

Rising from the dust

Building a support network on asbestos and environmental disease in Barking and Dagenham

Barking & Dagenham Post. 1995

Test case brings ray of light for sufferers of asbestos-linked diseases

NEW HOPE FOR VICTIMS OF DEADLY 'WHITE DUST'

Barking & Dagenham Post. 1998

Asbestos tragedy

CLEAN AIR VERDICT

Barking & Dagenham Post.
1997

AIR samples taken on the Harts Lane Estate in Barking have given the area a clean bill of health, following concerns about asbestos. External consultants, Associated Laboratory Families on the estate have been assured after some time that the results were satisfactory, with no levels above the limit.

Asbestos found in high-rise block

COUNCILLORS Eastern Avenue ever with it at the

Barking & Dagenham Recorder. 1997

Workers died from asbestosis

Barking & Dagenham Post.
1996

The lighting of each season will be announced by the firing of a rocket.

BARKING MAN'S DEATH FROM ASBESTOSIS.

AN OLD STANDING CASE.

An inquest was held at Hammersmith on Monday, on Henry Weiss, aged 53, of Bifron-st., Barking, whose death was believed to have been due to asbestosis.

Deceased, it was stated, worked at a Barking asbestos factory from 1918 to 1920. Afterwards he was taken ill, suffering from lung trouble, and had treatment in several hospitals.

Sir Bernard Spilsbury said that was due to asbestosis, a new word, but which had found a recognised position in the medical nomenclature.

A verdict of Accidental death recorded.

Barking Advertiser. 1929

Estate hears latest moves on asbestos

Barking & Dagenham Post.
1997

£500,000 BILL FOR ASBESTOS

Barking & Dagenham Post. 1997

Asbestos health risk ruled out

Barking & Dagenham Recorder. 1997

Asbestos scare is 'dead and buried'

Barking & Dagenham Recorder. 1997

GREATER LONDON & ESSEX NEWSPAPERS LTD.: WEDNESDAY, JANUARY 25, 1989 7

Asbestos link as brothers die

Barking & Dagenham Post. 1989

Battery man's death

A MAN who worked in the power room at Dagenham Chloride, the battery firm, for 30 years had died of asbestosis.

Robert Corti, 71, of Dunmow Drive, Rainham, collapsed and died at his home on October 23. A post mortem found a lung

tumour 5cm thick.

Coroner Dr Harold Price said: "There's absolutely no doubt this man's death was due to exposure to asbestos."

He recorded a verdict of death by industrial disease.

Barking & Dagenham Post. 1998

Rising from the dust

Introduction

Ill health connected to toxic waste and asbestos has been a real issue in Barking and Dagenham for years. Both the Cape Asbestos factory and the docks have sadly led to this area having one of the highest industry-related mortality rates in the country. The local branch of UNISON decided that we wanted to highlight the concerns we had and assist the local community in developing a support network. We believe that it is important to link the families and friends of those who develop asbestos related illnesses.

We therefore commissioned the London Hazards Centre to write this pamphlet. The branch has funded the publication and is seeking financial help in UNISON to help fund the support group as we go to press.

The credit for the hard work must go to Margaret Sharkey of London Hazards Centre. I would also thank Chris Sale and Gary McCarthy for their help on this project. The photographs are by Gary.

Lastly for several years one person has campaigned to clean up the environment in our borough. Sadly he died last year. So this pamphlet is dedicated to Frank Krause, a socialist and green activist, a fighter for truth and justice despite his poor health.

Tony Browne
Branch Secretary, Barking and Dagenham UNISON

The sickest

If you live in Barking and Dagenham you are more likely to be ill with a long-term disease than anywhere else in London.

The 2001 census asked questions about chronic (i.e. long-term) illness for the first time. The results show nearly one fifth of households in Barking and Dagenham, 19.9%, had someone suffering a long-term illness. This is significantly above the English average of 18.2%, and is the highest percentage of all the London Boroughs¹. Barking and Dagenham is also the second highest London borough for people saying their general health is 'not good'.

For cancers of all kinds, the death rate is significantly above average for men, and is higher than other London boroughs. In 2000 Barking and Dagenham had the fifth highest number of men dying from cancer in the country (out of 354 local authorities): over 800 people were diagnosed and over 400 died from cancer². According to statistics from London Health Observatory, general trends would predict 983 male cancer deaths in the borough between 1998 and 2002; whereas in fact there were 1,187 (the figures for women would be 967 predicted deaths and 1,034 actual deaths). In 15 of the 17 wards in Barking and Dagenham the death rate for cancer amongst men is higher than the national average (see table 1).

As well as higher rates of lung cancer and mesothelioma, Barking and Dagenham has higher rates of breast cancer than the rest of London or England and Wales. The incidence of bladder cancer is also one of the highest in the country.

We believe that much of the ill health is caused by the industrial past of the borough and is related to the large numbers of people who have been exposed to asbestos and other industrial toxins.

Inequalities in health

Links between social and economic deprivation and ill health are well established³. The poorer you are the more likely you are to experience ill health and, in crude statistical terms, to die at a

Table 1: Cancer rates by council wards

Ward	Male SMR for all cancers
Thames	139.5
Eastbury	139.1
Alibon	138.7
Longbridge	133.3
Parsloes	130.3
Valence	130.2
Mayesbrook	129.9
Village	125.1
Becontree	122.7
River	117.1
Goresbrook	116.6
Eastbrook	115.3
Heath	113.2
Whalebone	111.0
Gascoigne	110.2
Chadwell Heath	90.7
Abbey	85.5

SMR stands for Standardised Mortality Ratio. It shows the number of deaths observed, compared to those expected, based on what statisticians know about the death rates of a standard population in Great Britain and taking into account the age and sex of the population compared. An SMR of over 100 shows more people dying from cancer than expected, and an SMR of less than 100 means fewer deaths than expected.

younger age. The most recent independent inquiry into inequalities in health, chaired by Sir Donald Acheson found that:

'Although average mortality has fallen over the past 50 years, unacceptable inequalities in health persist. For many measures of health, inequalities have either remained the same or have widened in recent decades.'

And although some politicians and others would like to link the health gap between rich and poor to purely lifestyle factors, such as differences in diet and smoking, the Acheson report says:

'The weight of scientific evidence supports a socioeconomic explanation of health inequalities. This traces the roots of ill health to such determinants as income, education and employment as well as to the material environment and lifestyle.'

The health gap between rich and poor is apparent for many of the major causes of death, including coronary heart disease, stroke, lung cancer and suicides among men, and respiratory disease and lung cancer among women.

London borough?



This street on Harts Lane Estate, on the old Cape factory site, is appropriately a dead end. Construction work in 1997 unearthed asbestos and tars in the ground on the estate's River Roding side.

One way to look at death rates is via the average life expectancy at birth. The difference between men at the top and bottom of the social class scale in the late 1980s was 5 years: you are more likely to live to be 75 years if you are a rich man compared with 70 years if you are poor. For women, the differential was smaller, 80 years compared with 77 years. Another way to look at rates is by premature mortality, that is death before age 65, which again is higher among people who are unskilled. The difference in death rates between those at the top and bottom of the social scale has actually widened since the early 1970s¹.

Deprived communities have the worst environments

Recent research published by the Environment Agency shows that the most deprived wards in the major urban areas have the worst levels of pollution².

Dagenham MP Jon Cruddas, speaking in a House of Commons debate on regeneration³ had this to say about the area:

'Let us consider some of the basic characteristics of the community that I represent. It is the lowest-wage economy in Greater London and one of the most deprived boroughs in the capital. Adult numeracy is the second lowest in the

country, literacy is the fourth lowest. The number of residents with higher educational qualifications is the lowest in the country. Heart and lung disease, infant mortality and life expectancy are among the worst in the capital.'

Cape Asbestos: the legacy

Barking and Dagenham is the tenth worst place in the whole of the UK for men experiencing the effects of asbestos which has been called the worst industrial killer. The nine boroughs worse than Barking and Dagenham are all in shipbuilding regions. The exceptionally high asbestos mortality rate in this part of London is a marker of how hard the area has been hit by the legacy of Cape Asbestos, the industrial killing machine that used to be in Harts Lane. In addition, the most recent Health and Safety Executive (HSE) figures⁷ show that Barking and Dagenham is the worst borough in the country for the numbers of women dying from mesothelioma (tables 2-3, page 5). The death rate for women from this cancer is usually six times less than men, with women suffering around 15% of the total number of deaths from mesothelioma every year. Women's asbestos exposure is often categorised as environmental exposure, including

washing dusty overalls of men working with asbestos. But in the Harts Lane Cape factory women worked alongside men. The two other areas with high asbestos deaths for women also had significant numbers working directly with the fibres in Sunderland, in shipbuilding and manufacturing, and in Blackburn and Darwen where women worked in gas mask factories.

Cancer and the car industry

Dagenham has been synonymous with the Ford plant until very recently. At its peak period of employment, around World War Two, the plant employed 34,000 and even in 2000 when it announced the end of car assembly in 2002, it employed nearly 8,000 of Ford's 30,000 British workers, with 4,500 on the car assembly line.

Former car workers from Fords may be at increased risk of cancers especially those exposed to asbestos, those working in the foundry and those involved in spray painting.

Since all cancers develop a long time after exposures to the cancer causing agents they may need advice about possible compensation many years from now.

There is a great deal of American and Canadian evidence⁸ of excessive levels of respiratory and digestive cancers exposed to cutting fluids (also known as machining fluids or metal working fluids). In Ontario cancers of the oesophagus and larynx caused by exposure to cutting fluids recently became recognised for compensation under their Workers Compensation Act.

- 1 Richmond, the lowest, has 12.4%.
- 2 Annual Public Health Report 2002/2003, LB Barking and Dagenham, and Barking and Havering Health Authority, Chapter 6: Cancer.
- 3 The Black Report 1982, The Health Divide (Whitehead) 1992, The Acheson Report 1998.
- 4 Acheson Report.
- 5 *Environmental Quality and Social Deprivation*. Environment Agency, R&D Technical Report E2-067/1/TR, January 2004. www.environment-agency.gov.uk/commodata/105385/deprived_comms_643874.pdf
- 6 Hansard, 8th February 2002.
- 7 HSE Press Release E189:03, 2 October 2003. The figures are for 1981-2000.
- 8 Workplace Roulette: Gambling with Cancer, by Firth, Brophy and Keith for Windsor Occupational Health Information Service, Windsor, Ontario, 1997.

The asbestos epidemic

Asbestos deaths in the UK are predicted to continue rising until a peak is reached between 2015 and 2020, according to HSE statistics collected on mesothelioma deaths, now over 1,800 a year, and estimates of other asbestos-related deaths. A recent editorial in the British Medical Journal¹ went over previous reports to draw attention to the fact that the disease is increasing in frequency and that: 'There is nothing we can do now to prevent it in workers exposed to asbestos throughout the 1950s, 1960s, and 1970s. ...In the developed world alone 100,000 people alive now will die from it.' The BMJ spells out exactly what it means to be an asbestos victim:

'Once made there is a tendency for the diagnosis to be met with a sense of hopelessness — not without good reason for it is a horrible disease, often with months of unremitting pain ... and the inevitability of death.'

Mesothelioma, which has been counted reasonably accurately, is not, however, the only disease, or the only fatal disease, caused by asbestos.

Asbestos diseases

Mesothelioma

This form of cancer is peculiar to exposure to asbestos and often confused with lung cancer. It is a rapidly fatal and painful cancer of the lining of the lung (pleura), the abdomen (peritoneum), or heart (pericardium). Until the 1960s this form of cancer was unrecognised. More than 10 times as many deaths are due to pleural mesothelioma as to peritoneal mesothelioma. Some people develop both.

Lung cancer

This is a painful and nearly always fatal disease. In the UK around 38,000 people a year die from lung cancer, the most common cancer in men, and second most common in women. Smoking is assumed to be the main cause, but some 6,000 lung cancers a year may be wholly or partly caused by previous asbestos

exposure, at a very conservative estimate. HSE have said there are at least 2 lung cancers caused by asbestos for every mesothelioma, others say there could be many more.²

Smoking, asbestos and lung cancer

In 1966 a US study estimated that the risk of lung cancer in a non-smoker exposed to asbestos is five times the expected rate. Smoking alone would increase the risk of lung cancer by a factor of 11. Asbestos and smoking together would increase the risk to 52 times that prevailing in the general population. The International Agency for Research on Cancer (IARC), the WHO body devoted to cancer research, has quoted a study of asbestos workers suggesting that those who smoke have eight times the risk of lung cancer compared to all other smokers, and 92 times the risk of non-smokers not exposed to asbestos.

Over the last twenty years, smoking amongst adults has fallen but working class people are more likely to smoke: 41 per cent of men in unskilled manual occupations compared to 12 per cent of professional men and 36 per cent to 11 per cent for women³.

Asbestosis

This is a disabling and eventually fatal scarring of the lungs, causing severe breathlessness and chest pains. The destructive effects of asbestos cause the slow replacement of healthy lung tissue, responsible for the exchange of oxygen and carbon dioxide, by fibrous or scar tissue, which cannot 'breathe'. Lungs have a natural reserve capacity that means the disease can develop over many years without any symptoms showing. By then the damage is well and truly advanced. The victim will be short of breath, unable to walk very far, will have coughing, general weakness and chest pain. The damaged lungs strain the heart and can lead to congestive heart failure.

X-rays detect the damage at an early stage: a routine medical examination will not.

Pleural thickening

The lung walls thicken because of the scarring caused by asbestos. This is seen on X-ray examination. Extensive thickening may cause severe shortness of breath. It can occur on one side of the lungs, or both sides (known as bilateral) or it can be described as widespread (known as diffuse).

Pleural plaques

Also show up on X-rays. They are dense bands of scar tissue, different from pleural thickening. Plaques are usually seen on both sides of the lungs. People with pleural plaques may run an increased risk of developing lung cancer. The lung cancer rate in a group of shipyard workers with plaques was double that of shipyard workers without.

Other types of cancers caused by asbestos

In 1982 the International Agency for Research on Cancer (IARC) said there is clear causal relationship to gastrointestinal cancers and cancers of the larynx in workers exposed to the three main types of asbestos.

Asbestos and children

Young body tissue is growing and may be more susceptible to carcinogens (cancer causing substances). In 1982, Fred Lodge, who grew up in a house next to the Cape factory, and had never worked with asbestos, died of mesothelioma at the age of 39. There were two schools by the Cape factory, one on either side.

Substantial under-claiming

Despite the high incidence of asbestos disease, the number of Department of Work and Pensions assessments for asbestos-related diseases other than mesothelioma is very low. In 2002 there were only 57 assessments for cancer of the lung accompanied by asbestosis or pleural thickening; and only 379 claims for diffuse pleural thickening.

We believe this means many people are unaware of benefits they are entitled to.

Asbestos and Contaminated Land

Asbestos will be found as a contaminant in many other places than just the neighbourhood of the old Cape Asbestos factory. It was extensively used in all industrial buildings throughout the last century, particularly power stations, gas works and chemical plants, because of its insulation properties, although safer substitutes were always available.

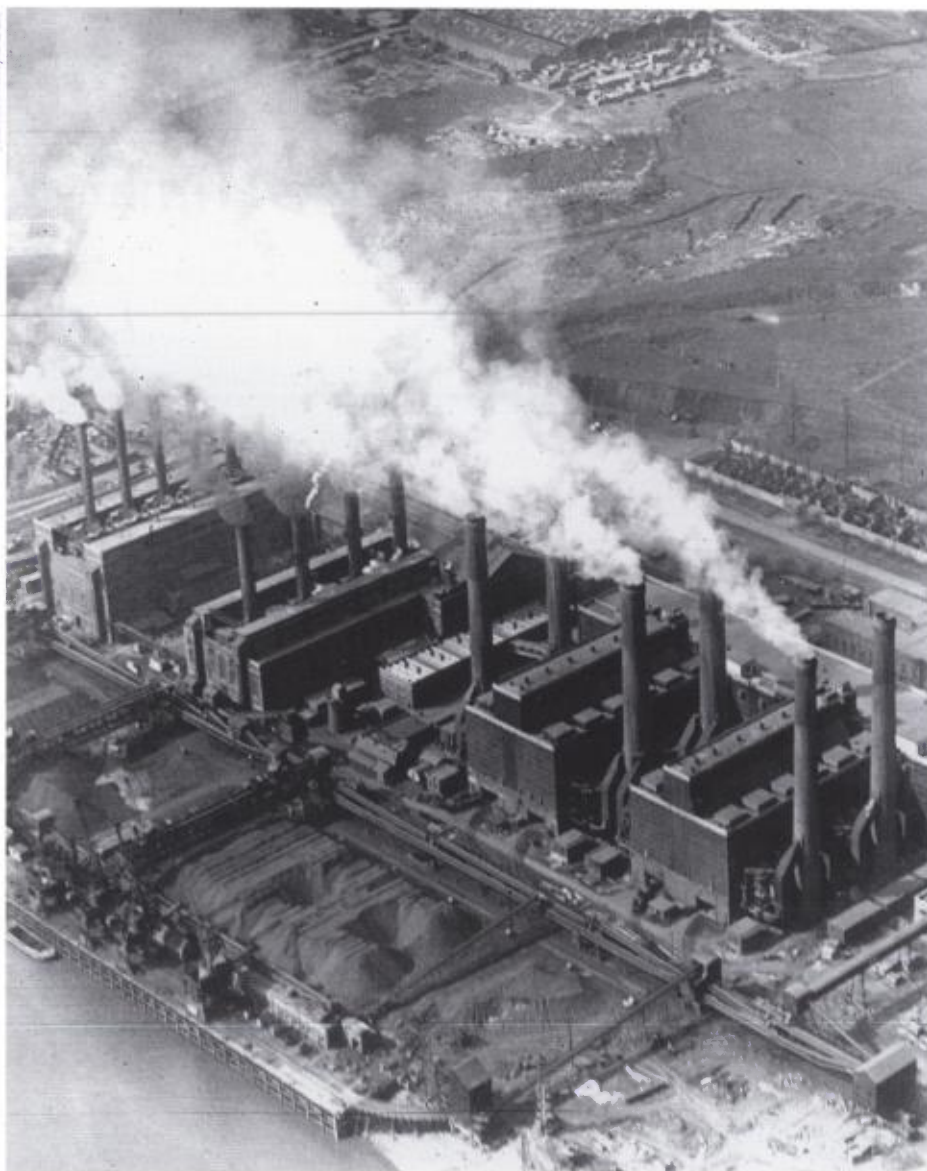
Asbestos was not finally banned in the UK until November 1999.

The HSE warns that asbestos-containing material may be present on any derelict land, in such forms as cement or textile. This can be because of illegal fly tipping, as well as previous industrial use. It is likely to be buried, but may be found above ground if parts of buildings it was used in are standing.

Disturbing contaminated ground will cause fibres or dust to be released into the atmosphere. The release will be increased if the site is dry or the asbestos is in a friable form (can be crumbled easily), such as old lagging blankets, insulating boards or loose, unconsolidated deposits. The HSE says that laboratory studies of soil samples with asbestos materials have shown that measurable levels of airborne fibres can be generated from incorrect handling of ground which is contaminated with even low concentrations of asbestos. If the site is wet the release of fibres is likely to be reduced.

The Control of Asbestos at Work Regulations 1987 and Approved Codes of Practice apply to any work with asbestos contaminated materials. The precautions to be taken will depend on the extent and type of asbestos, the condition of the site and the work to be carried out. Large scale excavation and removal of asbestos, or removal of lagging waste, must be carried out by specialist contractors using proper decontamination facilities, monitoring of fibre concentrations and arrangements for disposal of contaminated clothing. Segregation of areas and dust suppression by spray application of water should take place before work begins.

Simmons Aeroflms Ltd



The Cape factory was not the borough's only source of asbestos. Former workers at Barking power station are also suffering asbestos related diseases, as are former power workers in local factories. The contaminated site of the former power station (pictured in 1950) is now part of the giant Barking Reach development (see page 12).

Table 2: Mesothelioma deaths for men: worst ten areas in UK

Area	Deaths	Expected Deaths	SMR
West Dunbartonshire	178	28	637
Barrow-in-Furness	140	24	593
Plymouth	298	75	396
Portsmouth	222	57	388
South Tyneside	187	52	357
North Tyneside	219	64	340
Southampton	207	64	325
Eastleigh	94	31	303
Medway	189	64	298
Barking & Dagenham	147	50	294

Table 3: Mesothelioma deaths for women: worst ten areas in UK

Area	Deaths	Expected Deaths	SMR
Barking & Dagenham	53	8	649
Sunderland	79	14	575
Blackburn with Darwen	31	6	484
West Dunbartonshire	22	5	451
South Ribble	17	5	367
Newham	29	8	348
Leeds	115	35	328
Swale	16	5	297
Maldon	7	2	281
Chorley	12	4	279

1 BMJ 31 January 2004; vol 328: p 237-238. Full text via www.bmjournals.com.

2 See Asbestos Hazards Handbook, London Hazards Centre, 1995, full text at www.lhc.org.uk

3 Acheson 1998.

Exposures today: Gary's story, Monteagle Primary School

'My name is Gary McCarthy. I work as a site manager at Monteagle Primary School in the London Borough of Barking and Dagenham. I have worked for the school for approximately 10 years.

During 2003 a private contractor conducted an asbestos survey when it was brought to my attention that in the boiler house there was an open duct, and the pipes that lay in there were lagged with asbestos. The analyst quite openly said to me that he would not like to be working down there as the asbestos was in a bad state and was breaking down releasing airborne fibres in the boiler house. Realising the dangers, the company carrying out the survey covered the duct with some polythene and sticky tape, which only partially covered the duct (see photos). I was not satisfied with this and sealed the boiler house door with strong polythene and hazard warning tape so that no one could enter the contaminated area.

After a short while it began to dawn on me the full implications of what had been discovered. I then contacted the head teacher of the school (who was on holiday at the time) and told him of the events and that I would refuse to go down into the boiler house until I had some reassurance that it was safe to do so. I also contacted the Unison office that immediately contacted various council officials by e-mail, including the officer responsible for asbestos and its safe removal in any council building. This officer replied stating the site manager was over reacting; that the site was safe. This he did from the comfort of his chair in his office without the courtesy of visiting either the school or myself.

I was angered by this e-mail reply to say the least. I asked that a formal complaint be made against that person. Needless to say the officer was told how inappropriate his remarks were and an apology swiftly followed. The head teacher was totally

supportive and arranged a meeting with ourselves and Education Human Resources which also included the Chair of Governors and the education health and safety adviser. The results of the survey proved there was contamination in the boiler house and arrangements were made for it to be removed or made safe.

Both the head teacher and myself had been exposed and we agreed to attend a medical at the occupational therapy unit at Oldchurch Hospital. The Chair of Governors kindly offered to attend this with me, which turned out to be a blessing as the medical attention I received was far inferior to that of the head; i.e. he had chest X-rays, lung function tests plus yearly consultations. Once again this left me feeling my case was not being taken seriously. The head asked Human Resources to look into this. At this moment in time neither my union representative nor myself have received any explanation.'



Gary's photos provide damning evidence of the asbestos hazard.

Management of asbestos: new opportunities for safety reps

Regulation 4 of the Control of Asbestos at Work Regulations 2002 is fully in force from 21 May 2004. This imposes new duties on the owners and controllers of non-domestic premises and gives trade union health and safety representatives new opportunities to raise asbestos safety issues.

Asbestos is found in a wide range of buildings, especially those put up in 1950-70, and in a wide range of building products such as wall panels, lagging and floor tiles. Whenever it is damaged or disturbed it poses a risk to anyone in the vicinity. Particularly at risk are building and maintenance workers, electricians and plumbers, as well as emergency service workers, but everyone in the vicinity of work on asbestos can be exposed to the hazard.

Employers and landlords of public buildings containing asbestos will now be obliged to develop a plan for the management of asbestos and to make sure this is properly carried out. Safety reps have an important role to play in ensuring these duties are carried out in practice.

The CAW regulations are a Statutory Instrument and part of the criminal law: they implement the Health and Safety at Work Act in detail. Regulation 4 is backed up by an Approved Code of Practice (ACOP). Approved Codes of Practice have a special legal status. If employers are prosecuted for a breach of health and safety law, and it is proved that they have not followed the relevant provisions of the Approved Code of Practice, a court can find them at fault unless they can show that they have complied with the law in some other way. The ACOP is accompanied by official Guidance which explains

how to achieve good practice.

The Regulation begins by defining who is the **duty holder**. This is anyone who has responsibility for maintenance and renovation of public buildings, including workplaces, and covers both employers and landlords. Everyone engaged in asbestos work, including architects and surveyors, must co-operate with the duty holder.

The duty holder must make a suitable and sufficient **assessment** to determine if asbestos is present in his building. As part of the assessment the duty holder must take into account building plans, other relevant information and the age of the building, must inspect the reasonably accessible parts of the building. They must review the assessment whenever there is a significant change in the circumstances. One of the weaknesses of the Regulation is that it falls short of requiring a full survey involving sampling and analysis.

If asbestos is found or suspected, the duty holder must determine the risk from that asbestos, map its location, and have a written plan specifying measures for managing the risks.

The **plan** should include adequate measures for monitoring the condition of any asbestos or suspected asbestos-containing material, ensuring that any such substances are properly maintained or removed, and providing information about the location and condition of the asbestos to any person likely to disturb it and to the emergency services.

It is here that there is the greatest scope for interpretation and therefore for safety reps to get involved. There is always an issue of encapsulation versus removal. Removal is often though not universally the most

desirable option. It puts an end to exposure risk. But there may be reasons why encapsulation should be preferred. It is here that the safety rep should weigh in with a recommendation.

There is also an issue with labelling of asbestos, where bad management can be highly disruptive. Again the rep can make sure that management deals with it properly.

The duty holder must review the plan regularly and whenever there is reason to suspect it is no longer valid or there has been a significant change in the premises. They must ensure the measures in the plan are carried out and that measures taken to implement the plan are recorded.

Since 2002 the Government has encouraged employers to prepare for implementation of Regulation 4 and to start operating the new duties rather than wait for the formal introduction of the legislation. From 21 May 2004 any employer who has ignored this advice is in breach of the law. Safety reps should press their employers to implement the Regulation in the most effective way.

More information

London Hazards Centre factsheet: *Management of asbestos in non-domestic premises*, March 2003. From the Centre or www.lhc.org.uk.

Official document: *The Management of asbestos in non-domestic premises: approved code of practice and guidance*. Document L127. £9.50 from HSE Books, 01787-881165, www.hsebooks.co.uk

Barking Reach: brownfield homes?

Huge amounts of fresh topsoil are waiting to be spread before building starts on the Barking Reach site, in contrast to the adjacent Thames View Estate built in the 1950s.



Photo: Gary McCarthy

The government plans to build 120,000 homes and create 180,000 jobs in the Thames Gateway area by 2016. The development covers Barking Reach, Greenwich-Woolwich, Thurrock and north Kent-Thameside and at least £330m will be spent on 100 projects. 80 per cent of the new homes will be on brownfield land.

Barking Reach is a 200 hectare (500 acre) development on the site of the old power station between the Royal Docks and Ford's old Dagenham plant, taking in parts of Beckton, site of the old gas works. Deputy prime minister John Prescott, an enthusiastic supporter, described the project in November, 2003¹ as the largest brownfield site in London and the first public private partnership of its kind. The developer Bellway has already built 1,000 houses on the site and plans another 11,000 over the next 12-15 years, as land is progressively cleared, including, they say, a 'large number' of affordable homes for rent or for shared ownership with housing associations.

Safe remediation of brownfield land is expensive and typically takes up to three

years. The difficulty and cost of decontaminating brownfield sites go a long way towards explaining why many have remained untouched for so long. Thames Gateway has been slow to develop, and it will therefore have little immediate impact on housing shortages.

The obvious concern is that remediation to a poor standard could put at risk both construction workers and local residents. Community campaigns set up to fight for clean up of contaminated sites often focus on risks to young children, who are at high risk of ingesting poisons through normal play.

Though Barking Reach and other developments will be marketed as having views of the river, the immediate view will be of industrial dereliction for a considerable period of time. The site is also at risk of flooding and requires significant protection measures². And to integrate properly as a community in east London, Barking Reach needs better roads and improved bus services if it is to support an increase in population density.³

The government, both national and

local, including the London Mayor, promote brownfield developments on environmental grounds. But there are environmental costs to brownfield development too. According to the London Wildlife Trust⁴:

'Many brownfield sites support a surprisingly diverse biodiversity which often reflects the cultural context of the locality in which they lie. Hence, the trading nature of London is partly reflected in the variety of plants from around the world that are found on such sites such as buddleja (China), London rocket (Mediterranean) and Michaelmas daisy (North America). In this respect they are often unique. Brownfields also provide broader environmental and social functions such as providing open play space and green corridors, and ameliorating pollution and noise.'

1 Guardian 20.11.2003

2 Guardian 22.4.2004

3 Guardian 19.2.2003

4 Planning for the Wild, Niall Machin, London Wildlife Trust, 2000.

5 The Environment Agency 2003.
www.environment-agency.gov.uk/yourenv/eff/land

Brownfield Britain

Brownfield sites are abandoned, idle or under-used industrial and commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination. The UK National Land Use Database (2002) identified some 66,000 hectares of which some 29,000 hectares could be used for new houses. About 16,523 hectares has been vacant or derelict for nine or more years.

Such land will often have been contaminated to varying degrees, and may also pollute other land or waters. The Environment Agency says that many more sites have yet to be identified and that as many as 100,000 sites may be affected by contamination: almost 1% of the land area of Britain, covering 50,000-200,000 hectares, an area larger than Greater London⁵.

What's in your backyard?

Contamination of land in Barking and Dagenham

Contaminated Land is defined in the Environment Act 1995 as any land which appears to a local authority to be "in such condition, by reason of substances in, on or under the land, that significant harm is being caused or there is a significant possibility of such harm being caused; or pollution of controlled waters is being, or is likely to be, caused."

Past sources of pollution

Large industries

The industrial past of the borough suggests the following kinds of contaminated sites could particularly be of concern:

Asbestos industry

Former Harts Lane Cape Asbestos factory, mainly asbestos.

Power generation and gasworks

Former power station at Barking Reach, mainly asbestos and PCBs.

The former Beckton gasworks contains waste from coal and the coking process. Pollutants include:

- ▲ toxic substances: cyanide compounds, arsenic, lead
- ▲ radioactive material
- ▲ respiratory irritants: sulphur dioxide, hydrogen sulphide, hydrogen cyanide, mineral dusts
- ▲ skin irritants and corrosives: strong alkalis, acids, coal tars, phenols, metal oxides
- ▲ carcinogens: asbestos, tars, phenols, hydrocarbons

Typical wastes from old gas works include coal tar, cyanide salts and hydrogen sulphide gas. Leakage and spillage from

storage drums or tanks may have contaminated surface and subsurface soils, sediments, surface water and groundwater.

Chemical and other manufacturing

In early Victorian times new laws on pollution in Middlesex forced many factory owners to move to sites in nearby counties. In 1857 an artificial fertiliser and sulphuric acid factory was built at Creeksmouth in Barking, on the shores of the Thames. By 1900 Barking was proud to be attracting small factories to its riverside sites¹. Heavy industry and chemical plants opened and later oil refineries and storage buildings for hazardous waste.

Other industries

Other common sources of long-term contamination² that are likely to have existed in the borough are:

Old electroplating workshops

Metal finishing including plating is done to improve a product's performance and durability. The first step is degreasing: this can be done by solvents or water-based products; for a long period the solvent used was 'trike' (trichloroethylene). Metal components are then etched, plated, and finished in a series of vats or baths. Spillage from cleaning or plating, or from storage tanks, may contaminate underlying soils. Ground water may be contaminated by heavy metals, cyanide and solvents.

Scrap metal and car salvage yards

These recover usable parts, scrap metal, usually iron, steel, copper, brass, aluminium, and recyclable materials from old and wrecked cars. Non-recyclable materials are stored on site or sent to a municipal landfill. Depending on the type of operation the surrounding soil may be

contaminated by heavy metals, asbestos, PCB oils, lubricating oils, fuels and solvents.

Paint shops and car body repair shops

As well as spray painting, these shops use cutting torches, welding equipment, solvents, cleaners, fibreglass, various polymers and epoxy compounds. Typical contaminants include toluene, acetone, perchloroethylene, xylene, gasoline and diesel fuel, carbon tetrachloride, and hydrochloric and phosphoric acid.

Current sources of pollution

Modern regulation of polluting industries ought to make it easier to track down some potential polluters. The European Integrated Pollution Prevention and Control Directive (IPPC) was incorporated into law in England and Wales as the Pollution Prevention and Control (PPC) Regulations 2000, made under the Pollution Prevention and Control Act 1999. This legislation requires a certain level of monitoring.

The Environment Agency, rather than the local authority, regulates the **most polluting industries** covered by part A of the PPC Regulations. Operators should give details of their annual emissions of toxic substances and other pollutants to the Pollution Inventory, which records pollution from a set of 170 chemicals regulated by the Environment Agency. Substances monitored in this way include:

- ▲ **greenhouse gases**: for example carbon monoxide and dioxide and methane which contribute to global warming.
- ▲ **chlorofluorocarbons (CFCs)**: which cause ozone depletion, contributing to a rise in exposure to ultraviolet radiation, believed to be a key contributory factor in the rise of skin cancers.

- ▲ **volatile organic³ compounds (VOCs):** such as benzene, xylene, other organic solvents, some of which cause cancer.
- ▲ **particulate matter:** emitted from power stations and incinerators which contributes to photochemical smog.
- ▲ **toxic substances:** such as heavy metals: lead, chromium, arsenic, cadmium, mercury, nickel; and gases: phosgene, ammonia, dioxins and furans; and pesticides.
- ▲ **special wastes:** including asbestos and radioactive substances.

Operators are required to report emissions that exceed a set threshold and to report **notifiable releases:** emissions that are the result of an emergency, mis-operation, accident or plant failure. Inventory data was not collected systematically until 1998.

For many pollutants, particularly greenhouse gases, benzene, particulate materials and VOCs, road transport contributes greatly to poor air quality; airports are also a major source of air pollution.

The Environment Agency Website⁴ has a section called **What's in Your Backyard?** which gives details of a number of factories in and around Barking and Dagenham. As well as discharging into the air, into sewage and into controlled waters, many produce tonnes of waste for disposal at landfill sites or by incineration. **What's in Your**

Backyard? also gives the **OPRA scores.** These consist of a **Pollution Hazard Appraisal** and an **Operator Performance Appraisal**, a useful starting point for community groups to find out how 'clean and green' their local industry is.

Some companies in or near Barking and Dagenham regulated by the Environment Agency

- ▲ Aventis Pharma Ltd, Rainham Road South manufactures organic chemicals, mainly drugs.
- ▲ Barford Chemicals Ltd, Abbey Road manufactures organic chemicals.
- ▲ Blagden Packaging NV, Gascoigne Wharf, Alfreds Way is involved in waste disposal, recycling and incineration.
- ▲ Exide Batteries Ltd, Chequers Lane manufactures batteries and is a user of inorganic chemicals including toxic material such as lead, cadmium, chromium, nickel. Copper and zinc are discharged to controlled waters.
- ▲ Ford Motor Co Ltd, Main Site, Dagenham: a fuel and power production plant within the company was monitored for emissions up to 2002.
- ▲ HPG Industrial Coatings Ltd, Freshwater Road manufactures paints

and other organic chemicals.

- ▲ Rhodia Organique Fine Ltd, Rainham Road South manufactures organic chemicals.
- ▲ Thames Power Services Ltd, Barking Power Station, Chequers Lane: power generation.
- ▲ Thames Water Utilities Ltd, Beckton Sewage Treatment Works, Jenkins Lane is involved in waste disposal, recycling and incineration.

Toxic substances common in contaminated land

Polychlorinated Biphenyls (PCBs) are a group of about 130 chemicals. From the 1930s they were used extensively in the power engineering industry to transfer heat in electrical equipment as electricity was generated. This was because they have very low electrical conductivity and don't break down at high temperatures. They have been used in electric capacitors and transformers, hydraulic and heat exchange systems; in pumps, plasticisers, surface coatings, paint, adhesives and flame retardants. They resist microbial and chemical breakdown processes in the environment. They accumulate via food chains, and are now found in the fatty tissues of people and animals. They can produce liver cancer in animals. There is evidence⁵ that workers and those exposed through contaminated food have a



Soil sampling in gardens in early 2004 revealed contamination on the Thames View Estate, built in the 1950s on brownfield land. The council warned residents not to dig deeper than 18 inches, or eat home-grown vegetables.

significantly greater risk of liver cancer, cancer of the biliary tract, lung cancer and the skin cancer, melanoma.

Free cyanide can be produced when some waste chemicals in soil mix together, for example acid waste and complex cyanides in the mixture known as 'Blue Billy', so called because exposure to large amounts of the dust has been known to turn people blue.

Sulphates in soil may be transformed microbially to sulphides. These can react with acids to form the gas hydrogen sulphide which may be released during excavation and is an extremely toxic asphyxiant.

Heavy metals lead, mercury, cadmium, and arsenic. If garden soil, or soil in parks and playgrounds, is contaminated by any of these metals and their compounds children are at risk of eating it as they play.

▲ **Lead** is very toxic, especially to children. Low levels can affect the central nervous system and cause a decline in physical performance and intelligence. Lead in particulates from leaded petrol, and in drinking water because of leaded pipes, has accumulated in people's bodies. Its wide use industrially, and in everyday products such as batteries and paints, means soil can be heavily contaminated. Those working with lead must have their blood lead level monitored, by law.

▲ **Mercury** breathed or absorbed at high levels can kill. Long-term exposure to lower levels damages the nervous system and the kidneys.

▲ **Cadmium** is used in electroplating. It is taken up readily by food crops and cadmium levels may be increasing in top soil throughout Europe. Cadmium is known to cause lung cancer and prolonged exposure causes kidney damage.

▲ **Arsenic** is used to produce pesticides and wood preservatives. Arsenic emissions to the air are usually caused by smelting metals and burning some fuels, particularly brown coal, and wastes containing arsenic. Arsenic increases the risk of lung cancer and also skin cancer.

Dioxins and Furans. These complex compounds (polychlorinated dibenzo-para-dioxins, PCDDs, and polychlorinated

dibenzofurans, PCDFs) are formed as by-products in manufacturing some herbicides, in some incineration processes, in metal-processing and when paper pulp is bleached with chlorine. They have become widespread contaminants of soil, and because of this they easily enter the food chain. They do not break easily so they accumulate in animal fats. An accident at a chemical plant in 1976 in Seveso, Italy, exposed a large number of people to a dioxin. They have been found to have an increased risk of a cancer known as non-Hodgkin's lymphoma, which affects the lymph nodes and immune system, a finding confirmed in studies of other workers exposed to these substances. People exposed to the particular dioxin involved have been also reported as having increased risk of other cancers particularly cancers of the digestive system and the bone marrow cancer multiple myeloma.

Cancer pollution in Barking and Dagenham

These are some of the cancer causing substances (carcinogens) discharged or emitted into the air, water or sewage system from local companies, according to the Pollution Inventory. An up to date, detailed analysis can be seen at the Pollution Inventory website.

There have been cases where the reporting threshold has been exceeded, or the substance has been unintentionally discharged as a result of a notifiable incident.

We list the chemicals according to recent IARC⁶ evaluations and also give what IARC lists as relevant circumstances, or jobs, that is those that are known or believed to have a high risk of cancer.

Group 1 Definite carcinogens

Chemicals and groups of chemicals

Arsenic and arsenic compounds, asbestos, benzene, cadmium and cadmium compounds, chromium (vi) (hexavalent chromium) compounds, nickel compounds, tetrachlorodibenzo-para-dioxin, vinyl chloride.

Mixtures

Coal-tar pitches, coal-tar, mineral oils

(untreated and mildly treated).

Exposure circumstances or occupations

Coal gasification, coke production, iron and steel foundry work, exposure as a painter.

Group 2A Probably carcinogenic in humans

Chemicals and groups of chemicals

Acrylonitrile, formaldehyde, tetrachloroethylene (perchloroethylene), trichloroethylene (trike).

Mixtures

Creosotes, diesel engine exhaust, polychlorinated biphenyls.

Exposure circumstances or occupations

Petrol refining; hairdresser or barber.

Group 2B Possibly carcinogenic in humans

Chemicals and groups of chemicals

Acetaldehyde, carbon tetrachloride, chloroform, chlorophenols, glasswool, lead and lead compounds, methylmercury compounds, nickel (metallic), slagwool, styrene, toluene diisocyanates, urethane.

Mixtures

Bitumens, diesel fuel, engine exhaust fuel oils, gasoline, welding fumes.

Exposure circumstances or occupations

Carpentry and joinery, dry cleaning.

1 See Museums and Heritage on www.barking-dagenham.gov.uk

2 Details of typical contamination from United States Environment Protection Agency: www.epa.gov; EPA/652/R-00/July 2000.

3 'Organic' in chemistry is nothing to do with food. An organic substance is one whose molecule contains carbon. E.g. organomercury compounds have molecules containing carbon and mercury (and possibly other atoms).

4 www.environment-agency.gov.uk

5 IARC Monograph 18, 1978 and Monograph 69, 1997. A large population, about 2000 people, was exposed to a mixture of PCBs in contaminated cooking oil ("Yusho") in Japan between 1968 and 1975. There was a clear increase of deaths from liver cancer in men exposed.

6 The International Agency for Research on Cancer (IARC) (www.iarc.fr) is the World Health Organization body devoted to cancer research. In its 'Monographs' series it publishes assessments by international experts of the carcinogenic risks posed to humans by a variety of agents, mixtures and exposures (<http://monographs.iarc.fr>).

Asbestos victim support group

Asbestos Support Groups are primarily organisations of victims and their relatives. In the 1970s, Clydeside Action on Asbestos pioneered asbestos victim support work in the UK, as did Nancy Tait at SPAID, now known as OEDA¹, and the late Dick Jackson through the Hull Asbestos Action Group. More recently other groups have been established in Merseyside, Manchester, Sheffield, and Derbyshire. The figures for asbestos deaths in Barking and Dagenham and surrounding boroughs show the same need as in these other urban areas.

Support groups usually have four functions:

- ▲ practical support in obtaining benefit advice, compensation and the best medical help
- ▲ emotional support for people with terminal and painful diseases
- ▲ an educational role raising awareness within the community of the dangers of asbestos
- ▲ a campaigning role: the story of asbestos is one of multinational greed and justice denied to the millions of victims worldwide. The asbestos companies, with the collusion of governments, have avoided liability as much as possible and our complex and inadequate benefit system for workers with industrial diseases means many victims fall through the net. Asbestos groups have led the trade unions in fighting for improvements and were at the core of campaigning for a ban on asbestos.

What the group would do

Drop in sessions

The group would aim to hold weekly drop in sessions in a Community Centre, to build networks and to offer advice and support. We would aim for an informal atmosphere so people could have a cup of tea and a chat. Advice workers would help people understand the complexities of the compensation process, help fill in the forms, provide contacts, and help liaise with the Benefits Agency. London Hazards Centre would assist with access to competent legal advice, and to up to date advice on welfare benefits. Once a network is established it will help with tracing witnesses for individual claims.

Home Visits

Many people needing help are very elderly and very ill with perhaps only a short time left. The group would organise home visits to help with paperwork, and strive to prevent these people becoming isolated.

Medical Appeal Tribunals

The group would ensure that people are represented at Medical Appeal Tribunals.

Macmillan Nurses and Health Professionals

The group would distribute information and run briefings for specialist Macmillan nurses, general

practice nurses, social workers and others. We would try to set up a system to use the existing primary care internal mailing system to promote the project to GPs as is done in Liverpool. This would introduce them to the project, and draw attention to compensatable conditions: pleural plaques, asbestosis, lung cancer, mesothelioma, etc.

Campaigning

The group would aim to hold monthly meetings to plan activities and manage and evaluate the project. This meeting would introduce the campaigning dimension. Recent campaigning by asbestos support groups has been successful in ending the need for dual diagnosis for mesothelioma by a hospital consultant and the Industrial Injuries Disablement Benefit specialist doctors. This dreadful system meant many died before their claim was dealt with. Again, asbestos support groups were invaluable in alerting the press and trade unions to the potential dangers of the Fairchild decision, a ruling that could have denied compensation to the many victims exposed to asbestos by more than one employer. They have also been crucial in building support in this country for the successful group action against Cape plc by former South African miners and residents of polluted mining areas².

Laurie Kazan-Allen, the co-ordinator of the European Ban Asbestos Network, will work with us to link with the broader campaigns around asbestos and London Hazards Centre has good links with all trade unions at regional and national level.

¹ SPAID stood for the Society for Prevention of Asbestosis and Industrial Diseases; OEDA stands for the Occupational and Environmental Diseases Association.

² The case was heard in March 2003.



Hampstead Town Hall Centre
213 Haverstock Hill, London NW3 4QP
Tel: 020 7794 5999 Fax: 020 7794 4702
Email: mail@lhc.org.uk Website: www.lhc.org.uk
Registered Charity No. 293677

Funded by



Barking and Dagenham UNISON,
Room 198, Civic Centre, Dagenham, RM10 7BN.
020 8227 2012
unison@barking-dagenham.gov.uk