Asbestos
2011 Update

thames laboratories

assessing & managing

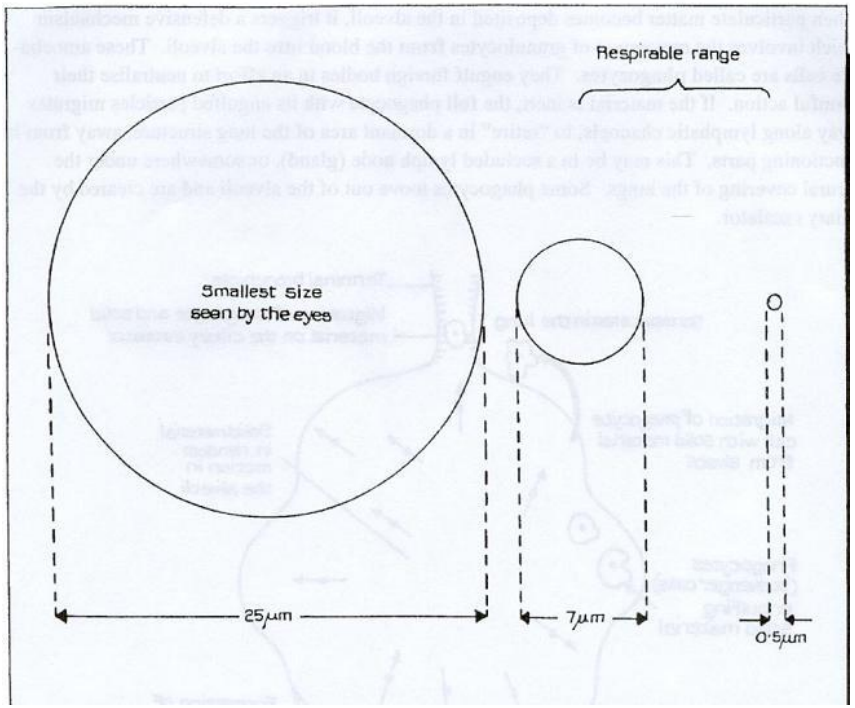
asbestos | legionella | fire | energy

Asbestos: 2011 Update

- Introduction
  - John Richards, Thames Laboratories

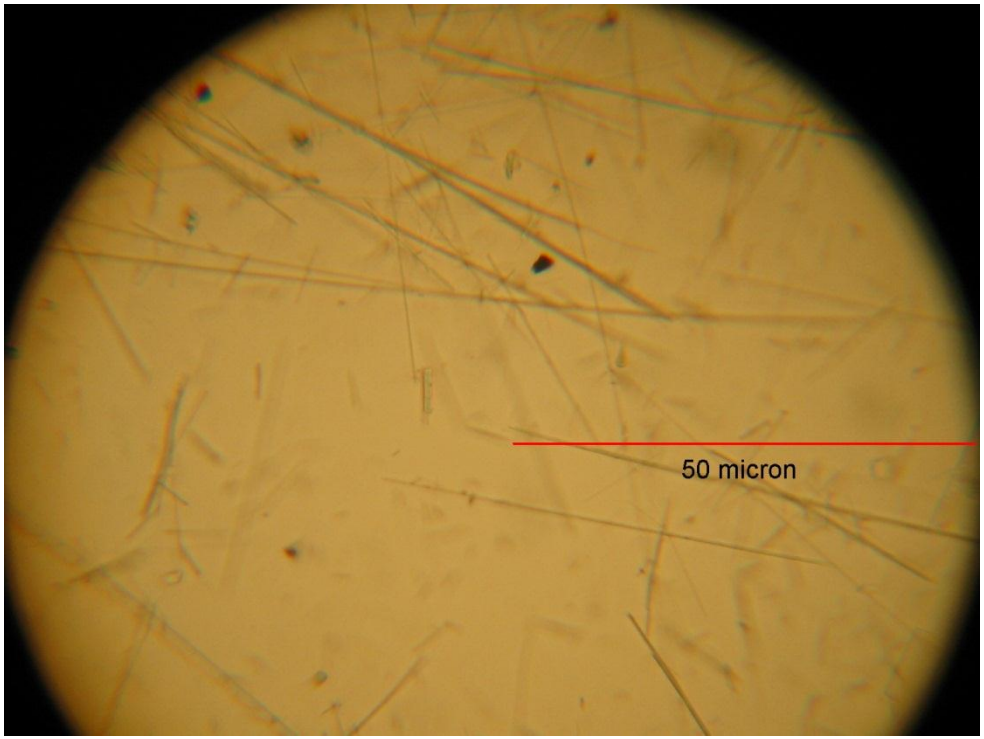
The Problem

- Fibres are very small
- Not visible with naked eye
- Has no smell
- Has no taste
- And does not irritate!



Fibres @ 500 Magnification

thames laboratories

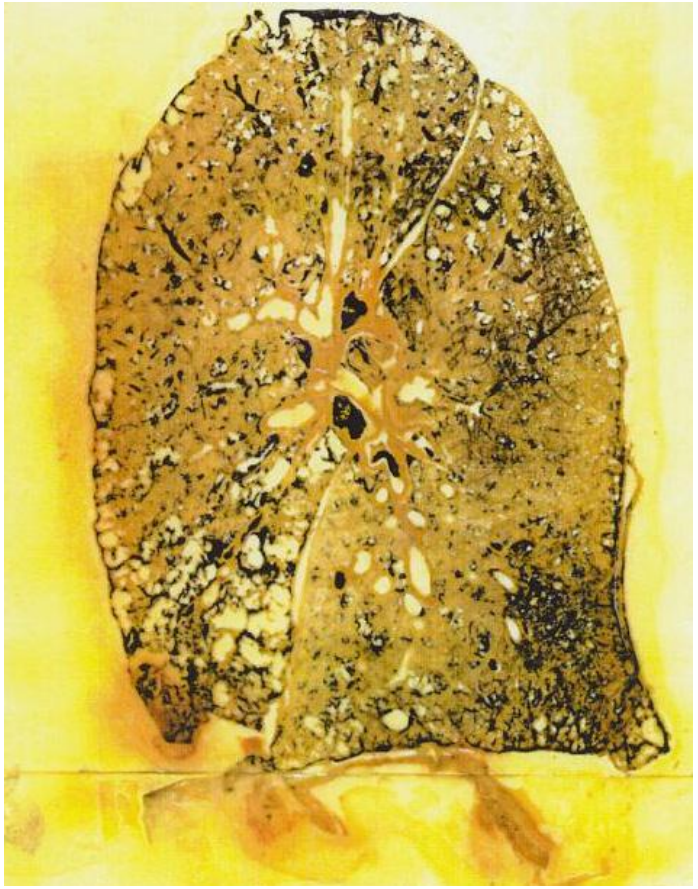


The Problem

- We are all aware of the risks.
- But what makes asbestos different to other building materials?

Asbestosis

- In 2006 111 people died of asbestosis.
- Number claiming disability benefit dropped to 690.



The Traditional View

- The traditional view has associated high occupational exposure with diseases such as asbestosis.

UK 40 – 50 years ago - India Today

Asbestosis Sufferers

- Asbestos Manufacturers
- Insulators
- Construction Workers
- Asbestos Applicators
- Dockers

Asbestosis

- The statistics would suggest that over the next 20 years Asbestosis will not be a cause of concern in the UK.
- Given that most of those affected were involved in asbestos production, such a decline would make sense.
- But does this mean an end to our asbestos problem?

Table 5: Mesothelioma mortality in Great Britain: number of deaths and SMRs for males by area 1981-2005

Area	Deaths	SMR	95% Confidence Interval		Rank within GB	Rank within county
			Lower	Upper		
Kent	**684**	**108**	**100**	**117**		
Dartford	54	151	114	197	44	1
Gravesham	61	147	112	189	45	2
Swale	74	140	110	176	50	3
Canterbury	74	107	84	134	96	4
Tonbridge And Malling	51	112	83	148	98	5
Thanet	78	105	83	131	99	6
Maidstone	64	104	80	133	110	7
Shepway	52	101	75	132	123	8
Dover	54	100	75	130	127	9
Sevenoaks	51	97	72	127	143	10
Ashford	42	93	67	125	169	11
Tunbridge Wells	29	62	41	89	330	12

2006 Death Statistics

- These deaths were predominantly from asbestos lung cancers and Mesothelioma.
  - ***3 Plumbers***
  - ***20 Tradesmen***
  - ***6 Electricians***
  - ***6 Joiners***
  - These deaths were predominantly from asbestos lung cancers and Mesothelioma

Mesothelioma

- Exposure to lower levels of asbestos can potentially cause Mesothelioma
- These deaths have generally occurred as a result of both occupational exposure and non-occupational exposure
- In 2009 2629 deaths from Mesothelioma were recorded. Suggested peak 2016 for males

Lung Cancers.

- No recorded figures. The assumption is that for every Mesothelioma death we have one Lung Cancer death
- Hence 2006 number of asbestos lung cancer deaths estimated at *2056*
- Asbestos is the major cause of industrial lung cancers.

Why the Change?

- Why is Mesothelioma & Lung Cancer deaths increasing, whilst asbestosis deaths decline.
- In the UK over 10 Million Buildings are believed to contain asbestos.
- Much of this is over 30 years old and its condition is deteriorating.
- Generations have entered construction with no idea what the material looks like.

Why the Change?

thames laboratories

If we look at those now at risk,

- Plumbers, tradesmen, electricians, surveyors.
- What do they have in common.
  - They are all working in buildings, disturbing materials that could contain asbestos.

HSE Awareness Campaign

Why the Change?

- If we look at acceptable exposure levels .
  - 30 years ago acceptable exposure was 2 fibres/cc
  - 20 years ago 0.6 fibres/cc
  - Today 0.1 fibres/cc
  - This still equates to 100,000 fibres per cubic metre.
  - General building level of 0.01 fibres/cc
  - This still equates to 10,000 fibres per cubic metre.
- How many fibres are required to develop an asbestos illness?

Why the Change?

- Recent publication by the Health Council of the Netherlands has suggested that the building background level for asbestos should be reduced to 0.001 f/ml

Non-Occupational Mesothelioma

thames laboratories

- More widely reported
- Has been identified in housewife, teachers, doctors, bankers.

Poison from washday took 20 years to kill a wife

By HELEN CARROLL

A HOUSEPROUD wife was killed by dust she shook from her husband's workclothes as part of her laundry routine.

June Thomas was unaware that the particles she breathed in for 12 years came from deadly blue asbestos at the factory where her husband Denzil worked as a welder.

Mr Thomas was unaffacted. But his 49-year-old wife developed a lung tumour brought on by inhaling the asbestos, an inquest heard yesterday.

The couple split up in 1974 after 12 years of marriage. But Mrs Thomas had breathed in enough dust on washdays to kill her more than 20 years later.

Mr Thomas told the inquest: 'She always washed my working clothes during our married life.

'Years later, when safety regulations came in, we were kitted out with overalls, masks and glasses.

'But before these measures were introduced my wife washed all my working clothes at home.'

Mr Thomas, of Williamstown, Rhondda, Mid Glamorgan, worked using asbestos sheets for covering pipes.

Pathologist Dr David Stock told the inquest in Talbot Green, near Llantrisant, that Mrs Thomas died from a cancer in her lung caused by blue asbestos fibres.

Mrs Thomas, of Penygraig, Rhondda, worked in a button factory and had no other contact with asbestos dust.

Coroner Phillip Walters, who recorded a verdict of accidental death, said: 'Mrs Thomas was in the habit of shaking, then washing, her husband's working clothes.

'Her death shows the danger of blue asbestos. These fibres can lie dormant for 20, 30 or 40 years then come to light.

'Clearly Mrs Thomas died because she came into contact with her ex-husband's clothes more than 20 years ago.'

Non-Occupational Mesothelioma

- Youngest victim Leigh Carlisle 28.
- How has this occurred with a 30 year latency period?

The Duty to Manage

- One of the key weapons HSE has developed to ensure the management of asbestos in premises is Regulation 4 “The Duty to Manage”
- This came into effect in 2002.

Regulation 4 DTM

- It requires that an assessment is made of all non-domestic premises to ensure the risks of asbestos are controlled.
- This assessment is the responsibility of the ‘Duty Holder’.

Regulation 4 DTM

- Reported that this Regulation is one of the most expensive in history. (Telegraph)
- HSE research to date has suggested levels of compliance are poor.

Regulation 4 DTM

- In Kent only 40% of businesses visited were compliant.
- HSE are suggesting that only 16% of retail premises are compliant.
- Research by other groups suggest that only 30% of educational establishments are compliant.

What changes are needed?

- Improved Compliance with DTM
- Greater asbestos awareness
- Better understanding of risk
- Clearer guidance and regulation.

Improving Compliance with DTM

- RICS and others are pointing out the differences in the mechanisms for EPC's / DEC and asking why this model of enforcement is not followed for asbestos.
- Transfer enforcement role to outside body or trading standards and ring fence fines.
- Responsibility for DTM is primarily with HSE and yet they are not the enforcing authority on a large number of sites affected by DTM.

Greater Asbestos Awareness

- Incredible that even today's students on plumbing and electrical course are not being given awareness training.
- Increased enforcement of requirements and Duty Holders asking about awareness training.

Asbestos Surveyors Guide

- HSG 264, revised asbestos survey guide.
- Replaces current MDHS 100

Asbestos Surveyors Guide

- Main Changes
  - HSG Document
  - Terminology:
    - Type 1 & 2 will become Management Surveys
    - Type 3 will become Refurbishment/Demolition Surveyors
  - Domestic Sector Guidance:
    - Refurbishment Surveyors
    - Survey Strategy

Asbestos Surveyors Guide

- Section on Disclaimers / Caveats
- Competence
- Client Sections
    - Surveyor selection
    - Report formats
- Survey / Management Plan

Revision to Control of Asbestos Regulations 2006

- EU decision that HSE have not implemented the AWPD correctly.
- Result revisions to regulations are currently being consulted.
- Two terms omitted from the 2006 Regulations
- *“non-friable”* and *“without deterioration of non-degraded material”*

Revision to Control of Asbestos Regulations 2006

- Three categories of work
- *Licensed Asbestos Works*
- *Notifiable Non-Licensed Work (NNLW)*
- *Non-Licensed Works*

Licensed Works

- *(a)Work where the exposure of employees to asbestos is not sporadic and of low intensity in natures; or*
- *(b)Work for which the risk assessment demonstrates that the control limit will be or liable to be exceeded*
- *(c)Work on asbestos coatings*
- *(d)Work on asbestos insulating board*
  - *(i) is not sporadic and of low intensity; or*
  - *(ii) will be liable or is liable to exceed the control limit; or*
  - *(iii) is not short duration work.*

Non-Licensed Notifiable Works

- This will apply to all currently non-licensed materials
- Where the material is either friable or where deterioration will occur during removal.
- Requirement will be;
  - Work to be notified to enforcing authority
  - Training of staff
  - Medical surveillance
  - Record retention

Non-Licensed Works

- No change on current situation

Proposed Revisions

Non-licensed works	NNLW	Licensed Works
-compliance with risk assessment, control of exposure and - training requirements	-Notification before start -Medical examination every 3 years -Health records -compliance with risk assessment, control of exposure and training requirements	-licensing Notification 14 days in advance -Emergency arrangements -Designated asbestos areas -Medical examination every 2 years Health records -compliance with risk assessment, control of exposure and training requirements

Horror Video

thames laboratories