000 times less than their present occupational level.<sup>63</sup> The levels are scheduled to be implemented in 2014.<sup>64</sup>
74. An environmental airborne fibre level should be adopted in schools in the United Kingdom.
75. The case for adopting an environmental level for schools is at this link:  
<http://www.asbestosexposureschools.co.uk/pdfnewslinks/Environmental%20asbestos%20fibre%20level%20for%20schools%2014%20Jun%2013.pdf>

### **Air sampling identifies risk**

76. There have been a number of cases in schools where air sampling has identified that asbestos fibres were being released into the rooms. In some cases it is probable that the releases had been taking place for many years but had passed unnoticed. For instance the release of amosite fibres from classroom cupboards, slamming doors, hitting walls and columns, from displaying children’s work and from heaters were only identified by air sampling.<sup>65</sup>
77. The hazard is the presence of the asbestos, but the risk to the occupants is when the asbestos fibres become airborne and can be inhaled. Because the danger is the inhalation of airborne fibres there should be a method in schools of identifying whether asbestos fibres are being released into the rooms.
78. Professor Peto gave evidence to the Education Select Committee and emphasised the importance of measuring airborne asbestos fibre levels in schools. He stated: *“You want a very focused approach to identifying schools, if any, where the levels are much higher... At the moment, the air sampling is so expensive. What I would recommend to the HSE is —it is easier said than done—some procedure whereby you are getting a very large volume air sample over a period of time, and then you measure the asbestos fibres in it. It is expensive but it is probably not as expensive as what is being done now.”*<sup>66</sup>  
*“...All that matters is whether or not kids are breathing in asbestos and, until you find that out, everything else is hot air.”*<sup>67</sup>
79. The Committee on Carcinogenicity also concluded that air sampling is necessary in schools so that present levels can be determined and a more accurate assessment could be made of the risks to the occupants. They recommended that: *“The information on levels found in schools is largely historical and there is a lack of contemporary data on asbestos in schools. In view of the importance of this issue, there would be a benefit in generating new exposure data.”*<sup>68</sup>
80. HSE disagree. A senior director gave evidence to the Education Select committee, dismissed criticism of the present regulations and stated *“You heard one criticism, which was that they should be replaced with sampling, which we disagree with. Sampling is a snapshot. It would be in the order of £5,000 to £10,000 per school to carry out the sort of sophisticated sampling that would give you meaningful information.”*<sup>69</sup> This view was reiterated by the HSE representative on the DfE Asbestos Steering Group who stated that air sampling has no place in the management of asbestos in schools. HSE also dismissed a trial to perfect the methodology for widespread air sampling in schools,<sup>70</sup> but have offered no solution on how to determine whether asbestos fibres are being released.

81. In January 2014 AiS attended a briefing on 'ALERT,' an asbestos fibre detector that gives an instant readout.<sup>71</sup> The system is presently in the final stage of development and is a considerable improvement on other instant fibre detectors. It has the potential to act as a 'smoke' alarm so that it indicates when asbestos fibres are detected, at which point conventional sampling could be carried out to determine the precise level. Trials are presently being carried out by the designers to determine its suitability for schools, and it is intended to provide provisional results to the DfE policy review.
82. An asbestos survey identifies the hazard, but rarely identifies the risk, whereas widespread air sampling in schools would identify the risk and would allow targeted measures to be taken to prevent further releases. It would be cost effective as remedial measures could be targeted at those schools, and even rooms, where there really is a problem. In the long run it would not only save lives, it would also save money.
83. AiS recommends that further trials are carried out to perfect the methodology for widespread air sampling in schools.

### **In general pupils are not insured for asbestos risks.**

84. Evidence was given to the Education Select committee that between two hundred and three hundred people could die each year because of their asbestos exposure as a child at school. There is therefore the potential for an increasing number of asbestos related claims against schools and local authorities, which will inevitably continue so long as asbestos remains in schools. Despite this children and non-employees are generally no longer insured. A Parliamentary written answer confirmed "*there is a general asbestos exclusion for public liability insurance.*"<sup>72</sup>
85. The fact that insurance companies will not provide insurance cover for pupils puts the risks from asbestos into perspective. However, in the absence of commercial insurance, future claims can still be met in local authority schools as they self insure. But most academies and free schools do not have the resources to do so.
86. In February 2014 there were 3,657 academies in England<sup>73</sup> and the legal responsibility for the safety of pupils and non-employees rests on the academy trust. Therefore they are legally liable for any claim that may be made against the academy. The Government have stated that they will not accept any liabilities but have not provided an answer to how future claims will be met. Instead DfE have said that they will deal with any future claims on a case by case basis.<sup>74</sup> This is a flawed policy because the long latency of mesothelioma will mean that the first claim from someone exposed in an academy might not be for thirty years, at which time it is far too late to realise there are no funds to meet the claims.
87. The Minister of State for Schools made the situation clear in a Parliamentary written answer that any financial liability would not be met by the Government. He stated; "*The Secretary of State for Education...is not legally responsible for any compensation awarded, and nor is he bound by the terms of the funding agreement to compensate an academy for any such liability.*"<sup>1</sup>
88. The Minister expanded on his answer at the Education Select Committee when he was asked if schools are unable to meet the claims whether there is a risk that central Government will have to pick up the bill. The Minister replied "*All I would say on that is that our judgment of the potential financial risk is that it is not a huge one, even if it fell back on the Government; I think I am right in saying that, so far, there has only been one successful case in this area. We would expect the first line of accountability to be the duty holder. Given the fact that there has only been one successful case, it also does not look like a very large contingent liability for the Government.... The governors are the people who are the duty holders, and therefore they have the responsibility here.*"<sup>75</sup>
89. This is clearly an unsatisfactory situation as it could mean that a former pupil dying of mesothelioma is unable to receive compensation as there are no funds to meet his claim. Also governing bodies and individual governors could be personally liable to settle future asbestos related claims. A parliamentary question was asked whether the Government has issued guidance to governors informing them of the situation. The reply was "*No guidance has been issued to local authorities, academies or free schools in respect of insurance cover for asbestos exposure risks.*"

<sup>1</sup> Parliamentary written answer Schools mesothelioma. Annette Brooke MP/ Minister of State Nick Gibb MP 12 Jun 2012

<sup>2</sup> Which inevitably means that many, and perhaps most, governors are unaware of their potential liabilities, as the Government has not informed them.

90. A Government policy of managing asbestos cannot be considered viable if there is no credible means of meeting future asbestos claims. It is essential that a viable means is evolved, and that in the interim governors are informed of their potential liabilities.

91. For a more detailed examination of the lack of public liability asbestos risk insurance follow the link:  
<http://www.asbestosexposureschools.co.uk/pdfnewslinks/INSURANCE%20Schools.%20lack%20of%20asbestos%20risk%20public%20liability%20insurance%204%20Dec%2013.pdf>

### **HSE advises the Government but fails to follow its framework for the management of risk**

92. An HSE publication describes the framework for their decision making on the management of risk:

*“The framework makes clear that:*

- *Both the level of individual risks and the societal concerns engendered by the activity or process must be taken into account when deciding whether a risk is unacceptable, tolerable or broadly acceptable;*
- *The decision-making process and criteria adopted are such that action taken is inherently precautionary.”*<sup>76</sup>

HSE have failed to follow the framework in their advice to the Government on the management of asbestos risks in schools. The following is an analysis of these failings:

### ***U.S Government assessed risks and considered them unacceptable. No assessment in Britain.***

93. When decisions are taken and policy made the evidence that should be taken into account is that there is an individual risk to many teachers, school support staff and pupils.

94. The Medical Research Council document concluded that there was extensive use of amphiboles in system built schools and that it is not unreasonable to assume that the entire school population has been exposed to asbestos in school buildings. Their assumption has been confirmed by frequent evidence of asbestos fibre release in schools and the exposure of the occupants. The inevitable consequence is that school teachers, school support staff and former pupils are dying of asbestos related disease.

95. In the 1980s the U.S Government assessed the scale of the asbestos problem in schools and the risks. They also took into account the greater vulnerability of children and the probability that they are being exposed to asbestos at the same time as their teachers. They assessed that over a thirty year period 1,000 people would die because of their asbestos exposure at school, of which 900 would be amongst former pupils. They therefore had a sound scientific basis on which to conclude that the risks are unacceptable. Consequently in 1986 they introduced specific asbestos regulations for schools where preventative actions were taken to reduce the risks to staff and in particular to pupils.<sup>77</sup>

96. This has not happened in the UK although the risks are far greater as they contain large amounts of amosite in places vulnerable to damage from the pupils. Instead, despite considerable evidence to the contrary, the HSE has advised the Government that the risks from asbestos in schools are very low. Because of this advice the Minister has stated that if that is the case then spending large sums of money on mitigating the effects of asbestos cannot be justified.<sup>78</sup>

### ***HSE claim that decisions are inherently precautionary cannot be justified***

97. The HSE advice and Government policy are not based on sound scientific evidence. Successive Governments have failed to collate data on the scale of the problem and have cancelled the process of assessing whether their policy of managing asbestos is working. Instead they base their policies primarily on advice from the HSE. There is, however, a considerable, and growing, body of expert opinion that considers that the HSE advice is wrong.

98. Instead of taking all the evidence into account HSE cherry picks those aspects that support their advice that the risks from asbestos in schools are very low. An example is a paper they submitted to both the Government's advisory committee on science (WATCH) and to the Committee on Carcinogenicity. The paper had been requested by WATCH to *“Summarise the knowledge it has on airborne levels of asbestos in buildings for the next WATCH*

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<sup>2</sup> Parliamentary written answer Schools asbestos. Ian Lavery MP/ Minister of State Nick Gibb MP 21 Mar 2012 see Annex1.

meeting.”<sup>79</sup> The HSE paper included irrelevant data and excluded relevant data, it excluded any tests that had shown raised fibre levels and only included two exceptionally low levels that were an order of magnitude lower than had previously been found in UK buildings.

99. The same unbalanced and misleading summary was then supplied to the COC secretariat for the committee’s assessment of the relative vulnerability of children to asbestos.<sup>80</sup> Both committees accepted the evidence on face value. Both committees advise the Government and yet the “scientific” basis for their decisions and policy were flawed because of misleading advice from HSE. It was only when the flaws in the HSE data were shown to the COC that they accepted other authoritative evidence that showed that disturbance and fibre levels can frequently be considerably higher than HSE were telling them.
100. Because all the teaching and support staff unions are concerned about the risks to their members and pupils from asbestos in schools they have come together to coordinate their resources to make schools safe from the dangers of asbestos. They have advised the Government, HSE and DfE that their policy of managing asbestos has not, and is not working. Because of it their members and former pupils are dying, and will continue to die unless fundamental changes are made. The asbestos consultants have confirmed that many local authorities and schools are not effectively or safely managing their asbestos. The HSE are ignoring what they are told by expert organisations whose members are on the ground. The HSE assurances to the Government that their policy of asbestos management is working are not soundly based on the practical realities of what occurs in schools or on a proper analysis of the evidence.
101. The Government took the decision to exclude asbestos from the audit of school buildings despite advice from the local authorities, the unions, asbestos consultants and others. In addition HSE dismissed the request to undertake a trial of widespread air sampling in schools. These decisions cannot be justified as they deliberately exclude essential data that is required if there is to be a sound basis for assessing the risks and the financial costs.
102. When Coroner’s Courts have found evidence of significant exposure at school they have given verdicts of death from industrial disease at the inquests of school teachers and support staff. But those exposures have been dismissed by senior HSE officials and Government Ministers with the inference that they happened anywhere other than a school. In addition, without examining the evidence, HSE has also dismissed the verdicts, with the implication that the coroners were wrong.<sup>81</sup> Because they have dismissed the evidence of exposure and the findings of the Courts, valuable lessons have been lost.
103. HSE claim that their policy is “inherently precautionary.” But they have failed to collate data, they have selectively chosen data, ignored what experts on the ground are telling them and have dismissed the growing evidence that people have been, and continue to be exposed to asbestos in schools and that those exposures have already caused people to die, and will continue to do so. That is not inherently precautionary, rather it is a blinkered approach that excludes or dismisses unpalatable evidence. By doing so they have failed to provide successive Governments with a sound scientific basis on which they can base their policies.
104. Successive Governments have been advised by HSE that the risks to the occupants of schools are very low. Consequently they have felt able to justify their policy that it is safer to leave asbestos in place and manage it than it is removing it. If HSE now publicly admit that they have been wrong then that would not only be embarrassing for them but also it would be embarrassing for the Government. It would mean that the Government would have to publicly acknowledge that their policies have been, and are, flawed. The direct implication of that would be a tacit acknowledgement that generations of school staff and pupils have been, and remain, at risk.
105. A European Environmental Agency paper published in January 2013 is directly relevant to HSE and their advice. It says:  
*“The scientific elites have also been slowly losing public support. This is in part because of the growing number of instances of misplaced certainty about the absence of harm, which has delayed preventive actions to reduce risks to human health, despite evidence to the contrary.”*<sup>82</sup>
106. HSE has provided advice to successive Governments for almost forty years. That advice has played down the risks and provided the Government with the evidence they need to support their policy. Because of this each Government in turn has felt able to delay taking the fundamental preventative actions that are desperately required to reduce the risks to the occupants of schools from asbestos.

### ***A lack of transparency avoids having to address “Societal” concerns***

107. So long as the Government can keep the facts from the public then the problem of taking society’s concerns into account are also avoided. But if people were aware of the extent of the problem then one must question whether society would consider it acceptable that school teachers, support staff and children are being exposed to asbestos and subsequently dying from the simple act of attending school.
108. It is apparent that successive governments have considered the problem of asbestos in schools too big to handle. This has led to a lack of transparency. Governments are concerned that if the public were aware of the true scale of the problem they would panic and demand the removal of all asbestos from their children’s schools.<sup>83</sup> This irrational fear is the reason why an assessment has never been made of the scale of the problem and has meant that proportionate action has never been taken. The policy has led to “spin” being put on public statements and even science.<sup>84</sup> It has also meant that many staff and parents have not been informed of asbestos incidents or of their exposure and that of their children.<sup>85</sup> This lack of transparency is contrary to the open policies of both the Opposition and the Government.
109. As the facts have been kept from the public there has been no pressure on successive Governments to tackle the problem, and they have therefore been able to delay indefinitely having to take the action that is required. That policy is no longer sustainable as there is increasing public awareness so that parents, teachers, school support staff and the unions are questioning whether the assurances they have been given are justified. They are understandably concerned whether the schools they work in, or their children attend, really are safe. And if they are not safe they now expect positive action to be taken.
110. In contrast for more than twenty five years the USA has required parents and teachers to be annually updated on the presence and condition of any asbestos and the measures taken to manage it.<sup>86</sup> This has not created panic, but it has meant that staff and parents are aware of the dangers of asbestos and has in general led to schools achieving acceptable standards so that the occupants are safe.
111. A decision making process often relies on a cost benefit analysis that weighs the financial cost of taking action against benefits. In the case of asbestos one of the benefits is measured in terms of the number of lives saved. Particularly where children are involved the process must be open to public scrutiny and decisions and policy must take into consideration society’s concerns. That has happened in the USA, but not in Britain. In Britain the scale of the problem and the risks have not been assessed, so decision making and cost benefit analyses have not been based on sound scientific data. In addition, because of a lack of transparency, the public have not been included so that calculations and decisions have been without public influence and scrutiny.
112. All Governments, of whatever political party, have failed to properly address the considerable problem of asbestos in schools. All the parties should now practice their commonly stated policy of transparency, assess the scale of the problem and the risks and work together to solve the problem of asbestos in schools.
113. The policy review provides the opportunity for individuals and organisations to submit evidence to the Government that will show them the scale of the problem. The Government should then impartially and radically review its policies. It should follow the example of the USA and Australia and adopt long term strategic policies that prioritise schools. Proportionate resources should be provided so that schools can effectively manage their asbestos, and a policy adopted for the progressive removal of all asbestos from schools, prioritising those most at risk.

### **Recommendations**

It is recommended that:

- A policy of openness should be adopted. Parents, teachers and support staff should be annually updated on the presence of asbestos in their schools and the measures that are being taken to manage it.
- Data on asbestos in schools should be collated on the Asset Management System as part of DfE’s Property Data Survey Programme, so that the overall scale of the problem is known, financial forecasts made and those schools and local authorities with the worst asbestos problems can be identified and targeted.
- Standards in asbestos training should be set and the training should be mandatory. The training should be properly funded.
- Pro-active inspections should be reinstated in all schools to determine the standards of asbestos management.

- A viable scheme should be implemented to meet future asbestos related claims. In the interim governors should be informed of their potential liabilities.
- An environmental airborne fibre level is adopted for schools
- A trial of widespread air sampling for schools is commissioned.
- The Government should set a programme for the phased removal of asbestos from all schools, with priority being given to those schools where the asbestos is considered to be most dangerous or damaged.
- The Government must impartially analyse the evidence submitted to their policy review. If the evidence is such that present policies are not ensuring the safety of the occupants of schools, then fundamental policy changes must be made.

*Michael Lees*  
21<sup>st</sup> February 2014

<sup>1</sup> APPG on Health and Safety: Asbestos in Schools the Need for Action Feb 2012

<http://www.asbestosexposureschools.co.uk/pdfnewslinks/APPG%20report%202012.pdf>

<sup>2</sup> DfE Asbestos management in schools: What asbestos is and when it becomes a risk 22 Oct 2012

<http://www.education.gov.uk/schools/adminandfinance/schoolscapital/buildingsanddesign/managementofpremises/b00215518/asbestosmanagement/schools/whatasbestosis>

<sup>3</sup> Fibrous Materials in the Environment. Medical Research Council Institute for Environment and Health. P72 . 1997

<http://www.asbestosexposureschools.co.uk/pdfnewslinks/MRC%20Fibrous%20Materials%20in%20the%20environment%20IEH%201997%20complete%20document.pdf>

<sup>4</sup> HSE Occupational, domestic and environmental mesothelioma risks in Britain. 2009 . IMIG Congress Abstract 25-27 Sep 2008

<sup>5</sup> The Quantitative Risks of Mesothelioma and Lung Cancer in Relation to Asbestos Exposure *Ann. Occup. Hyg.*, Vol. 44, No. 8, pp. 565–601, 2000 Hodgson and Darnton Is there a threshold?

<sup>6</sup> HSE Mesothelioma occupational statistics: Male and female deaths aged 16-74 1980-2000 Table 3,4 Southampton Occupation Group. 5 year time period 1980-2000 excluding 1981. E-mail HSE Statistics Unit/Lees 15 Jul 2008. Mesothelioma deaths in the education sector for males and females 2001-2005. HSE Mesothelioma mortality in Great Britain: Analyses by Geographical area and occupation 2005 Tables 11, 13 (2002-2005). HSE Epidemiology Unit CSAG, table 0977/Lees 2 Mar 2011 HSE Epidemiology Unit, table 0925./Lees 25 Feb 2011. E-mail HSE Statistics Unit/Lees 21 Nov 2012 . Mesothelioma deaths in the education sector for males and females 2001-2010. Freedom of Information Request Reference No: 2013110056 Lees/Corporate Science, Engineering & Analysis Directorate (CSEAD) Health & Safety Executive 21 Nov 2013 Male and female mesothelioma deaths aged 16-74 for occupations in the education sector in Great Britain, 2011.

<sup>7</sup> E-mail DCSF Workforce Group /Lees 27 January 2010 15:47 Case Reference 2010/0004693 “The average length of service for full-time teachers is about 30 years”. And Scottish Parliamentary written answer S2W-15080 18 Mar 2005 [http://www.theyworkforyou.com/spwrrans/?id=2005-03-18\\_S2W-15080.h](http://www.theyworkforyou.com/spwrrans/?id=2005-03-18_S2W-15080.h) Death certificate is based on last occupation. Therefore occupation on retirement or death. Average length of service at retiring age, early retirement or because of ill health is about 33 years.

<sup>8</sup> Asbestos exposures in malignant mesothelioma of pleura; a survey of 557 cases Bianchi Industrial health 2001,39, 161-167 . Malignant mesothelioma due to environmental exposure to asbestos: follow up of a Turkish cohort living in a rural area. Chestp2228. Metintas Mesothelioma: cases associated with non-occupational and low dose exposures Hillerdal *Occup Environ Med* 1999;56:505-513

<sup>9</sup> See: Asbestos in Schools. The scale of the problem and the implications. P34-42

<http://www.asbestosexposureschools.co.uk/pdfnewslinks/AiSreportonASBESTOSINSCHOOLS.pdf>

<sup>10</sup> Fibrous Materials in the Environment .Medical Research Council Institute for Environment and Health. P72 and 73. 1997

<http://www.asbestosexposureschools.co.uk/pdfnewslinks/MRC%20Fibrous%20Materials%20in%20the%20environment%20IEH%201997%20complete%20document.pdf>

<sup>11</sup> Supreme Court Judgment Knowsley Metropolitan Borough Council v Willmore 9 March 2011. .High Court QBD Liverpool District. The Hon Mr Justice Nicol . Dianne Willmore and Knowsley Metropolitan Borough Council 24 July 2009 Para 4 .

<sup>12</sup> Committee on Carcinogenicity Statement on the relative vulnerability of children to asbestos compared with adults. 7 June 2013

<sup>13</sup> Effect of children's age and life expectation on mesothelioma risk. R. Howie 28th June 2012. See also Effect of age on mesothelioma risk. Darnton COC CC20132 annex A 2013. WATCH annex 2 Adjusting the H&D mesothelioma predictions to allow for life expectancy and age of first exposure undated. Age adjustment factors Darnton BOHS 17 Oct 2001.

<sup>14</sup> Committee on Carcinogenicity. Lees contemporaneous notes 12 Jul 2012

<sup>15</sup> Education Select Committee hearing asbestos in schools 13 Mar 2013Q20

<sup>16</sup> Education Select Committee hearing asbestos in schools 13 Mar 2013 Q 13

<sup>17</sup> Personal correspondence Professor Peto/Lees 3 May 2013

<sup>18</sup> [Debate House of Commons Asbestos in Schools - Tuesday 7 February 2012 -\(Hansard text\)](#) penultimate paragraph.

Also House of Lords Written answer Lord Hill HL15579 16 Feb 2012 : Column WA184

<http://www.publications.parliament.uk/pa/ld201212/ldhansrd/text/120216w0001.htm#12021640000237>

<sup>19</sup> Meeting Minister of State for Schools David Laws MP 19<sup>th</sup> November 2013. Lees contemporaneous notes.

<sup>20</sup> Parliamentary Written Answer Minister of State for Schools 8th February 2011

<sup>21</sup> Chief Executive PFS Today programme 1 Apr 2010. 4 mins 24 secs [http://news.bbc.co.uk/today/hi/today/newsid\\_8598000/8598276.stm](http://news.bbc.co.uk/today/hi/today/newsid_8598000/8598276.stm)

<sup>22</sup> See examples of asbestos incidents: <http://www.asbestosexposureschools.co.uk/npaper%20articles.htm>

<http://www.asbestosexposureschools.co.uk/pdfnewslinks/ASBESTOS%20INCIDENTS%20IN%20SCHOOLS%2014%20Dec%2009.pdf> and:

<sup>23</sup> Association of Metropolitan Authorities. Asbestos Policy and Practice in Local Authorities. Sep 1985 para 2,2.8 p 2

- <sup>23</sup> Commonwealth of Australia Bills Asbestos Safety and Eradication Bill 2013 <http://www.austlii.edu.au/au/legis/cth/bill/asaeab2013346/>
- <sup>24</sup> Australian Government. National Strategic Plan for Asbestos Awareness and Management 2013-2018 July 2013 [http://asbestossafety.gov.au/files/National\\_Strategic\\_Plan\\_0.pdf](http://asbestossafety.gov.au/files/National_Strategic_Plan_0.pdf)
- <sup>25</sup> The Australian. Schools first in asbestos removal plan. 4 Sep 2012
- <sup>26</sup> For example: Select Committee on Education and Skills Jarvis plc memorandum >£1.4m Jun 2003. Para 5.5. <http://www.publications.parliament.uk/pa/cm200304/cmselect/cmmeduski/112/112we07.htm> .
- Capital Programme Urgent works Nightingale Junior School £700,000 Derby CC Corporate Policy Cabinet meeting 24 May 2007. <http://www.asbestosexposureschools.co.uk/pdfnewslinks/Nightingale%20mothballing%20700000%2024%20May%2007.pdf>
- William Parker School: Approximate increase in cost of project due to discovery of asbestos in ceilings: £495,800 IEA Refurbishment and re-cladding of 1970s classroom and laboratory block p149 <http://www.annex36.com/pdf/uk1.pdf> South Ayrshire Council Proposed closure of Mainholm Academy Report by the Director of Education, Culture and Lifelong Learning January 2007. £13.9m. “ ..maintaining the school buildings has proved far more costly and troublesome than anticipated with asbestos making access a problem.” Evening Times 19 Apr 2006. Also see: Issues of Using CLASP to transform learning – Nottinghamshire County Council 24 Nov 2008. Refurbishment 94% cost of new build. P3 and 6 <http://www.asbestosexposureschools.co.uk/pdfnewslinks/ISSUES%20OF%20USING%20CLASP%20TO%20TRANSFORM%20LEARNING%20NOTTINGHAMSHIRE%20CCclaspreportupdateappendix126012009.pdf>
- <sup>27</sup> Review of Education Capital April 2011 Para 2.25
- <sup>28</sup> Property data survey programme memorandum of supplementary information 17 Oct 2011 p8
- <sup>29</sup> See an analysis of the exclusion of asbestos from the audit of school buildings: <http://www.asbestosexposureschools.co.uk/pdfnewslinks/AUDIT%20EXCLUSION%20OF%20ASBESTOS.pdf>
- <sup>30</sup> DfE Asbestos Steering Group meeting. Lees contemporaneous notes. 12 Sep 2012. Meeting Minister of State for Schools/AiS. Lees contemporaneous notes. 10 Jan 2013
- <sup>31</sup> Letter Annette Brooke MP/ Lord Hill Property Data Survey Programme asbestos data from an IT perspective. 16 May 2012
- <sup>32</sup> Secretary of State for Education Written Ministerial Statement ‘Property Data’ 8 November 2013
- <sup>33</sup> Assessment of asbestos management in schools Asbestos Testing and Consultancy Association 24 Jan 2010 [http://www.asbestosexposureschools.co.uk/pdfnewslinks/ASSESSMENT%20OF%20ASBESTOS%20MANAGEMENT%20IN%20SCHOOLS%20ATAC.%202%20FEB%202010.pdf?zoom\\_highlight=atac#search="atac"](http://www.asbestosexposureschools.co.uk/pdfnewslinks/ASSESSMENT%20OF%20ASBESTOS%20MANAGEMENT%20IN%20SCHOOLS%20ATAC.%202%20FEB%202010.pdf?zoom_highlight=atac#search=)
- <sup>34</sup> Press release <http://www.hse.gov.uk/press/2011/hse-asbestosinschools.htm> list of schools inspected: [www.hse.gov.uk/services/education/asbestos-management-1011.htm](http://www.hse.gov.uk/services/education/asbestos-management-1011.htm)
- <sup>35</sup> Summary of enforcement action <http://www.asbestosexposureschools.co.uk/pdfnewslinks/HSE%20ENFORCEMENT%20SUMMARY%20%20NOV%2010%20to%20Jul%2011.pdf> <http://www.asbestosexposureschools.co.uk/pdfnewslinks/HSE%20ENFORCEMENT%20ACTION%20%20%202011%20Oct%2011.pdf>
- <sup>36</sup> HSE Inspection of asbestos management in clasp and other system buildings 2007/2008. Annex 1 Inspection Findings –Consolidated Divisional feedback. undated
- <sup>37</sup> For example: South Gloucestershire council. Thurrock Council, Glasgow Council, Bedford council [http://www.asbestosexposureschools.co.uk/npaper%20links/update%20114.htm?zoom\\_highlight=enforcement](http://www.asbestosexposureschools.co.uk/npaper%20links/update%20114.htm?zoom_highlight=enforcement) Doncaster Council <http://www.bbc.co.uk/news/uk-england-south-yorkshire-11388784> Harrow [http://www.harrowtimes.co.uk/news/8407723.Harrow\\_primary\\_schools\\_warned\\_over\\_asbestos/](http://www.harrowtimes.co.uk/news/8407723.Harrow_primary_schools_warned_over_asbestos/)
- <sup>38</sup> Parliamentary Education Select Committee hearing ‘Asbestos in Schools.’ Question 70. 13 Mar 2013
- <sup>39</sup> DfE Asbestos Steering Group AiS Note of meeting 20 June 2013
- <sup>40</sup> Written Statement by the Welsh Government. Leighton Andrews, Minister for Education and Skills Asbestos in schools. 27 Nov 2012 <http://www.asbestosexposureschools.co.uk/pdfnewslinks/%20statement%20Welsh%20Government%20Asbestos%20in%20Schools%2027%20Nov.pdf> Parliamentary debate Wales 27 Nov 12 P70 Link: <http://www.assemblywales.org/bus-home/bus-chamber-fourth-assembly-rop/rop20121127qv.pdf?langoption=3&ttl=The%20Record%20%28PDF%2C%20903KB%29>
- <sup>41</sup> DfE Open academies in England 11 Feb 2014 <http://www.education.gov.uk/schools/leadership/typesofschools/academies/b00208569/open-academies>
- <sup>42</sup> DfE Open free schools in England 27 Jan 2014 [List of all free schools: open or in pre-opening stage](#)
- <sup>43</sup> HSE Leadership of Health and Safety in Schools A summary of the findings and recommendations made following the secondment of a headteacher into HSE’s Public Services Sector Mar 2012
- <sup>44</sup> HSE Freedom of Information Request Reference No: 2010110157/Lees Refusal section 22. 8 Nov 2010
- <sup>45</sup> HSE Freedom of Information Request Reference No: 2013070123/Lees 25<sup>th</sup> Jul 2013
- <sup>46</sup> Parliamentary Education Select Committee. The Role of School Governing bodies 4 Jul 2013 <http://www.publications.parliament.uk/pa/cm201314/cmselect/cmeduc/365/36506.htm#a8>
- <sup>47</sup> Good Health and Safety for Everyone. Targeting and Reducing Inspections 21 Mar 2011 para 3 iii p 9
- <sup>48</sup> HSE Head of Government, Defence and Education Unit Public Services Sector Operational Strategy Division. DfE Asbestos Steering Group 14 Jun 2012 Lees contemporaneous notes.
- <sup>49</sup> Personal correspondence Lees Nov 13-Dec 13. And Jan 2011
- <sup>50</sup> HSE Leadership of Health and Safety in Schools A summary of the findings and recommendations made following the secondment of a headteacher into HSE’s Public Services Sector Mar 2012
- <sup>51</sup> Is HSE the correct enforcing authority for you? <http://www.hse.gov.uk/contact/authority.htm>
- <sup>52</sup> HSE Head of Government, Defence and Education Unit Public Services Sector Operational Strategy Division. DfE Asbestos Steering Group 14 Jun 2012 Lees contemporaneous notes.
- <sup>53</sup> OFSTED school inspections Section 5(5a) Education Act 2005
- <sup>54</sup> HSE Head of Government, Defence and Education Unit Public Services Sector Operational Strategy Division. DfE Asbestos Steering Group 14 Jun 2012 Lees contemporaneous notes.
- <sup>55</sup> HSC CAWR 2006 Work with materials containing asbestos ACOP para 17 p68. Personal correspondence HSE Gibson/Lees 1 Dec 2012
- <sup>56</sup> World Health Organisation Elimination of asbestos related diseases. Sep 2006 . WHO environmental Health criteria 203: Chrysotile Asbestos 1998

- <sup>57</sup> Hodgson & Darnton The quantitative risks of mesothelioma and lung cancer in relation to asbestos exposure. Epidemiology and medical statistics unit HSE. Ann Occup Hyg vol 44 p583 Is there a threshold? 2000)
- <sup>58</sup> Final WATCH Position on asbestos risk assessment: February 2011
- <sup>59</sup> Fibrous Materials in the Environment Institute for Environment and Health. P71
- <sup>60</sup> High Court QBD Liverpool District. The Hon Mr Justice Nicol . Dianne Willmore and Knowsley Metropolitan Borough Council 24 July 2009 Para 8, 57b . Supreme Court Judgment Sienkiewicz (Administratrix of the Estate of Enid Costello Deceased) (Respondent) v Greif (UK) Limited (Appellant) Knowsley Metropolitan Borough Council (Appellant) v Willmore (Respondent) 9 March 2011
- <sup>61</sup> Asbestos. Vol 1 Final report of the advisory committee. The risk to children. 1979 Para 112 P60
- <sup>62</sup> DfEE AM on asbestos AB 20/17/02 D 2 Jun 1983
- <sup>63</sup> Asbestos Risks of environmental and occupational exposure Health Council of the Netherlands 3 June 2010 para 8.2 P83
- <sup>64</sup> Professor A. Burdorf/Lees personal correspondence 2 Dec 2012. And 10 Jun 2013
- <sup>65</sup> Asbestos in Schools The scale of the problem and the implications. 30 Oct 2011 P11-25  
<http://www.asbestosexposureschools.co.uk/pdfnewslinks/AiSreportonASBESTOSINSCHOOLS.pdf>
- <sup>66</sup> Parliamentary Education Select Committee hearing 'Asbestos in Schools.' Question 29. 13 Mar 2013
- <sup>67</sup> Parliamentary Education Select Committee hearing 'Asbestos in Schools.' Question 37. 13 Mar 2013
- <sup>68</sup> COMMITTEE ON CARCINOGENICITY OF CHEMICALS IN FOOD, CONSUMER PRODUCTS AND THE ENVIRONMENT STATEMENT ON THE RELATIVE VULNERABILITY OF CHILDREN TO ASBESTOS COMPARED TO ADULTS. CC/13/S1 7 Jun 2013  
[http://www.iacoc.org.uk/statements/documents/Asbestosinschoolsstatement\\_000.pdf](http://www.iacoc.org.uk/statements/documents/Asbestosinschoolsstatement_000.pdf)
- <sup>69</sup> Parliamentary Education Select Committee hearing 'Asbestos in Schools.' Question 56. 13 Mar 2013
- <sup>70</sup> DfE Asbestos Steering Group meeting contemporaneous notes Lees 14 Jun 2012
- <sup>71</sup> ALERT briefing Hertfordshire University Professor Kaye 22 January 2014
- <sup>72</sup> Parliamentary written answer Schools asbestos. Ian Lavery MP/ Minister of State Nick Gibb MP 21 Mar 2012
- <sup>73</sup> DfE Open academies in England 11 Feb 2014 <http://www.education.gov.uk/schools/leadership/typesofschools/academies/b00208569/open-academies>
- <sup>74</sup> Insurance. See comment and parliamentary written answers: [www.asbestosexposureschools.co.uk/npaperlinks/childrenuninsurable.htm](http://www.asbestosexposureschools.co.uk/npaperlinks/childrenuninsurable.htm) also [http://www.asbestosexposureschools.co.uk/pdfnewslinks/INSURANCE%20response%20to%20DfE%2010%20Sep%2012%20\\_2\\_.pdf](http://www.asbestosexposureschools.co.uk/pdfnewslinks/INSURANCE%20response%20to%20DfE%2010%20Sep%2012%20_2_.pdf)
- <sup>75</sup> Parliamentary Education Select Committee hearing 'Asbestos in Schools.' Question 73. 13 Mar 2013
- <sup>76</sup> HSE Reducing Risks Protecting People 2001 p3 <http://www.hse.gov.uk/risk/theory/r2p2.pdf>
- <sup>77</sup> AHERA US code: title 15,2643. EPA regulations Chapter 53. EPA Fact sheet AHERA 1986 Statement EPA Administrator 23 Oct 1986
- <sup>78</sup> Meeting Minister of State for Schools/AiS Contemporaneous notes Lees 10 Jan 2013
- <sup>79</sup> WATCH committee papers annex 3. WATCH committee minutes. 10 Nov 2009 paras 4.38 and Actions para 4.49 (iv)  
<http://www.hse.gov.uk/aboutus/meetings/iacs/acts/watch/101109/minutes-nov09.pdf> WATCH committee papers 23 Feb 2010 [Annex 3: Update of published asbestos concentrations in buildings under normal use and occupation.](#) 27 Oct 2010
- <sup>80</sup> See Asbestos in Schools. The Scale of the problem and the implications. AiS. Annex D p64.  
<http://www.iacoc.org.uk/papers/documents/AiSreportonASBESTOSINSCHOOLS.pdf>
- <sup>81</sup> HSE Education Sector Briefing. HSE Head of Asbestos Policy. Contemporaneous notes Lees. 13 Dec 2006. House of Lords written answer HL648 Baroness Quin/ Baroness Morgan of Drefelin 15 Dec 2009
- <sup>82</sup> Late lessons from early warnings, science, precaution, innovation. European Environmental Agency Report No 1/2013 Vol 2 p6  
<http://www.eea.europa.eu/publications/late-lessons-2> Vol 1 [http://www.rachel.org/lib/late\\_lessons\\_from\\_early\\_warnings.030201.pdf](http://www.rachel.org/lib/late_lessons_from_early_warnings.030201.pdf)
- <sup>83</sup> DfES Asbestos Briefing pack for meeting at the HSE 18 June 1998. Line to take. P7. DfES EF/09/94/04 Ministerial brief. PS/Mr Squire. Asbestos in schools. Meeting with Doug McAvoy 14 Dec 1994
- <sup>84</sup> For example: Asbestos in schools. The scale of the problem and the implications. P 64  
<http://www.asbestosexposureschools.co.uk/pdfnewslinks/AiSreportonASBESTOSINSCHOOLS.pdf>
- <sup>85</sup> Informing staff and parents following an asbestos incident in a school 15 Jul 2012  
<http://www.asbestosexposureschools.co.uk/pdfnewslinks/INFORMING%20following%20an%20asbestos%20incident%20in%20a%20school%2015%20Jul%2011.pdf>
- <sup>86</sup> AHERA US code: title 15,2643. EPA regulations Chapter 53. EPA Fact sheet AHERA 1986 Statement EPA Administrator 23 Oct 1986