This Publication is dedicated to

MRS CHRISSIE MARMION

Mother, Factory Worker and Member of Clydebank Asbestos Group suffered from Mesothelioma, died 4th April 1999

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EDITOR'S INTRODUCTION

When a doctor visits a working-class home he should be content to sit on a three-legged stool, if there isn't a gilded chair, and he should take time for his examination; and to the questions recommended by Hippocrates, he should add one more – What is your occupation. [1]

Bernardino Ramazzini (1633-1714)

This publication is a summary of the work which has been undertaken by the Clydebank Asbestos Partnership. This group was formed to address the problems faced by asbestos sufferers in West Dunbartonshire. The principal members of the partnership are Clydebank Asbestos Group, Clydebank Health Issues Group, Greater Glasgow Health Board and West Dunbartonshire Council. The fact that a full-time, and professionally-staffed, advice and information service has replaced the volunteer-based facility available to asbestos sufferers in West Dunbartonshire is a major partnership accomplishment. It must be said, however, that this and the other positive steps could not have been made without the sterling efforts of the unpaid volunteers, most of whom have served their local community for some years. The Clydebank Asbestos Group was officially formed in 1992 and this step consolidated the work which had been ongoing in the area since the late 1980s. In the early days this group survived with access to only the most meagre resources. On one occasion in 1993 it was only a generous donation from the fabrication shop workers at John Brown's Engineering which kept the group alive.

Support has been offered and received from a number of groups and individuals since the Clydebank Asbestos Partnership's first initiatives took place in February 1998. In addition to the work being carried out in West Dunbartonshire by the Partnership there has been a serious attempt to involve a number of experts who are external to the locality but who have a particular expertise in an asbestos-related discipline, mainly in the medical and legal fields. These valued contributions were perhaps most obvious during the National Asbestos Conference which took place in Clydebank

[1] This statement was made by Bernardino Ramazzini, widely regarded as the father of occupational medicine (1633-1714) and taken from *Hunters Diseases of Occupations*, 1991 edited by P.A.B. Raffle, W.R. Lee, R.I. McCallum and R. Murray, published by Hodder & Stoughton, London, page 38.

Town Hall on 10 November 1998. Included in this report is a commentary of the main aspects of this highly successful event.

Despite a series of very full personal agendas a number of the conference contributors enthusiastically agreed to submit papers to be included in this publication. All of these papers are of a very high standard, are up to date and contain information of value to the lay reader and academic alike. Also included is the text of a resolution endorsed by all of the elected members on West Dunbartonshire Council in June 1998. This unanimous decision called for a ban on the use of Chrysotile (white asbestos), it also lent support to those campaigners who were fighting at that time to have a UK ban on Chrysotile implemented. One of the main arguments against a ban was that the substitute materials to replace white asbestos were not proven to be safer than the substance they would replace. This defence was virtually declared redundant following a report by the Institute of Environment and Health, University of Leicester. The study, carried out on behalf of the Medical Research Council, emerged with clear findings that those substitutes most utilised were less harmful than Chrysotile. We were fortunate to have Dr. Leonard S. Levy from the Institute as a conference speaker. A version of his lecture appears later in this report. *The Asbestos (Prohibitions) (Amendment) Regulations 1999,* signed on 24th August, were put in force on 24th November 1999. Statutory Instrument 2373 bans the import of crude fibre, flake, powder or waste Chrysotile. The new use of asbestos cement, boards, panels, tiles and other products are also prohibited. Robin Howie contends that the projected mortality figures in relation to deaths caused by asbestos contamination are an underestimate. His paper, included for scrutiny here, puts forward a very concise case in support of this hypothesis.

Dr. Ronald Johnston and Dr. Arthur McIvor, University of Strathclyde have provided a very readable chapter which examines the history and significance of Turners Asbestos factory which operated in Clydebank for a number of years. As editor I am extremely grateful to these two authors for this contribution which is constructed from a larger oral history research project and feel I must take this opportunity to apologise for the tight deadline which was inflicted upon them. Johnston and McIvor are keen to interview anyone who life has been affected by asbestos dust.

Elspeth Gracey of Clydebank Health Issues Group acted as facilitator at the conference workshop which discussed pain relief and palliative care. Elspeth kindly summarised the main issues raised by the asbestos victims, carers and health professionals at the workshop. Her account is included in the report. Professor Nick Wikeley, Dean of the Faculty of Law, University of Southampton has submitted an extremely instructive account of his conference contribution, *The Victim and the Law.* This paper deals with the complexities of Social Security law as they apply to the asbestos sufferer. The Clydebank Asbestos Partnership has a clear set of aims and objectives; however, the overriding purpose of the combined activities of the past two years is an attempt to reinforce a duty of care, a sense of morality and easier access to justice for asbestos sufferers and their families. We hope that those interested in the work of the partnership, and others, can learn from our experience in Clydebank.

Money being the *'root of all evil'* brings thoughts of hackneyed cliché. Nevertheless, it is a proven fact, despite knowledge of the dangers of asbestos, pursuit of super-normal profits was the driving force behind the overt and covert activities of the asbestos industry. The importation of asbestos into this country and the USA has declined almost to a halt. However, the profit motive is currently spreading asbestos-related carnage to the developing world. The tonnage of asbestos imported to parts of Asia, Africa and the Indian continent are massive. It is interesting to note that Robin Howie in his article points out that the West of Scotland's high incidence of Lung Cancer is exceeded by black males in New Orleans and Polynesians in New Zealand and Hawaii.

Recent information from South Africa suggests that black workers and people living in the vicinity of the country's asbestos mines experience a high incidence of asbestos-related disease. Miners in these areas have organised demonstrations while they wait for compensation from the British company that employed them. According to the ACTSA campaign, the company, Cape plc, is now fighting tooth and nail not to pay compensation due to former employees. Thousands of these miners and their families were exposed to lethal asbestos dust. Workers inside the mines and mills were exposed to dust levels which were 30 times the legal limit allowed in the UK. In one township alone there were 900 cases of Mesothelioma. While Cape plc drag out the due process of law these people are dying. Currently there is a campaign

being waged by Trade Unions and others in post-Apartheid, South Africa. In the UK *Action for South Africa* (ACTSA) is campaigning to force Cape plc to live up to their responsibilities and compensate those communities which they have devastated. Judges have blocked the cases from being heard in the British courts and the campaign is now proceeding to petition the House Of Lords on behalf of thousands of South African Workers.

The analogy between asbestos and cigarette smoking is clear. As the market place in the West declines due to health awareness, sales are targeted towards the developing countries. We have a duty of care to the people of these developing countries. The lessons of asbestos abuse, painfully learned in the West of Scotland, should not be a legacy of the future in the Third World. Perhaps support for the ACTSA campaign can be a first real step in this direction. Other areas of grave concern include India where there is a systematic strategy of misinformation being fed to Indian asbestos workers. *Hazards* journal pointed out in a recent issue that the *Indian Express* contained an article which stated that Chrysotile asbestos under controlled conditions does not contribute to the incidence of disease and that asbestos fibres can be hazardous only when it is inhaled in excessive amounts over a prolonged period when it is being mined. *Hazards* concluded the debate by articulating the fact that asbestos is not mined in the UK yet the mortality and morbidity rates which apply to British workers is an experience which should not be repeated.

At the inaugural conference of the European Centre for Occupational Health, Safety and the Environment (ECOHSE) which was held at the University of Glasgow on 28 January 2000 speakers from Eastern Europe and leading UK academics who had recently visited that part of the world spoke of significant asbestos-related problems. Particular reference was made to Poland and Romania. The asbestos industry must not be allowed to export this cancer risk to developing countries. The international exchange of tactics and information can be crucial in order to repel the worst excesses of the asbestos-exporting nations.

On a more positive note there are a number of exciting advancements taking place which will, in time, improve the lives of asbestos sufferers. The British Asbestos Newsletter informs us that clinical trials in the UK and in Australia are producing

very promising early results. Professor Bruce Robinson who is joint head of a mesothelioma research team at Sir Charles Gairdner Hospital in Perth, Australia reports a 42per cent success rate for the *Gemcitibine-cislatin* protocol in use since 1997. In a study being conducted St Bartholomew's Hospital London symptoms including persistent coughing, shortness of breath and chest pain improved in a majority of patients treated with *Vinorelbine.* Lung specialist Dr. Robin Rudd believes that progress is being made. Dr. Rudd is planning a new study which will look at the addition of new drugs. Clydeside Action on Asbestos the Glasgow based charity have recently appointed a respiratory nurse who will function as an outreach worker. She will give advice and information to patients and other health professionals throughout Scotland. This is one of the most forward thinking developments to emerge in recent years. It is an outstanding example of a support group extending the help available to asbestos sufferers beyond the area of financial compensation.[2] In a similar vein the Macmillan Mesothelioma Information Line 0113 392 4327 or 0113 20 66 466 will provide information for patients and others involved in the care and support of mesothelioma patients. This line is staffed by a specialist nurse. This service which is sited at Cookridge Hospital, Leeds LS16 6QB is supervised by Sister Mavis Robinson who is an acknowledged expert in all areas of mesothelioma patient care. Copies of Mavis Robinson's excellent booklet *Information for People with Mesothelioma and Their Carers* is available from the information line on request. Two seminars which were organised in Clydebank Health Centre allowed for a more in-depth discussion between asbestos campaigners, health professionals (mainly GPs) and the local authority (mainly social work). A wide range of medical and compensation issues were covered, in particular, the importance of early referral in all aspects of dealing with asbestos sufferers.

Legal, medical and social security matters all have an impact on the lives of asbestos sufferers and their families throughout the UK. However, it is only through discussion and constructive criticism that we can develop systems to meets the needs of these citizens. The National Asbestos Conference was a step in this direction. The 250 plus observers and delegates dealt with issues which ranged from palliative care to safe substitutes which can be used in place of asbestos. This publication includes

[2] This service can be contacted at Clydeside Action on Asbestos, 245 High Street, Glasgow G4 0QR; Tel: 0141 552 8852.

an account of the conference and associated activities which have been the main workload of the Clydebank Asbestos Partnership since February 1998.

This book could have been written with a number of cities, towns or villages as the principal actor in place of Clydebank the include the City Of Glasgow, Hebden Bridge, Washington in the north-east of England, parts of East London or Devonport. Clydebank Asbestos Group extend a common bond of solidarity and friendship to all asbestos campaigners throughout the UK and internationally.

NATIONAL ASBESTOS CONFERENCE

Summary of Proceedings

Andrew White, Leader, West Dunbartonshire Council

Chairman of the opening session of the conference was Andrew White, Leader of West Dunbartonshire Council. In his preliminary introduction Councillor White referred to the logic of convening the National Asbestos Conference in Clydebank. As a local authority they saw this conference as only one part in a longer-term process to help improve the lives of asbestos sufferers and their families in West Dunbartonshire. It was emphasised by the Chairman that the conference was organised in Clydebank Town Hall for two reasons. Firstly, to highlight the unwanted legacy of asbestos-related disease which continues to be a major concern for the town, and secondly, to be viewed as a gesture of respect to all of the people throughout the West of Scotland whose lives have been so adversely affected by asbestos dust. He indicated that a discussion paper *Clydebank, Asbestos The Unwanted Legacy,* prepared by the Welfare Rights Unit, West Dunbartonshire Council includes background information which further emphasised why the asbestos issue is so important, in particular to the town of Clydebank.[3]

Councillor White went on to mention the events and initiatives which were the main focus of the Asbestos Partnership in the period preceding the conference. Among these were a successful *Asbestos Awareness Day* held in Clydebank on 1st June 1998. Stemming from this event there have been a number of co-ordinated efforts to support local victims of asbestos-related disease. In addition to these activities West Dunbartonshire Council became the first local authority in the UK to support a ban on Chrysotile (White Asbestos). The text of the resolution is very interesting, especially in light of recent developments in the campaign to prohibit continued use of white asbestos.[4] Mr. White was hopeful that this position, which was unanimously supported by the elected members on West Dunbartonshire Council, would encourage other local authorities throughout the UK to discuss the issue of a total ban on asbestos. He went on to make the point that there is no advantage in having

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[3] This document, *Clydebank, The Unwanted Legacy, Asbestos* is included in this report.

[4] The text of this resolution, which was fully supported by all members of West Dunbartonshire Council, is included as an appendix to this report.

legislation to ban asbestos if local authorities are not given the additional finance to provide an effective safeguard in local communities.[5]

Mrs. Joan Ward, Clydebank Asbestos Group

Mrs. Joan Ward delivered a fraternal address to conference on behalf of Clydebank Asbestos Group. She courageously shared an extremely painful and personal experience with those present. The problems she faced after the death of her husband provide a sharp reminder of why events like the National Asbestos Conference remain crucial to the campaign on behalf of asbestos victims and the bereaved. She reminded the conference that behind every statistic it is real people and families who are seriously affected by the abuse of asbestos in our society whether that misuse is in the workplace or in the community. Mrs. Ward gave an account of the problems she personally had encountered and the support which she received from the local asbestos support group. She emphasised a belief that not only are these volunteer-based groups necessary but also that they should be adequately funded to ensure that the resource which they provide is available to those who require it when they are in most need.

Professor David Hamblen

During his fraternal address Professor David Hamblen, Chairman of Greater Glasgow Health Board, spoke of the highly successful Asbestos Awareness Day which was held in Clydebank on 1st June and the work of the Asbestos Partnership which was fully supported by GGHB. The Professor stressed the serious outlook that the Health Board had on all matters relating to ill health associated with employment, asbestos-related disease in particular.

Bill Speirs

The National Asbestos Conference was one of the first engagements undertaken by the General Secretary of the Scottish Trades Union Congress (STUC) since his recent appointment. Mr. Speirs recounted the pivotal function adopted out by trade unions in the campaign to change the legislation in relation to Compensation Recovery. This

[5] A ban on the importation, supply and use of Chrysotile (white asbestos) will come into force on 24th November 1999. Asbestos (Prohibitions) (Amendment) Regulations (Statutory Instrument (S.I.) No 2373/99)

was in large measure down to the efforts of the STUC and the close association forged with Clydeside Action on Asbestos, the organisation which initiated that particular campaign. He went on to say that the CRU campaign had resulted in tangible benefits for asbestos sufferers. One of the important features of this campaign was that it was UK wide. This allowed the TUC and individual unions to actively support the campaign.[6] Bill Speirs acknowledged the positive role the of trade union movement in the fight against the hazards of asbestos dust and in particular the excellent training materials which was now available from many individual unions to support the work of Shop Stewards and Safety Representatives.

Dr. Helene Irvine, Consultant in Public Health Medicine in Communicable Disease and Environmental Health, Greater Glasgow Health Board

This lecture gave an overview of statistical evidence which greatly assisted our understanding of the incidence of the asbestos-related disease Mesothelioma, particularly in the West of Scotland and the other major UK shipbuilding centres. Doctor Irvine spoke of her work since 1989 when she started working at the West of Scotland Cancer Surveillance Unit. This endeavor was aimed at measuring the percentage of all lung cancers in the West of Scotland which were attributable to asbestos exposure. The study was submitted to the British Medical Journal as an original piece of research.[7] In her lecture Dr. Irvine graphically illustrated the amount of the asbestos deaths caused by Mesothelioma. An historical analysis, included in this address, elucidated the responsibility of the shipbuilding industry for a large amount of the asbestos-related illness and fatality now experienced in the Britain.

Dr. A. F. Henderson

Consultant Physician, Lorn & Islands General Hospital

Doctor Henderson comprehensively explained the human cost of asbestos-related disease calling on his significant expertise and experience in the treatment of asbestos sufferers. His presentation illustrated a number of the problems which affect asbestos victims in the areas of information, diagnosis and prognosis. He dealt with a number of the problems faced by GPs, solicitors and other advisors who work in this field. He

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[6] STUC, 1993, *Robbing the Victims*, Section 22 of the 1989 Social Security Act.

[7] Helene De Vos Irvine, Douglas W. Lamont, David J. Hole, Charles R. Gillies, *Asbestos Lung Cancer in Glasgow and the West Of Scotland*, British Medical Journal 306: 1993, pages 1503-6.

placed great weight on the importance of early and accurate diagnosis especially in cases of Mesothelioma.

Dr. Leonard Levy. University of Leicester, Institute For Environment And Health, Head of Toxicology and Risk Assessment Group

Dr. Levy gave a presentation of the work that the Institute For Environment And Health at the University of Leicester had recently undertaken in relation to the substitution of Chrysotile. One of the core arguments against a ban on Chrysotile has been that the available substitutes are likely to be more dangerous than white asbestos. Doctor Levy and his colleagues have recently been involved in some very important and influential research in this area.[8] These influential findings have been of great consequence in the debate on the future use of substitutes to Chrysotile (white asbestos). A summary of Dr. Levy's paper is included later in this publication.

Robin Howie, Past-President, British Occupational Hygiene Society

One of the leading UK experts on industrial hygiene and author of many reports and papers at home and abroad on a wide range of safety issues Mr. Howie's lecture converged on a number of these topics. This included respiratory protection standards in the UK. His recent research on this subject concluded that there were a number of asbestos respirators which did not guarantee the safety of the operators whose lives depended upon them. This research has had a massive impact on the asbestos removal industry. Apart from these very specific areas of interest Robin Howie has been involved in the campaign to ban white asbestos. Robin. Howie has strong views on what is required to make the expected ban effective and he updated conference on the regulatory requirements necessary to achieve maximum benefit for our citizens. He also highlighted the urgency of the required changes by providing evidence and analysis which challenges the official figures in relation to current and projected asbestos-related death rates in this country. A version of Mr. Howie's paper is included later in this publication.

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[8] *Fibrous Materials in the Environment*, 1997, MRC Institute for Environment and Health, University of Leicester.

Mr. Tim Huntingford, Director, Social Work & Housing WDC

Chairman for the afternoon session of the conference was Mr. Tim Huntingford, Director of Social Work & Housing, West Dunbartonshire Council. In his opening remarks Mr. Huntingford applauded the work of the Asbestos Partnership which had been meeting in Clydebank over the past 12 months and said that he hoped that the new approaches required to the many difficulties faced by asbestos sufferers and their carers would be advanced by this National Asbestos Conference.

Professor Nick Wikeley, Dean of the Faculty of Law, University of Southampton

Professor Nick Wikeley presented a paper which dealt with the complex statute and regulations which asbestos victims must satisfy in order to receive compensation. He illustrated the fact that there were a number of non-prescribed asbestos-related diseases which did not qualify for Industrial Injuries Disablement Benefit. A complete version of this paper, *The Victim and the Law,* has been included in this publication.

Plenary Session

The plenary developed as a lively question and answer session which explored many of the matters raised in the various workshops. A wide range of issues were aired in this session particularly by trade union and asbestos-victim, support group members.

Tony Worthington, MP Clydebank & Milngavie

Tony Worthington in his closing address indicated that the National Asbestos Conference had been an overwhelming success. This was not only reflected in the numbers attending but also the quality of the contributions from the main speakers and delegates in attendance. The MP went on to outline some of the efforts made by a group of MPs in Westminster who meet regularly and continually raise matters in relation to the asbestos hazard. This activity included a number of *'early day'* motions which incorporated compensation recovery and the proposed ban on Chrysotile. In conclusion, Mr. Worthington reaffirmed his commitment to the work of Clydebank Asbestos Group and the partnership.[9]

[9] Tony Worthington acted as referee on behalf of Clydebank Asbestos Group in their recent successful National Lottery funding application, a sum of £93,000 was awarded to fund the work of the group by the National Lotteries Board.

Summary of Conference Workshops

Workshop 1

Politics of an Asbestos Free World

This was an engaging workshop which discussed the ongoing campaign for a total UK ban on the manufacture and use of Chrysotile (white asbestos). Both speakers are acknowledged as having an expansive knowledge of asbestos-related issues. The core components of Nigel Bryson's contribution can be found in the Sourcebook on Asbestos Diseases.[10] The discussion in this workshop was based on the practical steps required in the various *Ban Asbestos* campaigns.[11]

Workshop 2

Developments in Civil Litigation

Mr. Frank Maguire gave a comprehensive outline of recent developments in this complex area of litigation. He spoke of the problems many asbestos victims face trying to access justice and secure reasonable damages. The success of the struggle against the Compensation Recovery legislation and the amendments contained in the 1997 Social Security Act were uppermost in people's thoughts. Difficulties with time bar limitation were discussed. Mr. Maguire indicated that he was not despondent due to the recent success achieved in a number of these cases. An outstanding feature of this workshop was the numbers of asbestos victims who attended and took part in the discussion which developed into a lively debate. Mr. Ian McKechnie of Clydeside Action on Asbestos competently assisted in the organisation of this workshop.

Workshop 3

Medical Appeal Tribunals

Tanya Parker carried most of the burden in this workshop. This was due to the fact that virtually all of the welfare rights advisors who were delegates to the conference attended this session. Many questions and contributions were raised surrounding the complex nature of Medical Appeal Tribunals and the associated regulations. There was a lively discussion around the issue of MATs being decided on the simple

[10] George A Peters and Barbara J. Peters (editors), *Sourcebook On Asbestos Diseases*, 1999, Volume 19,Lexis Law Publishing, USA, pages 79-99.

'*balance of probabilities'*. Many of those present felt that decisions were, in practice, made on the basis of medical certainty with a higher required threshold of proof than a balance of probability. Concerns were also raised that in many cases representatives were proceeding to Medical Appeal Tribunals in circumstances where the appellant, although suffering from an asbestos-related illness, did not have a diagnosis, nor medical evidence of any of the prescribed asbestos-related diseases. There were differing points of view including the opinion that it is wrong to raise the aspirations of claimants in appeals which stood no prospect of any award of Industrial Injuries Disablement Benefit. Professor Wikeley introduced a number of contemporary issues in Social Security decision-making and the role of the Industrial Injuries Advisory Council (IIAC). Those attending this session agreed that it was most worthwhile and that a number of difficult questions were addressed. The facilitator for this session was John Hepburn.

Workshop 4

Palliative Care Issues

The issues covered in this workshop were extremely sensitive. A number of asbestos victims and their carers were in attendance. The main concerns were the lack of information and support available to terminally-ill patients. A comprehensive report of this workshop was produced by the workshop facilitator, Elspeth Gracey, and is included as an appendix to this report.

Workshop 5

Trade Union Responses

The wealth of experience in attendance at this workshop was reflected in the high level of discussion which took place. An appraisal of the role of the trade unions in the various asbestos campaigns over the years was fully aired. There was a general feeling that the unions were more focussed on asbestos issues than ever before. Trade Union participation in the *'Ban Asbestos'* campaigns and the *'Compensation Recovery Crusade'* were cited as evidence of improved awareness of the asbestos hazard and the needs of members to be protected while at work and, in addition, to be adequately compensated if their lungs are damaged by asbestos. Alan Dalton spoke of the Industrial Injuries Advisory Council (IIAC) and the role played by the TUC members on this body. The facilitator for this session was Jim Swan.

Workshop 6

Social Care & Initial Responses

The workshop, while recognising the crucial importance of financial compensation, attempted to explore issues of care needs which extended beyond the constituency of damages and welfare benefits. The discussion centered on the view that an holistic approach was required. It was felt that this should include the needs of the often-ignored carers. Bill Clark indicated that a number of local authority services could be more easily accessed by asbestos sufferers and their families if the proper systems were put in place. Referring to the age profile of asbestos victims in Clydebank he added that many of these people suffered from severe breathlessness due to chronic lung complaints. Mr. Clark gave the example of the value an Occupational Therapist's assessment could have in many cases. It was agreed by those in attendance that the aims of the Clydebank Asbestos Partnership were consistent with the holistic approach advanced in this workshop.

CLYDEBANK ASBESTOS PARTNERSHIP: *The Way Forward*

ClydebankAsbestos Partnership

Support for asbestos sufferers and their families in the West Dunbartonshire area has been substantially redefined. There are a number of reasons for this within an ongoing process of change. However, perhaps the most easily identifiable is the presence of the Asbestos Partnership Group which has met regularly since February 1998. The members of this partnership are Greater Glasgow Health Board, West Dunbartonshire Council, Clydebank Health Issues Group and Clydebank Asbestos Group (CAG).

This group has been extremely pro-active on asbestos issues in West Dunbartonshire since inauguration. This in turn has led to increased workload for the volunteer-based Clydebank Asbestos Group (CAG). The events and publicity generated by partnership activity has increased the numbers of people who have contacted sought support, advice or information. A number of successful events and initiatives have been organised to assist the work of Clydebank Asbestos Group. The following events and initiatives are included in the work of the partnership.

Asbestos Awareness Day

This event took place on 1st June 1998 in Abbotsford Church, Clydebank. More than 140 people attended this event at some point of the day. Local and national press, television and radio reported the event throughout. This coverage was very positive and a number of local asbestos sufferers and their carers were given advice and assistance as a direct consequence of the *Asbestos Awareness Day.*

Chrysotile Ban

In June 1998 West Dunbartonshire Council (WDC) became the first local authority in the UK to support the call for a ban on Chrysotile (white asbestos). All elected members supported a resolution which called for a UK ban on the manufacture and use of all asbestos. This followed on from the *Asbestos Awareness Day* and helped to keep the momentum ticking over during the summer months. Subsequently the area's asbestos problem retained a prominence and the workload of the support group was

increased. It was also agreed, within the resolution, that West Dunbartonshire Council would convene a major conference to discuss all aspects of asbestos.

National Asbestos Conference

The National Asbestos Conference was organised to take place on 10th November 1998. This was a major undertaking which was roundly supported by all members of the umbrella group. The conference was an overwhelming success with over 240 delegates and observers from all corners of the UK in attendance. Significant media coverage resulted in increased requests for advice and information from asbestos sufferers and their families. The national focus of this conference ensured that a number of these requests were from asbestos sufferers who lived outwith the immediate West Dunbartonshire area.

Publications Group

A sub-group of the umbrella organisation meets regularly to discuss various possible publications to assist the work of Clydebank Asbestos Group. A poster and information leaflets have been produced for use throughout West Dunbartonshire. These are distributed to health centres, hospitals, Social Work & Housing offices and through Trade Unions. Three hundred posters and 2,000 information leaflets are now in circulation. This additional publicity has increased awareness of the asbestos hazard in the local community.

Disability Benefit Training

Clydebank Asbestos Group responded to the challenge of their increased caseload with a commitment to improve the quality of the information which they provide for their members. In relation to benefits advice there is now a clearer understanding that although civil litigation and industrial injury benefits are key issues. Disability benefits and carers entitlements are routine applications in cases where the claimant appears to satisfy the DLA/AA regulations. The Welfare Rights Representation Unit have organised a training programme which goes a long way to achieving this improvement in the service required. All volunteers and staff are invited to these training sessions.

Freepost

A short questionnaire was sent out to every member/client of Clydebank Asbestos Group. In particular this helped to identify those members who may be entitled to Disability Living Allowance or Attendance Allowance but who have not submitted claims for these benefits. This exercise also gave some indication of the take-up of the main carer's benefit (Invalid Care Allowance). This survey was conducted using the Freepost facility provided by West Dunbartonshire Council. The Welfare Rights Representation Unit will support questionnaire analysis and action.

Monitoring

All volunteers have undertaken a short training programme to regulate monitoring and recording of casework. This has lead has been greatly improved through this process. to a more accurate view of the demands made on the support group. Utilisation of resources

Referrals

In addition to the casework generated by recent activity the group now receives a greater number of referrals from local GPs, Respiratory Clinic, Gartnavel General Hospital and from Thompson Solicitors Helpline which operates on a Freephone basis. The Clydebank Health Centre seminars have increased the number of referrals form local General Practitioners, in particular the number of new Pleural Plaques cases from the Clydebank vicinity.

Recent Funding

This has placed an added burden on the part-time unpaid volunteers who are the backbone of the Clydebank Asbestos Group (CAG). It must also be noted, however, that the number of CAG volunteers has also increased. In order to manage the workload money (£10,000) was provided by Greater Glasgow Health Board to finance the Welfare Rights service provided by the group. A grant of around £7,000 was allocated through the partnership to purchase computer hardware and software to enhance the quality of the service provided. This was for a period of 6 months which ended in March 1999. West Dunbartonshire Council awarded the group £25,000 and a

grant of £7,000 was allocated through the partnership to provide computer hardware and software with a view to enhancing the quality of the service.

A sum of £93,000 was awarded by the National Lotteries Board. This ensures that full-time staff are in place to assist with all aspects of the group's work for at least the next two years.

Counselling

While professional assistance is utilised by CAG to meet the current caseload it is important to stress that volunteer-based activity is the lifeblood of this group. In line with this CAG have been consistently trying to develop the skills of the volunteers. Counselling is an important aspect of these skills. In order to equip group members with these abilities a counselling course was organised by Hazel McQuarrie, Senior Training Officer, West Dunbartonshire Council. Following extensive discussions a two-day course was specifically designed to meet the needs of the support group. The training sessions held on 14th and 21st June 1999 were highly successful. The trainer for both days was Roisin McGoldrick, University of Strathclyde who is based at Jordanhill Campus.

Current Caseload

Clydebank Asbestos Group caseload cannot be quantified by a simple headcount of the membership. Some members may only have a single benefit claim in addition to their claim at civil law e.g. Industrial Injuries Benefit. Most asbestos victims, however, will require assistance with a number of separate claims to benefit and payments from the 1979 Workmen's Compensation Act. Disability Living Allowance or Attendance Allowance and Incapacity Benefit are the most common welfare benefit claims. In addition to the mainstream entitlement issues there may be a claim for a carer or other social work issues to be addressed. For example, a request for a Social Work and Housing input or an Occupational Therapist assessment. Currently the group is assisting with upwards of 75 benefit claims. This may increase as the membership questionnaires are returned.

CLYDEBANK ASBESTOS SEMINARS

Two seminars were arranged by the Clydebank Asbestos Partnership and the Local Health Care Co-operative (LHCC) on 18th November and 2nd December 1999. These meetings were organised as training sessions in order to raise awareness of various aspects of the medical and legal problems which can arise in asbestos-related illness. Although these sessions were organised for those health professionals who deliver a primary care service to asbestos sufferers other groups and individuals were in attendance at both seminars. Dr. Richard Wilson acted as Chairman for each of the two seminars and was also responsible for highlighting the learning outcomes on both evenings. The first session concentrated on the issue of diagnosis and the difficulties surrounding the question of early diagnosis.

Dr. Allan F. Henderson, Consultant Physician

Dr. Henderson took the meeting through a comprehensive discussion which included a brief outline of the various asbestos-related conditions. He indicated the difficulties associated in each situation. This lecture included a summary of the problems faced by patients when trying to access compensation at civil litigation or through the Social Security system.

Mr. Andrew Peacock, Consultant Physician

Mr. Peacock led the seminar through a series of case studies which had recently presented from the local area. This led on to a broad discussion of the recurrent problems in these types of cases. An extensive discussion took place at the close of the two lectures with most of those General Practitioners present taking part.

Tommy Gorman, Welfare Rights Officer WDC

The first presentation in the second evening session discussed the problems encountered by asbestos sufferers in their efforts to secure compensation. Mr. Gorman identified the three main routes to compensation as Social Security, Workmen's Compensation Act 1979 payments and civil litigation (damages). The speaker stressed the importance of GP reports in the Benefits Agency adjudicating process. It was also clarified that although not all asbestos-related conditions satisfy

the prescribed disease regulations for social security purposes a civil claim for damages can still be pursued in these cases (e.g. Pleural Plaques).

Bill Clark, Senior Strategy Manager WDC

In this session Mr. Clark indicated that the Clydebank Asbestos Partnership had taken great steps forward during the two years of existence. Despite this positive message he was quite clear that we must create systems which will result in a more systematic response to the problems faced by the victims of industrially-induced lung diseases, with a particular emphasis on asbestos-related illnesses. He went on to stress that this initiative must include all aspects of primary care as well as social care services and rights (compensation) advice. It was stressed that systems must be put in place in order that an effective service is provided through a series of routine responses.

Dr. Sheila Mackay

Dr. Mackay gave a comprehensive account of the role which is carried out by palliative care and pain relief services. She spoke of the difficulties in the areas of counselling and attempts to give hope to terminally ill patients. Dr. Mackay did not think that hope was something which should be written off in these circumstances. There were various measures which many patients wished to be involved in. In the second part of her lecture Dr. Mackay concentrated on the various combinations of pain relief available in these difficult circumstances. A full discussion ensued with a number of the seminar's main points under discussion. It was agreed that both seminars had been highly successful.

Ms. Heather Knox, Greater Glasgow Health Board

Heather indicated that similar events may be organised in other areas of the West of Scotland based on the success of the Clydebank seminars.

WEST DUNBARTOSHIRE COUNCIL

RESOLUTION ON ASBESTOS

JUNE 1998

This Council acknowledges the success of the Asbestos Awareness Day which took place in Clydebank on Monday, 1 June, 1998. We are encouraged by the number who participated in the day and the overall reaction from the local community and the media. These are the first results of a positive partnership which has been forged between the Clydebank Asbestos Group, Greater Glasgow Health Board and West Dunbartonshire Council to address this very serious problem.

This Council will endeavour to ensure that asbestos sufferers and their carers receive the best possible service which we can practically provide. In addition to this we shall continue to support Clydebank Asbestos Group and applaud the work they have carried out on behalf of their members in this area.

The Council notes that we must also encourage further research in this field. The more knowledge we have of these horrific lung diseases and their social consequences, the greater our ability to help the victims. The Council therefore resolves to sponsor a major conference on the problems faced by asbestos sufferers. This event will take place in Clydebank as we have the unfortunate title of the asbestos capital of Europe, a legacy of our shipbuilding heritage.

Furthermore, this Council supports the efforts of those campaigners, inside and outside parliament, who are working towards a UK ban on the importation of Chrysotile (white asbestos). World-wide research into the health effects of white asbestos has failed to identify a safe threshold of exposure. The Council also notes that current European Union legislation classifies this substance as a category one carcinogen. This Council therefore urges the Government to proceed on the basis of the robust evidence which has already persuaded nine European member states to ban white asbestos.

Clydebank: ***Asbestos the Unwanted Legacy***

A Discussion Paper Prepared by the Welfare Rights Representation Unit
West Dunbartonshire Council

Most victims have worked in the asbestos or insulation industry

In the shipyards, or the construction industry.

The death of a teacher may be unusual.

But then again it may not.

We can't tell because of the misinformation and disinformation

Surrounding the facts and figures.

(James Kelman 1992)[12]

Statistical Evidence

Asbestos could soon outstrip motor accidents as a cause of premature death in Britain. However, the most important aspect of this paper for anyone with an association to the Clydebank area is the fact that it has been empirically confirmed by respected academics that this area has the highest percentage of asbestos-related disease per head of population, certainly in the U.K. by large measure and, probably, throughout Europe. In Great Britain it is estimated that in each and every year over 10,000 workers die a slow and painful death from the effects of an industrial disease.[13]

Recent Developments

Two of the most significant developments in the politics of occupational health and industrial hygiene in Britain have taken place in recent years. Firstly there was the publication of the epidemiological study by Dr. Julian Peto and his colleagues which underlined the severity of the problem of asbestos pollution in Britain. Secondly was the judgement delivered by Mr. Justice Holland in Leeds High Court on 27th October 1995. This historic precedent accepted the link between environmental asbestos-exposure and the responsibility of an asbestos company despite the fact that neither of the plaintiffs worked for the company, but had lived beside an asbestos textile factory which they, (the company) owned. Two plaintiffs whose separate cases were heard in

[12] James Kelman, 1992, *Some Recent Attacks: Essays Cultural & Political*, AK Press, Great Britain, page 60.

[13] David Bergman, 1991, Deaths At Work, WEA, Page 3.

a joint trial were awarded damages of £65,000 and £50,000 respectively. This ruling has wide-ranging implications for residents who lived in close proximity to other asbestos factories throughout the UK. The defendants in the Leeds case operated an asbestos factory in Clydebank for many years.[14]

Epidemic Proportions

Both of these events could have historic consequences in determining how society deals with a health problem which is projected to reach epidemic proportions. Both events are closely associated with the increase in the incidence of the asbestos-related cancer Mesothelioma. It is important to note that Mesothelioma is only one of a number of fatal illnesses caused by exposure to asbestos at work and in the community.

Mesothelioma Deaths

Although most people associate Asbestosis with shipyard workers and the 1960s and 70s, asbestos-related disease and the misery it causes is as much a problem of the 1990s. In 1968-70 there were 506 Death Certificates mentioning Mesothelioma by age and sex. By 1989-91 this had risen to 2791 recorded deaths in Britain from this one disease. Recent analysis by *Hazards* the well-informed health & safety and occupational health journal is most disturbing.

> European trends in asbestos-related mesothelioma indicate a quarter of a million men in western Europe will die of this cancer alone over the next 35 years, a study backed by the Cancer Research Campaign has concluded.[15]

Peto Paper

Asbestos related deaths in this country could exceed 250,000 over the next 25 years according to the research led by Dr. Julian Peto, Professor of Epidemiology at London University. The results of the empirically-based study were published in March 1995. Dr. Peto's *Lancet* article included the following information.

> Combining projections for all cohorts results in a peak of annual Mesothelioma deaths in about the year 2020 of between 2,700 and 3,300 deaths.[16]

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[14] See chapter by Johnston & McIvor which appears later in this publication.
[15] Hazards, issue 65, 1999.

In a more recent paper Professor Julian Peto forecasts that male mesothelioma deaths in Western Europe will increase from 5,000 per year in 1998 to a figure of around 9,000 by the year 2018.[17] Professor Peto indicates that those most in danger will include men born around 1945-50 and that about one in 150 of all men born in these years will eventually die of mesothelioma. The risk to men born since 1955 is not yet clear, the problem being that plumbers, carpenters, electricians involved in renovation, asbestos removal personnel and those workers involved in demolition may still be experiencing heavy exposure to asbestos dust.[18]

Research Findings

It is also estimated that for men born in the 1940's, those most at risk to industrial exposure, Mesothelioma may account for 1% of all deaths. The death toll will rise steadily from exposure to asbestos which occurred in the 1960s and 1970s. The victims are almost exclusively working class men and women. Recent research carried out by the GMB trade union found that of the 590 members of the union killed through work-related deaths between 1981 and 1995, 266 (45%) died as a result of being exposed to asbestos dust in the workplace.[19] According to one report, every day eleven people die in the UK due to working with asbestos[20]

Wide-ranging Cohort

Although it remains a fact that most asbestos victims are from the shipbuilding and heavy engineering industries there is a small but steady stream of people from other trades and professions including school cleaners, firefighters, police officers, prison officers, teachers and bus workers who are coming to the attention of those campaigning against asbestos abuse.[21] The dangers of working in heavy industry are well documented. However, asbestos is a real danger in everyday life. The growing

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[16] Julian Peto, John T Hodgson, Fiona E Mathews, Jaqueline R Jones, *Continuing increase in Mesothelioma mortality in Britain,* The Lancet, vol. 345, March 4, 1995. Pages 535-539

[17] Peto et al, *The European mesothelioma epidemic*, British Journal of Cancer, 1999, volume 79, pages 666-672.

[18] Hazards, issue 65, 1999.

[19] GMB, 1995, Safety Representatives Guide, Preventing Exposure to Asbestos, page 15.

[20] Labour Research, April 1997, Volume 86, Number 4, page 7.

[21] British Asbestos Newsletter (various issues). This publication monitors all aspects of asbestos related issues regularly and precisely. This includes reporting new settlements and unusual cases.

number of victims of asbestos related diseases from unlikely non-industrial backgrounds are unfortunate testimony to this.

Built Environment

Not only are industrial processes believed to have deadly consequences for many workers but also the buildings in which many of these tasks are carried out can be hazardous. Construction methods using asbestos based materials have had grave consequences for many building workers and evidence is now emerging that workers and tenants who live and work in many of these buildings constructed in the 1960s and 1970s have been put at risk.[22] A combination of the facts and figures discussed earlier provide an overview of this paper.

Local Research

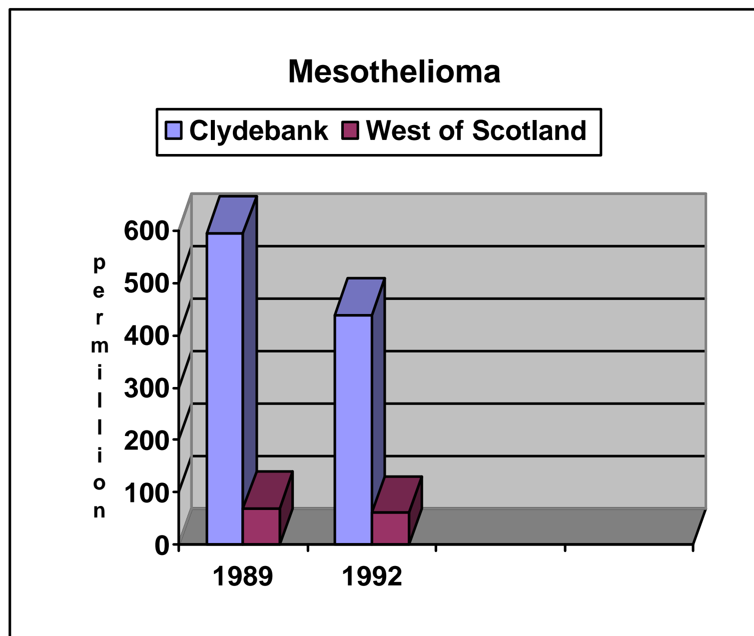
A Study carried out by the West of Scotland Cancer Surveillance Unit confirms that the Clydeside area experiences one of the highest incidence rates of lung cancer in the world.[23] The aim of the study was to quantify the relationship between lung cancer and exposure to asbestos in the West of Scotland between 1975 and 1984. The result was that asbestos was responsible in an estimated 5.7% of all lung cancers found in men registered in the West of Scotland during this period. This amounted to 1081 cases. The report points out that the rate of asbestos related lung cancer is far from equally distributed throughout the region.

> "*Three other areas in the West of Scotland known for their history of shipbuilding or heavy industry and construction (Clydebank, Renfrew and Inverclyde) have rates in excess of the average for the West of Scotland.*"

This statement succinctly indicates that there are clusters of asbestos-related disease sufferers within areas which are already higher in percentage terms than the national average. This phenomenon can even be identified by postcode in the former Strathclyde Region area.

[22] See for example, John Barrat, 24 January 1996, *Report of a Documentary Review into the use by Westminster City Council of Hermes and Chantry Points, Elgin Estate, Westminster for housing purposes, given the presence of asbestos materials,* 1980-1991.

Clydebank and the Medical Press



In a letter to the lancet one of the authors of the *British Medical Journal* published report clarifies the issue by using the experience of Clydebank in relation to the West of Scotland as a whole. She points out that in 1989 when the Mesothelioma rate for the region was 69 cases per million inhabitants the rate in Clydebank was 596 per million. When the regional average fell to 61 per million in 1992 Clydebank dropped to 439 per million. This is still a figure of epidemic proportion. The extent of the problem in Clydebank can be seen in the above diagram. De Vos Irvine puts this down to heavy occupational exposure to asbestos largely in the shipbuilding industry. There is also the spectre of Turner's Asbestos factory, mentioned earlier, now closed, which operated in Clydebank for many years.

Action Plan Required

There is the need for further research into the problems which result from asbestos poisoning. The Glasgow Cancer Surveillance Unit research validates the plight of these acute problem areas. People whose lives have been blighted by this or any other form of industrial pollution have the right to justice and reparation but we must not look upon this as the apex of achievement on their behalf. We must include allocation of resources including welfare rights advice, social work and counselling for patients and family members wherever required as well as the more obvious clinical care and hospice facilities.

Co-ordinated Effort

These aims can only be realised if they are based on accurate information and careful analysis. This requires the co-ordinated efforts of voluntary groups specialising in

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[23] Helen De Vos Irvine, Douglas W. Lamont, David J. Hole, Charles R. Gillies, *Asbestos Lung Cancer in Glasgow and the West of Scotland,* British Medical Journal 306:1993, pages 1503-6

this field, health professionals and social work. The programme of the Clydebank Asbestos Partnership (discussed elsewhere in this publication) is the key to progress in this area. Clydebank Asbestos Group, Clydebank Health Issues Group, Greater Glasgow Health Board and West Dunbartonshire Council have combined in an attempt to translate theory into practice and provide a model of care and support systems for asbestos victims and their carers.

Appendix 1: What is Asbestos?

Fibrous mineral

Asbestos is the collective name for a group of fibrous minerals which are mechanically strong and also resistant to heat and chemicals. Asbestos has been frequently referred to as the indestructible fibre. It is found in many parts of the world. The main sites of commercial mining are located in Canada, South Africa and what was formerly the Soviet Union. Many other Countries are also involved in commercial production on a smaller scale. Six million tonnes of this highly toxic material have been imported into the UK this century.

The three main types of asbestos produced for manufacture are:

Chrysotile – White Asbestos

Usually whitish in colour and smooth and silky in texture.

Crocidolite – Blue Asbestos

Normally blue, shorter, straighter and less silky than Chrysotile.

Amosite – Brown Asbestos

Normally brown, with more brittle fibres than either Chrysotile or Crocidolite.

Caution

Colour is not a guarantee of identification of a particular type of asbestos found. As asbestos ages and contaminated with other substances the colour tends to take on a dirty off-white or grey appearance**. Expert analysis is the only safe way to identify and categorise a suspected asbestos product.**

Mining and manufacture

During the mining process asbestos-containing rock is crushed and milled to produce raw asbestos of various grades. The strength and durability of the fibre coupled with its resistance to heat and chemical attack make it an attractive component for a wide range of products which are in use throughout industry and in the community. It can

be woven into fabrics, used in cement work and plastics. There are many industrial installations in which asbestos has been used, for example, in the lagging of pipes and boilers, roofing and ceiling insulation; in ships, locomotives and in furnaces and numerous applications, including gland packing and pipe joints. These are only some of the industrial processes involving asbestos and in industries such as shipbuilding and heavy engineering contact with asbestos is highly likely during a normal working life. It can be applied by spraying, painting, coating and other application methods. It is used in many everyday products, in schools, offices, hospitals and other public buildings. Obviously it has been widely used in many industries. It is the very fine fibres, invisible to the naked eye, which are dangerous when inhaled. Processes which produce very small airborne asbestos fibres are the most hazardous.

Products

Only white asbestos, Chrysotile, is now used in the U.K. mostly for the manufacture of asbestos textiles, friction materials such as brake pads and clutch linings, also asbestos cement products including pipes and sheeting. Chrysotile has accounted for 95% of asbestos mined throughout the world. Crocidolite is considered to be the most dangerous of this deadly family, in part, because of the length and shape of its fibres. It has been illegal to import blue and brown asbestos into Britain for nearly 20 years and both are now banned by law. The use of Crocidolite was banned in 1970 and Amosite was discontinued in 1980. However, construction and maintenance workers may still encounter them in stripping out old pipes, ceiling tiles, fire doors and heaters from buildings. Demolition and site clearance particularly concerning old power stations and gasworks are cause for concern.

No safe asbestos

In industry and the community at large the danger of asbestos poisoning exists. Asbestos is a killer! No amount of distortion of evidence or altering facts and figures will bring back to life those who have already died from exposure to this fibrous mineral, nor will those destined to die be cured by any report attempting to prove that some asbestos is safer than others. **All Asbestos Kills!**

Regulations

Some of the regulations put in place to combat the worst excesses of Asbestos abuse include the Construction (Design and Management) Regulations 1995, the Environment Act 1995 and the Control of Asbestos at Work Regulations 1987 (CAW) amended in 1992 to stipulate the duties of employers and self-employed persons to prevent asbestos exposure at the workplace. The Health and Safety at Work Act and other European Safety Directives on Asbestos are also in place. The Health and Safety Executive (HSE) has an explicit duty to enforce compliance with the regulations and can do so with informal sanctions, improvement notices, prohibition notices and legal action. In 1991/92 there were 39 convictions under the CAW regulations. This resulted in penalties totalling £21,250. In 1992/93 there were 23 convictions which produced penalties of £10,302. While the number of deaths from asbestos poisoning from workplace and environmental exposure increases at an alarming rate the number of convictions for contravening the asbestos regulations is decreasing. The Asbestos (Prohibitions) (Amendment) Regulations 1999, signed on 24th August were put in force on 24th November 1999. Statutory Instrument 2373 bans the import of crude fibre, flake, powder or waste Chrysotile. The new use of asbestos cement, boards, panels, tiles and other products are also prohibited.

Asbestos in situ

Do not touch or interfere with the suspected asbestos. This substance is most harmful when it is disturbed or when it starts to disintegrate. It is the dust created by interference which causes harm.

1. Leave it alone and seek advice from experts.

2. If you are suspicious that you are living in a building which contains asbestos, speak to those who control or occupy the building. If you are not satisfied with their response, contact the Health and Safety Executive, the Environmental Health Department or your local authority housing department for advice. The following statement comes from a information accumulated by the Institute For Environment And Health at the University of Leicester.

   > Existing asbestos in good condition must, where applicable, be managed in situ. Where asbestos materials are damaged and fibre release is occurring, removal is justified if this would result in a reduction in exposure. A

> general policy of asbestos removal would result in more, not less, exposure and is therefore strongly discouraged. It is recognised that judgement relating to the management of asbestos material must include a consideration of the perception of risk as well as the risk itself. (*Fibrous Materials in the Environment*, 1997, Institute For Environment And Health, University of Leicester, page 5).

Awareness

This information is designed to point out that asbestos awareness is crucial in all sections of the community. The dangers in heavy industry are well documented and obvious. However, asbestos is a real danger in everyday life. Many victims of asbestos related diseases are from unlikely backgrounds and are the unfortunate testimony to this reality.

Appendix 2*: What are the Dangers?*

Systematic misinformation

The effective regulation of Health and Safety in industry and the community at large depends on the accuracy and availability of information. If information concerning dangers in industry and the community is hidden or controlled by those motivated by self-interest and profit the effective safety and welfare of anyone exposed to the dangers of asbestos cannot be guaranteed. Litigation in the American courts has revealed how the major asbestos companies systematically suppressed findings by medical and scientific researchers which confirmed the carcinogenicity of asbestos. Profits came before the lives of ordinary people.

Exposure

Occupations involving the handling of asbestos lagging and textile materials are the most lethal. Insulating engineers have been in particular severely affected. However, people not actually handling the material themselves are often exposed to asbestos dust by being in the vicinity when fibres are introduced into the atmosphere. Breathing in asbestos fibres which are invisible to the naked eye, can lead to painful and disabling diseases. All asbestos-related diseases are progressive illnesses. This means they cannot be cured and in many cases the sufferers become terminally ill. Those who have been working with asbestos are most at risk for obvious reasons.

There have recently been incidents involving industries not normally associated with the use of asbestos. School cleaners, janitors and even teachers have been diagnosed with an asbestos related disease in both Scotland and England. Asbestos related illness can result from very short periods of exposure to asbestos dust. The symptoms normally take a long time (between 15-50 years) to show up between exposure and the diagnosis that a problem exists. Exposure to asbestos fibres can lead to a number of different diseases. When separated into very fine fibres asbestos becomes a very serious health hazard. The main way in which these fibres enter the body are through normal breathing, swallowing contaminated food and by contaminated nose and lung secretions.

Organs under attack

Asbestos attacks the heart, colon, larynx, chest, stomach, vascular system, the skin and various other parts of the body. These attacks come in three main diseases caused by exposure to asbestos. They are asbestosis (lung scarring), lung cancer and mesothelioma (cancer of the lining, the mesothelium) of the chest or abdomen. These three diseases related to asbestos poisoning have several things in common in that they are all very painful long drawn out events for both sufferer and those closest to them. The gestation period for the development of these diseases is between 15-40 years after exposure to asbestos fibres. The biggest blow of all is the fact that there is no known cure for any of these conditions, only palliative care is available. Prevention from contact with the deadly dust in the first place is the only safe solution.

Asbestosis

Fibrosis or scarring of the lung in which the tissue becomes less elastic making breathing progressively more difficult. It is irreversible and will progress even after cessation of exposure to asbestos. Asbestosis has been called the one symptom disease: shortness of breath. This can take the form of a terrible tightness of the chest. Other common symptoms are: unproductive or dry cough, clubbing of the fingers, lack of energy, more frequent chest infections and weight loss. You do not have to have a heavy exposure to asbestos to develop Asbestosis. But there is no doubt that heavy exposure makes you more likely to get it quicker. There is no safe level and over half of the people who suffer from Asbestosis eventually develop cancer.

Lung Cancer

Lung cancer is one of the biggest killers in our society. Smoking is always seen as the main contributory factor and many asbestos victims contend that it is often attributed blame when asbestos poisoning is the real root cause. An increased incidence of lung cancer has been found among people who have been in contact with asbestos, particularly if it involves their occupation. The increase in risk is dependent on the degree of exposure. All three types of commonly used asbestos can be responsible for lung cancer. Many sources argue that the risk is very much greater for smokers although, many non-smokers have also been victims of lung cancer asbestos being the undisputed cause. The most common symptom of lung cancer is the presence of chest

infection which fails to clear up, blood spitting, shortness of Breath (Dyspnoea), general ill heath, coughing up blood (Haemopytysis), weight loss and muscle wasting. One report gives the average death of asbestos workers with lung cancer as 55 years. The average age of those not involved in working with asbestos was 68 years. That is on average thirteen years of life stolen by the asbestos industry and that is only with reference to lung cancer victims.

Mesothelioma

This is a cancer of the inner lining of the chest or of the abdominal wall. It is almost exclusively confined to asbestos exposure. Para-occupational incidence of Mesothelioma is not unusual. This means someone who suffers from this asbestos-related disease whose only contact with asbestos is living in the same house as an asbestos worker. One of the most common points of exposure has been women who washed their husbands' or fathers' dirty working clothes. Mesothelioma was once a very rare cancer. It is estimated by some that 85 per cent of cases are attributed to asbestos exposure, it is known as the asbestos cancer. Others involved in the debate argue that asbestos is the sole causal factor responsible for Mesothelioma. The members of Clydebank Asbestos Group would concur with the latter viewpoint. Mesothelioma is an extremely painful illness and it always kills. It is usually terminal within two years of first diagnosis: as the cancer grows in the chest it eventually kills the sufferer by strangling the aorta. The first symptoms are pain, breathlessness and heavy feelings in the chest. Cigarette smoking has no relationship with the development of this disease. It has been known for the interval between first development of the disease and contact with asbestos to be as much as 40 years, although around 20 years is more common and it can be only a few years. There is no known cure for Mesothelioma despite a great deal of research in this area.

Other dangers

Exposure to asbestos has also caused other cancers, mainly connected with the digestive system (gastrointestinal cancers). These attack the stomach, colon, oesophagus, rectum and the larynx. One of the biggest problems for the victims of asbestos-related illness is the fact that Asbestos is only deemed to be culpable in the last resort. This is a recurring complaint which has been made by many Asbestos victims and their families. It is a situation that continues today.

Smoking and Asbestos

Working with asbestos and cigarette smoking can be a lethal combination. People who are exposed to asbestos and continue to smoke are in significantly greater danger from contacting lung cancer. It is important that this information is made clear to anyone who may come into this category.

TURNERS AND THE ASBESTOS LEGACY IN CLYDEBANK

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Introduction

Up to the 1960s a large number of 'Bankies' earned their livelihood in either the giant Singer factory at Kilbowie or in John Browns engineering and shipbuilding – the company that constructed the Cunarders, the *Queen Mary* and the *QE2*. Exposure to asbestos occurred in both these workplaces with the product used heavily in ship insulation and also in electrical insulation around the sewing machine motors.[24] Less well known is the fact that Clydebank had its own asbestos factory, Turners Asbestos Cement Company (TAC), which operated for almost 32 years from 1938 until its closure in 1970. Turners was the third largest employer in the burgh in the 1950s. This chapter explores the history and the significance of Turners, Clydebank, using a range of sources including evidence drawn from oral testimony from Clydebank residents and former employees of Turners. The first section describes the development of Turners, locating this within the context of growing demand for asbestos products and the evolution of asbestos manufacture in Scotland. The second section analyses work conditions within the factory. Finally, we examine the legacy of Turners upon the community and the environment in Clydebank.

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[24] Asbestos Oral History Project (AOHP), Interviewee A25 (a boilermaker-plater at John Browns, 1934-51). Oral testimony: Locky Cameron (Clydebank Asbestos Group) on Singers. His contact was with sheets and strips of brown (amosite) asbestos.

Turners and asbestos manufacture in Scotland

Scotland has a long association with the asbestos industry. Scottish entrepreneurs were amongst the pioneers in developing the manufacture of asbestos products, with the first companies appearing in the early 1870s.[25] By 1885 there were at least 20 asbestos manufacturers in Glasgow.[26] The importance of the industry in Clydeside in this early period is suggested by the fact that of 18 asbestos companies (undoubtedly the largest) listed in a UK Trade Directory in 1884, 6 were located in Glasgow.[27] The industry developed rapidly thereafter, especially on Clydeside. A Glasgow Directory listed 52 asbestos manufacturers, warehouses and agents and 26 boiler coverers in the city in 1900.[28] Thus, the claim of the Turner and Newall Company in their own internal company history that this was the first asbestos factory in Scotland is very wide of the mark.[29] The shipyards and engineering companies were the major users of the product in West Scotland before the 1930s, with boiler and pipe covering companies emerging which specialised in thermal insulation.[30]

Turner Brothers, the company that came to dominate the UK asbestos industry (as Turner and Newell), began manufacturing asbestos around 1920 from their plant in Rochdale. Demand for a variety of asbestos products – from insulating materials for shipbuilding, sheeting and pipes, to brake and clutch linings led the company to expand during the inter-war economic recession when so many other companies were contracting and laying off their workers. In the mid-1930s, Turners looked towards expanding its market in Scotland where there already existed a number of asbestos manufacturers and a growing market for the product, particularly in the Clydeside shipyards and in construction. Turners bought a plot of land at Dalmuir, Clydebank, previously owned by the defunct shipyard giant Beardmores. Here they constructed a

[25] A.L. Summers, Asbestos and the Asbestos Industry (1919), p. 10; St-J. Vincent Day, 'On Asbestos', Institution of Engineers and Shipbuilders in Scotland, 5 December, 1871 (Glasgow, 1872).
[26] *Post Office Directory of Glasgow, 1884-5*, p. 888.
[27] *Kelly's Directory of Merchants, Manufacturers and Shippers (England, Scotland and Wales), 1884,* p 185.
[28] *Post Office Directory of Glasgow, 1900-01*. .
[29] Turner Asbestos Company (TAC) History, *Origins to End of 1967* (1968), p. 181. Copy in Clydeside Action on Asbestos Archive, Glasgow.
[30] For more detail see R. Johnston and A. McIvor, 'Incubating death: working with asbestos in Clydeside shipbuilding and engineering, 1945-1990', *Scottish Labour History*, no 34, 1999.

massive new factory in 1938 to manufacture asbestos cement products, primarily for the construction industry.[31]

INSERT MAP, DALMUIR AREA, SHOWING TAC WORKS, c1940

INSERT AERIAL VIEW, TURNERS ASBESTOS CEMENT, 1939

At the plant raw asbestos fibres were mixed with water and Portland cement to create asbestos sheeting and wall board, corrugated bitumen covered asbestos roofing panels, tiles, water tanks and non-corrosive pressure pipes for water mains. Such products were widely used at the Empire Exhibition at Bellahouston Park in Glasgow in 1938 and in armament and other factories constructed under the Defence Programme, as well as in post-war prefabricated houses.[32] Turners continued production until closure in 1970, ostensibly as a consequence of ‘excessive capacity’, though the decision to close the Dalmuir factory may have been influenced by a protracted three month long strike for improved wages.[33] The company also faced increased competition from the 1950s. Other multi-national asbestos companies expanded into Scotland. Most significantly, perhaps, Cape Asbestos and John Manville established Marinite Co. Ltd. in Glasgow in 1952 to produce asbestos panelling, widely used in the building industry and on ships as an insulator and fire retardant.[34]

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[31] *Clydebank Press*, 25 February 1938

[32] *Glasgow Chamber of Commerce Journal*, XXII, April 1939, no. 4, p. 96; TAC History (1968), p. 181. TAC boasted that the Glasgow Empire Exhibition had 320,000 square feet of asbestos cement and 250,000 square feet of fire resistant ‘Turnall’ asbestos wallboard.

[33] *Clydebank Press*, 1 May 1970; 29 May 1970; 24 July 1970; 7 August 1970.

[34] *Glasgow Herald*, 27 May 1952.

Working with asbestos in Turners

The TAC Dalmuir asbestos factory expanded to employ at maximum capacity in the 1950s some 320 workers, of which 45 were women.[35] After delivery the asbestos was stored in a shed on the site. Jack Walsh recalled how up to 3,000 tons of raw blue and white asbestos fibre was stacked in hessian sacks piled up to 30 feet high in this shed.[36] Thereafter, the bags of asbestos were transported to the upper level of the factory and deposited in a mixing hopper. Here somebody worked attaching a sack over the outlet chute, constantly filling bags of the blended fibre to the required capacity. Another operator then took several of the sacks and loaded them into the 'beater', together with the required proportion of water and Portland cement. This machine created the asbestos cement which flowed downwards to the factory floor to be moulded into boards, panels, tiles and pipes. After this the products dried in ovens before dry boards and pipes were trimmed to size in giant cutting machines, with final preparation undertaken by hand. Some of the finished products were then sunk in seven large water filled vats to allow them to 'mature'.

The factory was organised on 'flow' principles, with the raw materials being processed stage by stage and moved from machine to machine by banks of rollers, not dissimilar to a steel mill. The majority of the TAC Dalmuir workforce could be classified as unskilled and semi-skilled machine operators, and a respondent from Donegal noted how a substantial proportion of Irish and Irish descendants were employed. Those whom we spoke to who worked in Turners differed, as you might expect, in their attitudes to their work. However, most noted that the work was very physical, dusty, dirty, noisy and dangerous. The photograph below show a number of female workers in one of the final finishing departments, preparing the pipe joints, just after the factory was first built in 1938.

INSERT PHOTO, 'MAKING ASBESTOS PIPE JOINTS, 1938

[35] M.S. Dilke and A.A. Templeton, *Third Statistical Account of Scotland* (Glasgow, 1959), p. 235; Clydebank Burgh Council, *Official Handbook, 1960*, p. 39. The 1966 Handbook reported 275 employed.

[36] *Evening Times*, 26 October 1987. Owen Lilly also testified to the use of the more dangerous blue asbestos in the works.

The preparatory processes with the dry asbestos fibres were amongst the most dusty, and hence dangerous jobs in the factory. Mary Sadler was directed as a wartime 'dilutee' into employment at Turners by the Labour Exchange in 1940 when a male machine operator left for the navy. She took on the heavy and dangerous job of loading and operating the 'beater' which created the asbestos cement. She described her work:

> The job itself was quite interesting; I quite enjoyed it. I would never have left if the Blitz hadn't have come. I was in what was called the beaters. I was upstairs putting the fibres in and there was a man downstairs another floor below me. So many revolutions of water I put into the beater tank y'know. And then I went upstairs and I put in, if I remember right it was six bags of fibre, all different types of fibre in. He put on his light to say he was putting the asbestos in so we both did it at the one time, y'know. I used to flick the light and I was ready too. And that was all you did. You just put your six bags of fibre into the tank, the beaters beat it up and then it came out through and on to the machines and the men cut it off into sheets y'know. It was quite interesting. It was a hard job, because they were heavy bags, about 20-30 pounds in each bag of fibre and they said I could never do it because I was a slight 18 year old, y'know but you get there….It was quite a good job. I quite enjoyed it anyway. But that was really all there was to it. So many revolutions of water, so many bags of fibres, so much cement and it all went into this beater and it all mixed up into cement and then it came out through the machine and the men at the machine cut it off into sheets.
>
> Q. Did the job involve opening up the sacks?
>
> A. Oh yes, oh aye. It was like, you had a platform and then it was like a tunnel. This was where you put the….when you were on the platform you had so many bags….you opened them up and put them into this tunnel and your head was in the tunnel as well.[37]

Another Turner employee commented on the dusty atmosphere and confirmed that dust levels were most dense on the upper level:

> The machines in it, they were flying up and down by you by you and they were blowing up the dust off the floor You got that used to it you didn't care about it, y'know what I mean.
>
> Q. Which was the most dustiest job?

[37] AOHP, Interviewee A22A. This respondent suffers from the asbestos-related disease pleural thickening.

> A. It was mixed up in the loft where there was a big mixer y' know….Dust was flying around all over the place. He cut the bag and threw it into the machine. Anything that was left, he gave the bag a shake. You look up and you wouldn't even see the man who was working in it. Like everything else if you don't do it somebody else will. The firm didn't care if you jacked [left] or not. Oh no, no.[38]

By the time TAC started operations in Clydebank in 1938, the British government had introduced measures aimed at regulating the asbestos hazard. The Asbestos Regulations of 1931 were a response to growing medical evidence from 1924 of confirmed deaths from asbestosis (though a female factory inspector had recognised the problem as early as 1898). Britain was the first country to pass such pioneering legislation, which looked impressive, at least on paper. Provisions included the wearing of respirators; dust checks and suppression of dust through localised exhaust ventilation; medical checks and monitoring. Asbestosis was also made a prescribed occupational disease, which enabled workers to claim compensation. However, researchers have shown that in practice these regulations were relatively ineffective. Only a small proportion of workers in Britain exposed to asbestos were covered; the Medical Panels were too conservative and compensation too meagre; whilst the asbestos manufacturers, insulation companies and their employers' associations continued to deny the extent of the problem and to lobby to minimise their liability.[39] Critically, the asbestos industry succeeded in getting only a core group of workers in so-called 'scheduled areas' included in the 1931 scheme. These were the primary *textile* manufacturing processes of crushing, carding, spinning, weaving and mattress-making. Laggers (including sprayers) and those working with asbestos brake linings were not included and nor were most asbestos cement workers. Turner and Newall's internal documents indicate that the risks were not deemed to be as high for such workers.

This is borne out in relation to the cement workers by the evidence of asbestosis compensation claims in the 1930s, which were much higher in the 'dry' processes in

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[38] **AOHP, Interviewee A23.**

[39] G. Tweedale and P. Hansen, Protecting the Workers: The Medical Board and the Asbestos Industry, 1930s – 1960s', *Medical History*, no 42,1998; D. Jeremy, 'Corporate responses to the Emergent recognition of a Health Hazard in the UK Asbestos Industry: the case of Turner and Newall', 1920-1960, *Business and Economic History,* no. 24, 1995; M. Greenberg, 'Knowledge of the Helth hazard of Asbestos Prior to the Merewether and Price report of 1930', *Social History of Medicine*, no. 7, 1994; Johnston and McIvor, 'Incubating Death'. For a less critical perspective see P. Bartrip, 'To Little, too Late? The Home Office and the Asbestos Industry Regulations, 1931', *Medical History*, no. 42, 1998.

the scheduled areas than in Turners Asbestos Cement. Indeed, the risk in the asbestos cement section of Turner and Newall's UK business (which employed about 30% of the total Turner and Newall workforce) was regarded as so small that TAC were informed in 1939 by the parent company that they could stop the contributions they had been making to the corporations internal asbestosis insurance scheme.[40] This is very significant. At just the point when TAC Clydebank started production Turners regarded asbestos cement manufacture as safe, with the risk of asbestos exposure causing health problems as negligible. Hence no special measures to minimise workers' contact with dust were deemed necessary.

Apart from the specific Asbestos Regulations, there also existed a general legal obligation upon employers under the 1937 Factory Act to provide a dust-free work environment. However, the evidence for TAC Dalmuir suggests that this was very poorly policed and enforced. This, combined with the exclusions under the 1931 Asbestos Regulations meant that many workers in TAC Dalmuir would be exposed to disabling and life-threatening quantities of dust. As the Turner and Newall historians Tweedale and Hansen note: 'at the periphery of the Turner and Newall business the medical surveillance in the satellite firms grew even weaker or even non-existent'.[41] They conclude their analysis by arguing that whilst the asbestos companies bear the brunt of responsibility for the escalating deaths, government agencies (including the Medical Panels) and policy-makers also bear some of the blame. Moreover, the major asbestos companies vigorously contested compensation claims whilst continuing to reap massive profits. Using Turner and Newall's own internal company papers as evidence, Tweedale and Jeremy have argued:

> The company's health and safety policy was directed at minimisation and denial. This meant, *inter alia*, failing to treat many legitimate asbestosis claims sympathetically; misleading the government regulators about asbestos-related disease in shipyard insulation workers; attempting in the 1950s to suppress research about the carcinogenic potential of asbestos; and in the 1990s doggedly contesting 'bystander' mesothelioma claims from environmental exposure.[42]

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[40] N. Wikeley, 'Turner and Newall: Early Organizational Responses to Litigation Risk', *Journal of Law and Society*, 24, 1997, pp. 258-9. See also N. Wikeley, 'The Asbestos Regulations, 1931: A Licence to Kill?', *Journal of Law and Society*, 19, 1992.
[41] Tweedale and Hansen, 'Protecting the Workers', p. 444.
[42] G. Tweedale and D.J. Jeremy, 'Compensating the Workers: Industrial Injury and Compensation in the British Asbestos Industry, 1930s – 60s', Business History, vol 41, April 1999. See also G.

The emergence of evidence that asbestos caused lung cancers in the mid-1950s and a specific tumour of the lung and abdomen lining (mesothelioma) in the early 1960s led to further changes in the law – notably the revised Asbestos Regulations of 1969 - and restrictions on the use of asbestos, including, in 1970-2, a ban on the importation and manufacture of blue (crocidolite) asbestos. In part, these measures were an admission that the 1931 Regulations had failed to protect all of those workers who were at risk. Why nothing was done in the intervening period is the real tragedy. These more effective controls over 1969-72 came too late for the Turners Asbestos Cement workers in Clydebank, many of whom had already inhaled fatal doses of the carcinogenic fibres whilst going about their daily work.

The oral evidence of ex-TAC Dalmuir workers shows that the Asbestos Regulations and Factory legislation were ineffective. Localised exhaust ventilation reduced but did not eliminate dust emissions and there is little evidence of workers at TAC wearing proper respirators or even basic face masks to protect themselves, even when sweeping the dust from the factory floor. Those we spoke to indicated that masks were either not provided, or were available but the necessity of workers wearing the masks was not impressed upon those working on the factory floor. A moulder, Nancy Ferguson, whose health was badly affected by asbestos, recalled how fellow female workers and herself used aprons, tied sacks around them and used scarves around their faces and heads to try to protect themselves from the insidious dust.[43] Mary Sadler also testified to an absolute lack of safety provision:

> Q. Do you remember any safety precautions or did you wear a respirator?
>
> A. I don't remember a mask or anything. No. First time I ever remember wearing a mask was when I went back into Singers after the war was finished and I became a – trust me to get all the dangerous jobs – a paint sprayer and it wasn't paint it was laquer for the sewing machines y'know. But no I don't remember any safety precautions at all….You never thought of danger. I mean asbestos was nothing. Just never gave asbestos a thought, y'know.
>
> Q. You weren't aware at the time of any dangers?
> No, not at all. That was 1940-41.

Tweedale, *Magic Mineral to Deadly Dust: Turner and Newall and the Asbestos Health Hazard* (Oxford University Press, forthcoming, 2000)

[43] *Evening Times*, 16 June 1993.

> Q. This man who did the job taking the fibres and bagging them. Do you remember the job being dusty at all or the atmosphere being dusty?
>
> A. Oh aye. It was a dusty atmosphere…. He was worse than me. I mean by the time I got the bags the bags were tied up. I was just next to him but I mean a lot of dust used to come out.
>
> Q. Do you recall any exhaust ventilation - any ventilation pipes that sucked the dust and fibres out of the plant?
>
> A. I don't think these are things you think about, y'know. I don't remember anything like that.[44]

A machine operator employed at Turners between about 1958 and 1966 also commented on the lack of masks or protection:

> Q. Did you have any respirators or masks?
>
> A. Well I never had a mask and I'll be honest with you I never seen anyone…you had gloves that was to save your hands getting cut up.
>
> Q. So you never worked with a respirator or a mask at all?
>
> A. Oh no, no. I dare say they wouldn't get away with that today….
> I never even knew where they were. Never mind not wearing one. I'm not saying that they actually wasn't there but if they were there nobody offered them to you. Know what I mean. You did get gloves. Your hands got that bad your skin got all worn off. The sheets was that sharp y'know.[45]

INSERT PHOTO: SACKS OF ASBESTOS IN TURNERS, c1960

[44] AOHP, Interviewee A22A.
[45] AOHP Interviewee A22A.

Owen Lilley found himself walking the streets of Clydebank searching for work in 1964. When he arrived at Turners he was immediately taken on and started work the very next day. He described very graphically conditions in the plant in the mid 1960s; ….

> I'll never forget till the day I die the first impression of that place. It was like walking into Dante's Inferno without the fire. It was just Hell. The noise was unbelievable. The size of the machinery was awe inspiring you know, awe inspiring. Three big machines took up the whole width of the factory. They were a sheet machine, and a pipe machine, and then another sheet machine. Dust was flying through the air everywhere, clouds of dust. And there were wee men walking about - I ended up dain it for the first two or three days I was there - sweeping the floor. Nae masks, just overalls. Clouds of stoor everywhere it just filled the air, and it was settling just as fast as they were sweeping it. And then it was then dumped. Shovelled intae wheel barras, takin out tae the side of the Clyde and dumped down at the grounds of what's the hospital down there now...Tae be heard. I know it sounds crazy but you had tae shout in a whisper. That was the strange thing, you had tae get in between the pitch of the machines and you could be heard.[46]

Interestingly, other commentators noted how you could smell and taste the dust. As in the cotton industry, the major problem was the accumulation of muck and dust on the machinery. Owen Lilly continued:

> The worst of the whole thing was the clean-downs. You had to clean the machine once a shift. You had big steel tools like scrapers, and they were for all the world like a big broad blade 6 or 7 inches long eh wide, with a handle maybe 4 or 5 feet long, that was made out of steel. And eh, you scraped off all the hardened asbestos cement fae round the sides of the machine with high pressure hoses and these scrapers. And every weekend the machines all closed down throughout the factory and they did what the called 'the clean down.' It was the big job when they did all the repairs tae the felts; washed out tubs and vats, and stripped everything back tae the bare metal and it was all washed away. And because you were working with high pressure hoses you got an awful lot of splash-backs and you were covered in wet asbestos cement. So you got on the bus with that and it started drying out and you were very popular with some of the bus conductors and so on. They thought the world of you sitting there making there seats all white you know. We nearly all carried newspapers just tae sit on in the buses so it didnae affect too many people. But we didnae know we were killing them.[47]

Lack of knowledge and information on the hazards of asbestos left many in ignorance of the danger they were in. Either people were not told, or they were informed that the

[46] AOHP, Interviewee A19A
[47] AOHP, Interviewee A19A

risk was minimal, associated only with one type of asbestos and with the 'dry' preparatory processes. Referring to the mid-1960s at Turners, Owen Lilly noted:

> When you went in the door of Turners asbestos there was a Factory Act with all the stuff. The only problem was that you couldnae see through it with the layer of asbestos cement on the glass you know. We were offered masks and told tae use them if we were upstairs at the beaters with blue asbestos, the dry form which if you breathed it in it was bad for you. They didnae tell you that once it came down it was wet then it dried out it could make you just as ill. You never got any warnings of that kind. You never got any warnings about brown asbestos; you never got any warnings about white asbestos. Ah, you weren't told that when you took it home in your clothes your wife was going to breath it in as well. As far as we were concerned the only dangerous stuff was the stuff that came out the bag and went intae the beater. That was the only time that was dangerous.[48]

Another Turner machine operator demonstrated an acute awareness of the potential of his cutting machine to take fingers off if you weren't careful but, significantly, when asked when he first realised that asbestos was dangerous replied: *"Oh, I was ignorant of the fact, ignorant of the fact, aye. I, I don't really know. I cannae answer that question"*.[49] This is indicative of a tendency for workers at this time to be more aware of the immediate threats to their safety at work, and less aware of occupational health problems which incubated over long periods of time. The provision of gloves but not respirators mentioned before is also significant in this context. Clearly, the wearing of masks was not being enforced and workers were not being adequately informed of the long-term effects the inhalation of asbestos dust could have upon their health. Nor have we come across any evidence that there was systematic medical surveillance and monitoring of TAC employees. None of the respondents we spoke to could recall any such medical scheme.

Clydeside employers at this time is not known. The evidence suggests, however, that there was very little, if any, organised protest against conditions at TAC Dalmuir until the late 1960s. Significantly, the three month 1970 strike for higher wages was reported to be the first in the history of the plant.[50] Instead workers voted with their feet, leaving Turners for more congenial employment elsewhere. This was probably facilitated by the expansion in job More research is necessary to determine the

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[48] AOHP, Interviewee A19A

[49] AOHP, Interviewee A24

reactions of asbestos companies in Scotland such as Turners, MacLellans and Cape (Marinite) to the discovery over 1955-60 that asbestos caused cancer. The oral evidence indicates, however, that at TAC Clydebank the response was inadequate. Clearly, by the 1960s *some* Turners workers in the most dusty processes were using masks. However, as in the shipyards, those working in the immediate vicinity were not deemed to be at risk and hence not effectively protected. There was still an assumption in this period that very large quantities of dust needed to be inhaled to get cancer, indicated in the fact that compensation was initially only allowed where lung cancer was diagnosed in *conjunction* with asbestosis. As asbestosis was not deemed by the manufacturers to be a problem in asbestos cement production, the risk of cancers amongst such workers was probably also deemed to be negligible in the 1960s.

Other testimony indicates that by the 1960s some (if not all) of the heavy cutting machinery was fitted with exhaust air extractors to draw away most of the dust. One machine operator whose job involved cutting 10 foot long pipes into six inch 'pots', described such an extractor, though he also noted that his had a tendency to get blocked and needed to be relieved by a heavy bang with a brush. He did not use a mask at his work, described conditions as 'terrible' and 'crap' and only stuck the job for a year.[51] This experience ties in with others and suggests a growing recruitment problem and a considerable turnover of workers at Turners by the 1960s. Few, it appears, tolerated such conditions for any length of time. One Irish machine operator described bitterly how he left the plant after several years in the late 1950s / early 1960s only to be forced to return because he was desperate for work and had a young family to provide for: 'They were always going and coming. Always people going out and new ones coming in. A good man wouldn't have stayed in it. Any man that has any sense'[52]

Making matters worse was the fact that the plant does not appear to have been unionised before the 1960s. One respondent described how wages were relatively poor in the 1960s and how management deducted the cost of any damages to

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[50] *Clydebank Press*, 1 May 1970; 29 May 1970; 7 August 1970.
[51] AOHP, Interviewee A24
[52] AOHP, Interviewee A23.

sheetings from these already meagre earnings.[53] Whether the factory regime at Turners was any more or less draconian than other opportunities in the 1960s. For some, however, this was not an option. The wife of a machine operator who worked in the plant for around 8 years commented:

> He was frightened to walk out of the job because he was married with a family and he just could not afford to do it, and that was the ins and outs of it. It was a job, the money was coming in….
>
> What could we do, we were trying to bring up two kids We were trying to bring them up as decent as possible and do our very best….Folk don't really understand when you actually say to them. I was trying to do the best for my husband, my family and my children.[54]

In response to the question: were you aware that asbestos was dangerous? Her husband replied*;*

> I knew it was dangerous before I went in there 'cause there was people complaining but when you have two of a family to bring up it was better than walking the streets. I never was idle in my life.[55]

Moreover, Like the Singer Corporation in Clydebank, Turners developed something of a reputation as a welfarist employer, with extensive sports and welfare facilities, including a gym and works football, badminton, golf and bowls teams.[56] This perhaps did something to sweeten the pill, helping some workers to tolerate what were by all accounts very grim working conditions in the 1960s.

The legacy of all this was a high incidence of asbestos-related diseases amongst those formerly employed by TAC. Precise figures are not known, but the weight of evidence appears irrefutable. Clydebank Asbestos Group have recently identified five confirmed deaths of ex-Turner workers from mesothelioma.[57] An ex-Turner employee noted in 1987 that he could cite the names of a dozen former colleagues who had died as a consequence of asbestos exposure.[58] Three out of four of the ex-Turner workers we interviewed suffered from some asbestos-related respiratory disorder. In 1993, 12 workers in a Turners works photograph taken 40 years previously in 1953 were

[53] AOHP, Interviewee A23
[54] AOHP, Interviewee A22B
[55] AOHP, Interviewee A22A.
[56] *Clydebank Press*, 7 August 1970
[57] Information provided by the Clydebank Asbestos Group Chairperson, Locky Cameron.
[58] *Evening Times*, 26 October 1987. Jack Walsh.

discovered to have subsequently died of breathing-related problems (see photo below).[59] Whilst not definitively traced back to asbestos in all cases, the prevalence of lung disorders of this magnitude indicates dust inhalation as the primary cause. Misdiagnosis by doctors in the 1950s and 1960s was also not uncommon, so the full extent of this particular tragedy will probably never be known.. In one of these cases, Nancy Ferguson was told by her doctors that she suffered from emphysema due to her smoking. However, a post-mortem found a substantial amount of asbestos fibre in her lungs. Tragically, Owen and Margaret Lilley have both been diagnosed as asbestotic – he as a result of working at Turners and she from washing his asbestos-impregnated work clothes. Turners thus contributed to a somewhat unusual pattern of asbestos-related disability and mortality in Clydebank. Male mesothelioma deaths were high; but so were female mesothelioma deaths in Clydebank, which exceeded the expected incidence by more than ten times.[60] Employment in Turners cast a dark shadow, long after the whirring beaters, thudding rollers and shrieking cutters fell silent in 1970. Asbestos shattered people's lives. Owen Lilly poignantly described the impact his disability had:

> Well we used to live in reasonable comfort. We're living just sort of on the poverty line I would say. Its difficult. Margaret's very very good at making ends meet.
>
> Q. What effect has all this had on your social life?
>
> A. Well the health aspect has had more impact than the financial impact actually. The health aspect has stopped us going anywhere and dain things. We use to be running about *all* over Scotland. Everywhere we went we made friends We could still dae that even though we're skint, but we cannae dae it because of the ill health….Och aye we had a lot of fun. And we've got a lot of memories, and in here I'm still wanting tae dae all these things but I cannae dae them. Margaret's the same. On a day like this I'd had been up at Arrochar or something and never thought anything about it. A wee tent 'come on let's go'[61]

[59] *Evening Times*, 16 June 1993.
[60] Figures provided by the Health and Safety Executive, Epidemiology and Medical Statistics Unit, Bootle, Merseyside. A UK mesothelioma death register has been kept since 1968 from which standardised mortality rates have been calculated.
[61] AOHP, Interviewee A19A.

Apart from the mortality caused by asbestos-related diseases, industrial disability was responsible for pushing victims and their families into relative poverty and invariably into what sociologists and policy makers are now apt to term 'social exclusion'.[62]

INSERT PICTURE EVENING TIMES 16 JUNE 1993, PAGE 4 (GROUP PHOTO, 1953) – TOMMY TO PROVIDE.

Turners and environmental pollution

The consequences of Turners Asbestos went far beyond the workers who came into direct contact with the deadly fibres during their daily work. The community was directly affected in three ways. Asbestos dust, emanating either from the factory or its waste tips, blew into the neighbouring streets. One Clydeside resident noted how the end of Agamemnon Street adjacent to the Turners factory was covered in white dust which settled on cars and window sills.[63] Secondly, the wives and families of the predominantly male Turners workforce were exposed to the risk of contracting asbestos-related diseases through contact with the dust on work clothes and overalls brought into the home. Two wives of TAC workers commented independently on the dust brought into the home on work clothes.[64] Tragically, one of these now suffers from pleural plaques associated with this secondary exposure to asbestos dust caused by regular washing of work overalls.[65] The wife of a machine operator recalled in conversation with her husband:

> See when you went into it and you came out that first day. When I said to you how did you get on, you said to me it was ok, it was a good job. I said why are you all white? He had pure black hair. Your black hair was pure white with the dust….. The man came home and he was pure white, actually white with dust. It was a nightmare, a pure nightmare.[66]

Her husband noted the lack of facilities to wash before returning home, contrasting the situation at Turners with Singers:

[62] This is discussed in more detail in R. Johnston and A. McIvor, 'Pushed into Social Exclusion', *Scottish Affairs*, forthcoming, 2000.
[63] We are grateful to Jim Cameron for this comment.
[64] AOHP, Interviewees A19B and A23B.
[65] AOHP, Interviewee A19B.
[66] AOHP, Interviewee A22B

> There was no such thing in it as a shower bath either when you finished working. Not at all. No your hands and clothes were all cement and everything. If you washed your face you were washing the cement into it. I was in Singers a wee while before that. That was a good clean job. I just didnae like it because it was shiftwork as well. You got a shower bath in Singers.[67]

Thirdly, the company contaminated the area with indiscriminate dumping of asbestos waste for more than 31 years. This left a polluted site, including a large, uncovered asbestos waste pile when the plant closed down in 1970.

If you glance at a map of the area, you will see that Turners factory was located close to the banks of the Clyde. Throughout its existence from 1938 to 1970 all the waste asbestos cement was put through a crusher and this, plus asbestos cement silt from the bottom of the maturing tanks in the factory, was taken from the plant and dumped down at the river bank and the mud flats adjacent to the factory. The Turners employee responsible in the 1960s for this asbestos disposal, Jack Walsh, testified in 1987 that 'all the ground between the factory and the river along the whole frontage was reclaimed by dumping asbestos waste'.[68] He estimated that this represented an area around 1,000 yards long by 40 yards wide by 7 yards deep. It appears that nothing was done to make the site safe for a decade after TAC closed. In 1980 this situation was exposed in the press. Commenting on the issue, Ted Rushworth, the Director of the Cancer Prevention Society, highlighted the cancer risk to the community that the dumped asbestos represented and expressed his amazement that Clydebank residents had tolerated such 'scandalous contamination' for so long.[69] Some asbestos removal was undertaken on the site in 1980 and a more extensive clean up job undertaken by the Council in 1985, costing some £400,000. This essentially involved covering the asbestos on site. Attempts to recoup the costs from the owners of the site, Monaville Estates, failed because they lacked liquid assets.[70]

This only partially solved the problem, which resurrected again when a private U.S. health company approached the District Council and the Scottish Office in 1987 with a bid to purchase the site. Their proposal was to build a private 260 bed intensive care

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[67] AOHP, Interviewee A22A.
[68] *Evening Times*, 26 October 1987
[69] *The Scotsman*, 4 June 1980.
[70] *Lennox Herald*, 20 December 1985.

hospital, which incorporated a postgraduate medical education centre and a hotel on the Turners site. Amidst much controversy and public protest, and the opposition of the Labour Party and the health unions, the Secretary of State for Scotland Malcolm Rifkind gave planning permission for the building of the private health facility which became known as Health Care International Scotland. Amongst the incentives offered to the health consortium was an agreement that the site be completely cleared of all asbestos waste, with the cost borne by the Scottish Development Agency.[71] The Clydebank District Council was split on the issue and only granted planning permission for the asbestos removal at Dalmuir on the casting vote of the Chairman after a tied vote.[72] The asbestos was excavated, dumped in a dredged and deepened nearby disused dock basin (the Arnott Young Basin) and covered with concrete. The original projection was that the cost of clearing the site would amount to around £2 million. In the event there were major difficulties and costs soared. Subsequently, the total cost of clearing the asbestos contaminated site at Dalmuir escalated to £8 million of taxpayers money.[73] The final irony in the story of Turners Asbestos Cement in Clydebank is that there now exists a luxurious, state of the art private health facility providing treatment and care for those fortunate enough to be able to afford it on the very site where the manufacturing of asbestos had contributed to undermining the health and destroying the lives of many workers from the Clydebank area.

[71] *Glasgow Herald*, 8 March 1991; *Evening Times*, 12 March 1991.
[72] Clydebank Health Care Campaign, *Case for a Public Enquiry* (Clydebank Library, ref. 362.11.L.C.)
[73] Ibid. See also Clydebank Health Care Campaign, *Reply to Comments on an Asbestos Removal Scheme at Clydebank* (Clydebank Library, ref. 362.11.L.C.) and J.D. Coull, *Environmental Safety Guide, Comments on an Asbestos Removal Scheme at Clydebank* Clydebank Library, ref. 362.11.L.C.)

ASBESTOS, THE WAY FORWARD BY LEARNING FROM PAST MISTAKES

Robin Howie
Robin Howie Associates

In looking for the way forward for dealing with asbestos it is necessary to look back so that we can learn from the mistakes of the past and avoid making similar mistakes in the future.

Industries such as coal, steel, shipbuilding, railway locomotive manufacture and chemicals created the industrial landscape of modern Scotland. In the Clyde estuary shipbuilding was the premier industry which produced about one third of UK shipping tonnage up to the early 1950s. Glasgow was also a major centre of heavy industry and a major producer of railway locomotives. These industries had a less welcome effect in that they were prolific users of asbestos with the consequences that Clydebank, the home of the yard which created dreadnoughts such as Hood, Repulse, Duke of York and Vanguard; and Cunarders such as Lusitania, Aquitania and the three Queens,[74] has the world's highest mesothelioma rate for white males. As workers travelled to the yards from all over the West, other Clyde areas also have high mesothelioma rates for both males and females:

West of Scotland mesothelioma death rates 1976 - 1991

District	Males		Females	
	Deaths per million	UK Rank out of 462	Deaths per million	UK Rank out of 462
Clydebank	212	1	17	6
Bearsden/Milngavie	49	20	6.1	42
Glasgow City	49	21	5.0	66
Dumbarton	47	22	6.1	39
Renfrew	42	27	2.9	178
UK average	19	-	3.3	-

from HSE (1996)

[74] The giant liners Queen Elizabeth, Queen Mary and Queen Elizabeth 2 were built in John Brown's shipyard in Clydebank and launched on 26/09/1934, 27/09/1938 and 20/09/1967 respectively.

From the above table, male mesothelioma rates in Clydebank are 11 times higher than the national average and female rates 5 times higher. The high mesothelioma rates in females possibly reflects the consequences of asbestos contamination taken home by their male family members as well as direct exposures to females in their own places of employment, particularly during the War when women replaced men serving in the forces.

The West of Scotland also has the distinction of having the world's highest incidence of lung cancer among white males, being exceeded only by black males in New Orleans and Polynesians in New Zealand and Hawaii. Scottish female lung cancer rates are also high, *Kemp et al* (1985).

The lung cancer figures illustrate the consequences of working and living in areas of heavy industry and will also include cancers caused by exposure to asbestos.

High excess lung cancer and mesothelioma rates also occur in other UK shipbuilding and railway manufacturing areas such as Tyne and Wear, Merseyside and areas around Royal Navy Dockyards.

The national information on asbestos-related disease illustrates the severity of the consequences of past exposures to asbestos. The total numbers of registered asbestos-related deaths from 1924, when records were first kept, to 1996, the last year for which information is available from Ministry of Labour (1970), HSE (1992), HSC[75] (1998a) were:

asbestosis	2,837	)	
excess lung cancer*	1,674	)	total 22,201
mesothelioma	17,690	)	

Note: "excess lung cancer" is the difference between the number of observed lung cancers and the number of lung cancers which would have been expected in an age and gender matched population with no exposure to asbestos.

[75] Health and Safety Executive (HSE), Health and Safety Commission (HSC).

The official figures identify a total of about 22,000 asbestos related deaths. These figures identify asbestos as causing the greatest number of deaths of any industrial substance used in the UK.

Asbestos-related lung cancers are under-reported as is not possible to distinguish a lung cancer caused by asbestos from one caused by smoking. It is generally assumed that there are between one and two excess lung cancers per mesothelioma, e.g. HSE (1992), HSC (1998a, 1998b). From the known number of mesotheliomas it is possible to estimate the actual number of excess lung cancers. If the number of excess lung cancers equals the number of mesotheliomas, the actual number of asbestos-related deaths will have been about 38,000 and if the number of excess lung cancers is twice the number of mesotheliomas, total deaths will have been about 56,000.

However, the accuracy of the assumption that there are only one or two excess lung cancers per mesothelioma is open to question. For example, the Health and Safety Executive reported that for chrysotile textile workers, the excess lung cancer rate was 1.5% and the mesothelioma rate was 0.05%, i.e. 30 excess lung cancers per mesothelioma, *Hansard* (1998).

Analysis of the available information for asbestos workers suggests that the ratio of excess lung cancer to mesothelioma was 21:1 for chrysotile, 4.5:1 for amosite and 1.5:1 for crocidolite. All three types of asbestos were imported into the UK. As we have no knowledge of how many people were exposed to each type of asbestos it is necessary to calculate an overall ratio between excess lung cancer and mesothelioma for exposure to "asbestos" on the basis of the relative imports of the three types of asbestos. The overall ratio for "asbestos" was 9:1 for males and 3.6:1 for females, *Howie* (1999).

If all mesotheliomas are asbestos-related and if the above ratios are applied to the available data, the total number of asbestos-related deaths to 1996 would actually be about 160,000 as against the figure of 22,201 reported in official sources; or 38,000 or 56,000 if one or two excess lung cancers respectively are assumed per mesothelioma. Exposure to asbestos can be identified for about 90% of UK mesothelioma cases,

Yates et al (1997). If 90% of mesotheliomas are asbestos-related, the total number of asbestos-related deaths to 1996 will have been about 145,000.

Assessment of the future consequences of asbestos fibres already in peoples' bodies suggests that between 1997 and 2020 a further 550,000 to 720,000 asbestos related deaths will occur, *Howie* (1999). Of these deaths about 90% will result from lung cancer and about half will occur in areas such as the Clyde which had large shipbuilding and heavy industry employment.

Unless the Health Boards in such areas prepare for the future asbestos related deaths in their areas severe overloading of their healthcare facility will occur over the next 20 years.

Preventing further deaths due to future exposure to asbestos requires that exposure limits for asbestos are set to control asbestos related deaths to "*acceptable*" levels and that such exposure limits are rigorously enforced by the Health and Safety Executive.

Occupational exposure to asbestos for a working lifetime at the pre-1999 UK Control Limits of 0.5 fibres/ml for chrysotile and 0.2 fibres/ml for amosite and crocidolite were anticipated to lead to 5,000 excess lung cancer deaths per million male exposed workers, compared with an unexposed population, HSE (1986), i.e. at the current Control Limit of 0.3 fibres/ml for chrysotile, 3,000 excess lung cancer deaths per million exposed male workers. Although the mesothelioma risk associated with such exposures has not been stated, information from the Health and Safety Executive suggests that for each excess lung cancer death there will be between one half and one mesothelioma death. That is, from official figures, the overall asbestos-related death risk associated with a lifetime's exposure at the current Control Limit is anticipated to range between 4,500 and 6,000 per million exposed males.

However, from HSC/HSE publications, the actual number of deaths from such exposure to chrysotile could be 15,000 excess lung cancers and about 1,680 mesotheliomas per million exposed males, HSC, (1998c), *Hansard*, (1998), *Doll and Peto,* (1985). Such risk figures would require a Control Limit of 0.09 fibres/ml for chrysotile to limit asbestos related deaths to 5,000 per million exposed males.

No corresponding official data are available to permit derivation of suitable Control Limits for either amosite or crocidolite.

A literature search was carried out to assess the relative potency of chrysotile, amosite and crocidolite for causing excess lung cancer and mesothelioma. Three studies in each of the three types of asbestos were available from which relative potency could be derived - see Appendix Table 1A, *Howie* (1999 - in print). These data are summarised below in terms of the Proportion of Total Deaths (PTD) in the study populations due to excess lung cancer and mesothelioma and the relative potency of amosite and crocidolite compared with chrysotile:

Proportion of total deaths, by asbestos type

Asbestos	PTD (%)		PTD re chrysotile	
	Excess lung cancer	Meso- thelioma	Excess lung cancer	Meso- thelioma
Chrysotile	2.62	0.075	1:1	1:1
Amosite	9.24	1.50	3.5:1	20:1
Crocidolite	7.47	7.48	2.9:1	100:1

As can be seen, for amosite, excess lung cancer is about 4 times higher than for chrysotile, and mesothelioma is 20 times higher. The corresponding death rates for crocidolite are about 3 times and 100 times higher than chrysotile respectively.

To restrict asbestos related deaths due to a lifetime's occupational exposure at Control Limit concentration to 5,000 deaths per million exposed males would require Control Limits of 0.09 fibres/ml for chrysotile, 0.016 fibres/ml for amosite and 0.007 fibres/ml for crocidolite.

The "acceptability" of setting Control Limits at a concentration which will cause 5,000 deaths per million exposed males should be the subject of public consultation. It may be acceptable to bureaucrats who will never be exposed to such concentrations in their comfortable offices: it may be less acceptable to the men and the families concerned!

It is useful to put the potency of, say, crocidolite into context by identifying the weight of crocidolite fibres required to give the current 5,500 asbestos "strippers" a

lifetime's exposure at the current Control Limit of 0.2 fibres/ml. Over a working lifetime a single stripper exposed to 0.2 fibres/ml for 40 hours per week will inhale about 20 thousand million crocidolite fibres. The most hazardous fibres are about 10 millionths of a metre long (10 um) by about 0.5 um in diameter. A single stripper's lifetime "permissible" dose of such fibres will weigh about 0.1 gram. The dose for 5,500 strippers will therefore weight 550 grams, i.e. about the same as a one pound bag of sugar. If the Control Limit for crocidolite is reduced to 0.007 fibres/ml as proposed above, the total weight of 5,500 strippers' "permissible" dose would be about 19 grams, or the same as six 5p coins!

To put the severity of the potential risk into context, about 150,000 tons of crocidolite, 600,000 tons of amosite and 5,000,000 tons of chrysotile were imported into the UK.

Unless rigorously enforced, introduction of the Control Limits noted above will not have the required effects, particularly as many asbestos removal contractors still do not comply with the current Control limits.

In any field, be it speeding, drink driving or working with asbestos, effective enforcement relies on the generation of three perceptions in the minds of those liable to fail to comply with the relevant legislation: (1) that there is a high probability of being caught; (2) if caught, Improvement or Prohibition Notices will be issued and/or prosecution will be initiated; (3) if charged and found guilty, severe penalties will be imposed.

Enforcement in the asbestos field can be assessed against these criteria.

Probability of being caught

Most asbestos removal contractors perceive that Health and Safety Executive Inspectors seldom attend stripping sites and most are well aware that the Inspectors very seldom enter the enclosure: note that under Field Operations Division instructions, only specially trained Health and Safety Executive personnel may enter enclosures. This author has experience of stripping sites where everything outside the enclosure was apparently ideal but where the conditions inside the enclosure were the

very opposite. An Inspector seeing only the area outside the enclosure could not have assessed the true conditions in which the strippers worked.

Without regular unannounced in-enclosure inspections the probability of being caught is therefore low.

Initiation of enforcement action

During 1997/98 the Health and Safety Executive issued 178 Prohibition Notices and 12 Improvement Notices and initiated 45 successful prosecutions for breaches of the Control of Asbestos at Work Regulations 1987, and 3 successful prosecutions for breaches of the Asbestos (Licensing) Regulations 1983, HSC (1998a). Given that the Health and Safety Commission admitted that 30% of asbestos removal operations were still being carried out without pre-wetting, HSC (1998b), initiation of enforcement action is inadequate.

Imposition of severe penalties

Although the Health and Safety Executive has recently had some high profile prosecution successes in the Courts, including a custodial sentence, the penalties generally imposed are generally low, e.g. the average fine imposed in 1997/98 for breaches of the two Asbestos Regulations was only £1,583 HSC (1998a). In a recent case in Leeds where untrained school children were hired to carry out asbestos removal operations, the penalty applied was a community service order. It should be stressed that the Health and Safety Executive has no control over the penalties imposed by the courts and are as unhappy as outsiders at the inability of the Courts to impose adequate penalties. Of much greater concern, however, is the failure of the Health and Safety Executive to revoke Licenses to work with asbestos. Dyer (1997) noted that although 85 contractors had been successfully prosecuted and 200 contractors were served Notices between 1985 and 1994, only 12 contractors lost their licence.

The penalties applied by the Courts and the infrequency of revocation of Licences are unlikely to ensure compliance.

Unless Control Limits such as above are introduced and rigorously enforced by the Health and Safety Executive and the Courts apply penalties which reflect the potential health consequences of breaches of legislation, avoidable asbestos related deaths will continue.

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APPENDIX

TABLE A1: Proportional Mortality Ratios for male excess lung cancers and mesotheliomas in asbestos manufacturing - by asbestos type,

Asbestos	Cohort Mortality (%)	PMR (%) Excess lung cancer	PMR (%) Meso-thelioma	Reference
Chrysotile	1,267 (35)	1.9	0	McDonald AD *et al* '84
	863 (34)	5.12	0.12	McDonald AD *et al* '83
	177 (31)	1.4[f]	0.56	Acheson *et al* '82
	384 (25)	0	0	Gardner *et al* '86
	2,691 (33)	2.62	0.075	total/weighted mean
Amosite	484 (55)	12.7	1.45	Selikoff *et al* '73
	304 (27)	7.4	2.0	Levin *et al* '98
	422 (9)	6.6	1.2	Acheson *et al* '84
	1,210 (32)	9.24	1.50	total/weighted mean
Crocidolite	43 (46)	9.3	18.6	McDonald & McDonald '78
	219 (29)	6.2[f]	2.3	Acheson *et al* '82
	139 (31)	8.9[f]	12.2	Jones *et al* '80
	401 (32)	7.47	7.48	total/weighted mean

Note: **f** all female cohort. Excess lung cancer rates doubled to give estimates for males

CURRENT PROGRESS ON THE REQUIREMENTS FOR AN E.U. BAN ON CHRYSOTILE

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Background

Early in this century the three common forms of asbestos fibre, namely blue (crocidolite), brown (amosite) and white (chrysotile), became valuable and seemingly indispensable substances because of their abilities to bind and strengthen other materials and their heat and water resistance and, of course, their relative cheapness. Each fibre type has its own specific properties and its own particular uses, but chrysotile, a curly serpentile fibre, is particularly versatile and its ability to be spun and woven, as well as its excellent binding properties in reinforcing cement, together with its use in friction material, allowed it to account for over 90% of asbestos usage in the UK. In the 1930s, there was unequivocal recognition of asbestosis and lung cancer in workers in the asbestos industries and later, in the 1960s, clear evidence that asbestos exposure (mainly to blue and brown asbestos) was able to cause mesothelioma, the invariably fatal cancer of the chest cavity. Although the use of these two fibres is now banned in the UK and elsewhere, because of the long latency between exposure and disease, the incidence of mesothelioma from past exposure continues to rise and is likely to go from over 1,400 deaths last year to perhaps 3,000 in the year 2020. This can be compared to around 380 deaths per year from all other occupational causes. The situation with chrysotile is complex, both in the evidence as to whether or not it can also cause mesothelioma and to the way it has been regulated and evaluated in the UK and elsewhere. Some EU countries have banned its use whilst others, including the UK, have until very recently continued to permit its use, in particular in its two predominant uses in asbestos-cement and friction linings. In spite of the scientific debate it is classified in the EU as a Category 1 carcinogen and thus there is continuing pressure to replace chrysotile with substitute fibres, or to use alternative non-fibrous technology. Within recent months the moves within the EU have accelerated towards resolving this issue, particularly from DG III (Industry) which has ultimate responsibility for banning substances within the EU and DG

XXIV (Consumer Policy and Consumer Health Protection) and its Expert Scientific Committee.[76]

Independent Review

As part of this complex exercise the UK Health and Safety Executive requested the Medical Research Council's Institute for Environment and Health to undertake an independent review and address the question of substitution of chrysotile by other fibres in its remaining major applications, namely asbestos cement and friction linings (brake linings and clutch facings). The report was a reasoned scientific judgement rather than a comprehensive literature review. The key findings of our report are presented below.

Chrysotile Imports

Although in 1975 chrysotile imports into the UK were around 190,000 tonnes, by 1990 this had fallen to around 15,000 tonnes and last year it was less than 5,000 tonnes. Most went into asbestos-cement or friction materials and a small percentage into gaskets, textiles and sealing materials. Most of our report focused on the two major uses of chrysotile and a comparison was made of its potential harmful properties with those of its potential substitute fibres. In the case of asbestos-cement, the two substitute fibres which can and are being used are cellulose fibre and polyvinyl alcohol (PVA) fibre. In the case of friction materials the commonly used fibre substitute is *para*-aramid fibre, commonly marketed as Kevlar® or Twaron®. Clearly, a major requirement for a substitute fibre is that it should be safer than chrysotile throughout its lifetime of use. This should include manufacturing, handling thereafter and even waste disposal which could occur many years after its initial incorporation into an industrial or building material.

Fibre Toxicity

The major problem facing such an evaluation is undertaking a comparison of hazards and risks without the availability of identical sets of toxicological and health data. As an example, *para*-aramid fibres have been in use for only a couple of decades and there simply are not the human health data available to demonstrate health effects one

[76] It should be noted that there is no implication that the substitutes cited by Dr. Levy are safe products.

way or the other. Yet there is a vast wealth of data on the effects of chrysotile on humans. Additionally, contemporary manufacturing and industrial controls mean that current airborne exposures to any fibres, including chrysotile, are far lower than in the past, so we will not be able to compare current low-level exposures of these substitute fibres to higher past levels of asbestos. However, there are useful leads; years of painstaking research on asbestos and other fibres is available to inform us that certain key physical and chemical properties of fibres are likely to account for their toxic properties. Using these factors, it is possible to make scientific judgement on the potential hazard of the substitute fibres in comparison to chrysotile and with some knowledge of likely exposures. Many years of research on fibre toxicity has shown that the key features that determine the potential harmful effect of a fibre type are dose, dimension and durability. Probably the most important is dimension. In order for fibres to be pathogenic they must reach the air sacs (the alveoli) in the lungs, hence the importance of size, particularly of diameter, which determines whether they can pass down the fine airways. Also, they must be long (greater than 10 µm) and durable - able to reside within the lung for long periods and not be dissolved or easily removed by mechanical action within the lung. Although there is no absolute consensus regarding the exact values of these parameters, there is a reasonable amount of agreement that fibres need to be less than 3µm in diameter and that fibres bigger (wider) than this are non-respirable and unlikely to penetrate deep into the lung. Thus, ideally any substitute fibre should be greater than this diameter. Another key point that makes chrysotile so dangerous is its ability to readily split longitudinally (fibrillate) and thus produce even more respirable fibres. This is something that any substitute fibre should not do. It is also most important to know how 'dusty' a new fibre will be when manufactured and used as this will determine the exposure and hence the dose to the lung.

Medical Research Council

The Medical Research Council's Institute for Environment and Health took all these toxicological and health factors into account and evaluated the evidence that was considered relevant to these issues, as well as some other factors, such as the need for replacement fibres to provide products of an equivalent or acceptable performance to

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The point is that they are less dangerous than Chrysotile-editor.

that of the existing chrysotile-containing product. Also considered crucial in the argument was whether or not the substitute fibres would result in overall lower fibre exposures during manufacture, use and disposal, taking into account likely exposure scenarios and life cycle analysis.

Risk Assessment

Despite the many hundreds of scientific and medical papers on the effects of chrysotile it is still difficult to give absolute answers on its health effects. Certainly we know that it can cause asbestosis and lung cancer. However, when it comes to mesothelioma, it is far less potent than amosite or crocidolite and there are those who hold that the only reason mesothelioma is seen in people who have been exposed to chrysotile is because it is contaminated with these two other fibres. No doubt this debate will continue in the literature and elsewhere but meanwhile the precautionary principle prevails and thus it is considered prudent to regard chrysotile as capable of causing mesothelioma. Although it is argued by some that the current control of chrysotile in its current UK uses and applications is such that probably no risk exists, it is important to recognise that the harmful effects of chrysotile fibre can never be "engineered out" and that the inherent hazard will always remain and, thus, we will always have to rely on control of exposure to control the risk of disease. History has taught us the sad lesson that the current epidemic of mesothelioma includes many building and services-related workers such as plumbers, electricians and carpenters who must have been exposed to unpredicted and uncontrolled asbestos.

In the case of friction materials, it is felt that *para*-aramid fibres would pose less risk than chrysotile because they are generally too large to be respirable (10-12 µm diameter). Under certain conditions respirable 'fibrils' on the surface of the fibres can be released but they have been shown to be few in number. Animal experiments have shown these fibrils capable of causing fibrosis in the lung at high concentrations, but associated 'proliferative keratinising cysts' in the lung are generally considered not to be relevant to human exposure.

In the case of the two substitute fibres that can be used to reinforce cement, PVA fibres are 10-16 µm in diameter, thus non-respirable and do not fibrillate, and the

parent material does not cause much tissue reaction. With regard to cellulose, although some respirable fibres can be produced through fibrillation, these are far fewer in number compared to chrysotile. Unfortunately there are few studies on health effects of workers exposed principally to cellulose; however, experience of its very long use in a variety of industries has not demonstrated any significant health concerns. However, as it is quite durable in the lung, further investigations are warranted regardless of its current and future use as a substitute fibre for asbestos.

Technically Adequate Substitutes

Overall, the judgement reached in the report was that, in spite of the lack of absolute and comparative data, it is still possible to propose, on the available evidence, that the continued use of chrysotile in asbestos-cement products and in friction materials is not justifiable in the face of available and technically adequate substitutes.

In September of this year, this report, along with other documents, was submitted to The Scientific Committee on the Toxicology, Ecotoxicology and the Environment (SCTEE) of DG XXIV. They considered a proposal from DG III which asked,

> On the basis of the available data, do any of the following fibres pose an equal or greater risk to human health than chrysotile asbestos?
>
> cellulose fibres - PVA fibres - *para*-aramid fibres
>
> Particular consideration should be given to the relative risk to para-occupational workers and other users of asbestos-containing products in comparison to non-asbestos products.

It is interesting to note that the question they were required to answer, and their conclusions, were very similar to those of the Institute for Environment and Health team and they state:

> Thus, both for the reduction of lung and pleural cancer and lung fibrosis, i.e. the end-point conditions investigated to a greater extent, and for other effects, it is unlikely that either cellulose, PVA or *para*-aramid fibres pose an equal or greater risk than chrysotile asbestos. With regard to carcinogenesis and induction of lung fibrosis, the SCTEE has reached a consensus that the risk is likely to be lower.

These conclusions seem unequivocal and it is now up to DG III to take matters forward for what must ultimately be the cessation of the use of chrysotile within the EU for these and perhaps other purposes.[77]

[77] The full report of the SCTEE is available on: http://europa.eu.int/comm/dg24/health/sc/sct/out17

THE VICTIM AND THE LAW: *Problems in Social Security Adjudication*

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> ***our understanding of the characteristics of many occupational diseases has outstripped the effectiveness of workers' compensation and associated systems to provide appropriate disability compensation.***
> Irvine J. Selikoff (1982)[78]

Introduction

The two main sources of potential compensation for victims of asbestos are damages in the civil law of tort (as we call it south of the border) and social security benefits. My brief is to focus on the latter, and in particular some of the difficulties which may face claimants in the process of social security adjudication. In this slot I will start by identifying some of the structural problems with the industrial injuries scheme as it stands, particularly those relating to prescription. I then wish to explore some of the difficulties which inhibit claims for industrial disablement benefit on the ground and to suggest some possible ways forward. In closing I also want to widen our horizons somewhat and to try and put the issue of compensation for victims of asbestos-related disease in the wider political context of developments in welfare reform.

The growth of asbestos-related disease

The ever-growing numbers of victims of asbestos-related disease is well known. In the late 1980s the HSE was recording between 800 and 900 deaths annually from mesothelioma alone, based on death certificates. The latest and provisional figures for 1995 and 1996 demonstrate that this death toll is now running at about 1,300 a year. Overall, there are currently between 3,000 and 3,500 deaths annually from asbestos-related disease, mostly due to cancers, with the number of mesothelioma deaths alone projected by Peto to rise to about 3,000 by the year 2020, with the total from all forms of asbestos-related disease could be between 5,000 and 10,000 annually.

[78] This quotation is taken from Irving J. Selikoff, 1982, *Disability Compensation For Asbestos-Associated Disease In The United States*, Environmental Sciences Laboratory, New York, Page xxi.

The prescription of asbestos-related disease

Following the 1996 report by Industrial Injuries Advisory Council (IIAC) on asbestos-related disease, the last government introduced a number of changes to the prescription rules in April 1997, shortly before its own demise.

1 The standard 90 day waiting period before which industrial disablement benefit was abolished for mesothelioma.

2 The prescribed employment for mesothelioma was amended. The scheduled jobs for asbestos diseases had changed little since 1931. IIAC recognised that the degree of exposure required to cause mesothelioma is considerably less than that associated with either asbestosis or lung cancer. Thus it is now sufficient (but only for PD D3) that there has been merely "exposure to asbestos, asbestos dust or any admixture of asbestos *at a level above that commonly found in the environment at large*" (emphasis added). This reform may potentially assist women in particular, who currently account for about 15 per cent of mesothelioma deaths (as recorded on death certificates) but just 3 per cent of PD D3 awards. This discrimination was highlighted in work carried out here on Clydeside. It is noteworthy that IIAC's stated preference would have been for *any* mesothelioma victim who had been an employee to receive benefits, but this was thought to be inconsistent with the statutory test for prescription.

3 An updated and more precise definition of bilateral diffuse pleural thickening has been provided for the purposes of PD D9 cases. Originally the Schedule contained no guidance on the diagnosis of PD D9; as amended, pleural thickening may be either unilateral or bilateral (i.e. covering one or both lungs) and must cover at least 25 per cent of the total chest wall as shown by X-ray (so 50 per cent unilateral pleural thickening would qualify) and must extend to a thickness of at least 5mm in at least one site on the lungs. A corresponding amendment was made to the prescription of lung cancer (PD D8), for which pleural thickening is used as a "marker".

These are all welcome if long overdue reforms. Yet there are at least four respects in which the scope of prescription for asbestos-related diseases remains very unsatisfactory.

First, and in stark contrast to the detailed statutory definition provided for pleural thickening, the diagnosis of asbestosis is left entirely to clinicians' discretion. Yet in this way value judgements are inevitably imported into issues of diagnosis and thus, indirectly, compensation. The consequence is that some claimants succeed in obtaining civil awards but not DSS awards. As one insurer commented in Tom Durkin's study:

> I thought their criteria were much too conservative at the time. We were actually settling cases when we had still not received the industrial [DSS benefit ruling].

I will return to this theme later.

Secondly, IIAC declined to recommend any change to the prescription criteria for asbestos-related lung cancer, other than the consequential amendment to the pleural thickening marker. In particular, the Council dismissed the case for compensating lung cancer in the absence of asbestosis in one short paragraph, on the grounds that epidemiological studies had not demonstrated a doubling of risk in such cases. There is, however, growing evidence that asbestos is associated with lung cancer even in the absence of radiologically apparent lung fibrosis, such as asbestosis. Earlier this year I heard Corbett McDonald argue that there were about a dozen key papers on the link between asbestos and long cancer: in his view 10 concluded that there was no need for asbestosis to make a causal link between asbestos exposure and lung cancer, whereas 2 "less good papers" say such an association is required. Indeed, asbestos is the only carcinogen for which heavy exposure is required; with the others, exposure itself is sufficient.

International developments also suggest reform should be on the agenda. In Australia, the High Court in 1995 refused leave to appeal to the asbestos manufacturer CSR, which had been found liable to pay workmen's compensation to the widow of a man who died of lung cancer but who had no signs of asbestosis and had indeed been a smoker: (*CSR v Culkin*, Western Australia, unreported, 1995). Similarly, in Germany lung cancer has been prescribed in the absence of asbestosis providing a sufficient level of exposure is

demonstrated (25 fibre-years). In Canada also there is no requirement of asbestosis but a substantial work history is required.

Thirdly, the Council declined to reopen the issue of prescribing cancer of the larynx for asbestos workers, last examined in 1989 (Cm 779). Again, in another recent development, Germany has amended its prescription criteria to include cases of laryngeal cancer among workers exposed to asbestos.

Finally, and more generally, the Council's earlier recommendation in 1993 that the self-employed in construction and agriculture be brought within the scope of the scheme remains yet to be implemented. This represents a fundamental weakness in the coverage of the scheme, especially given the incidence of mesothelioma in the building trade and in associated occupations where self-employment is common.

Difficulties in claiming industrial disablement benefit

1 Asbestosis

There has been a steady but not dramatic rise in the number of cases of asbestosis in the United Kingdom over the last 20 years. There are now about 400 cases a year accepted for industrial disablement benefit but the success rate for claimants is only about 1 in 3. There are several reasons for this. The legislation includes very broad and unhelpful definitions of pneumoconiosis and asbestosis which are inadequate in the light of modern medical knowledge. The absence of any clear statutory guidance means that in practice considerable discretion must be exercised by adjudicating medical practitioners in their assessment of the diagnosis. The problems are compounded because there is no generally accepted medical definition of what precisely constitutes asbestosis, as the term is used to cover a range of conditions of varying severity. As Doll and Peto explained in 1985:

> "The clinical diagnosis is, therefore, a matter of judgment and the importance of diagnosis to the individual will depend on the severity of the condition to which doctors are prepared to give the name."

Furthermore, examining doctors are often inclined to diagnose forms of lung fibrosis other than asbestosis, such as cryptogenic fibrosing alveolitis (which is not prescribed), even where there is clear evidence of occupational exposure to asbestos. In addition, the boards often insist on evidence of asbestos bodies in the lungs as a prerequisite for a diagnosis of asbestosis. Yet in answer to a parliamentary question in 1986 the minister stated that a diagnosis of asbestosis is not conditional upon the presence of asbestos bodies. It appears therefore that there is a divergence between the theory and practice of diagnosis. Moreover, doctors adopt a perspective on the legal concept of the balance of probabilities which is influenced by more rigorous medical and scientific concepts of proof.

This creates problems on appeal for claimants and their representatives. The last statistics which I saw suggested that two-thirds of special medical board decisions were upheld by medical appeal tribunals on appeal, as against just one-third of ordinary industrial accident cases. This may be because special medical boards genuinely attain a higher standard in decision making. It may equally reflect a greater unwillingness on the part of the consultants sitting on medical appeal tribunals to challenge the views of other "experts", especially in the diagnosis of diseases which involve difficult questions of judgment. Yet in this context we must remember the wise words of the former Chief National Insurance Commissioner, Mr Micklethwait, who observed that:

> A doctor trained in medical science is usually not prepared to say that A is B unless this has been proved to be true beyond any possibility of doubt. A tribunal must accept a much less exacting standard. Usually the question for its decision is whether it is more probable than not that A is B, assuming this to be a matter of reasonable inference and not merely guessing. In a case therefore where a doctor says that it is not proved that A is B it does not necessarily follow that a tribunal will say the same.

Notwithstanding the presence of legal chairmen, it may do no harm to remind tribunals of the appropriate standard of proof.

2 Asbestos-related lung cancer

The qualifying criteria for asbestos-related lung cancer are drawn so tightly that relatively few claims have been brought since it was first prescribed in 1985. Claims can succeed only if asbestosis or bilateral diffuse pleural thickening co-exist with the lung

cancer. Lung cancer alone is insufficient. The difficulty of securing a positive diagnosis is compounded by the uncertainty which surrounds the definition of asbestosis itself. Furthermore, where the claimant has a past history of smoking, doctors generally and medical boards more specifically have tended to attribute any cancer to that factor, rather than to asbestos exposure. There are currently only about 50 successful claims annually (indeed, figures for 1997 suggest a drop to 26 across the whole country), whereas it is estimated by the HSE that there are in fact more than 1,000 cases of asbestos-related lung cancer occurring each year in the United Kingdom.

One reason is undoubtedly the failure of occupationally-related cases to be picked up by the medical profession; as soon as they discover the victim has been a smoker, end of questions. The low number of claims may also be in part a consequence of the abolition of industrial death benefit in 1988. When death benefit existed, the lungs of deceased workers who had been exposed to asbestos would be routinely examined by the doctors at the Medical Boarding Centre. The lungs would then be sent to a histology department at a teaching hospital for storage for a year, pending any claim. This procedure has now been abandoned, with the result that it is often too late to try and obtain a representative sample of lung tissue for the purposes of analysis.

3 Mesothelioma

Mesothelioma was prescribed in 1966. The increase in mesothelioma deaths has been much more marked over the last 20 years as compared with cases of asbestosis: as I mentioned, they are also currently running at over 1,300 per year. The pathological characteristics of mesothelioma and the absence of any non-occupational cause mean that, at least as compared with asbestosis, there is relatively little scope for clinical disagreement over diagnosis. The success rate for mesothelioma claims is more than 90 per cent, yet there is evidence of underclaiming of industrial disablement benefit by some mesothelioma victims in occupations not traditionally seen as at risk. Again, recent figures are instructive: the number of claims for D3 has steadily risen over the last three years: in 1995/96 there were 570; in 1996/97 there were 620 and in 1997/98 a jump to 760. But the number of awards appears to be going down: 683 in 1995, 642 in 1996 and 551 in 1997.

4 Bilateral diffuse pleural thickening

This condition was prescribed for State compensation purposes in April 1985, at the same time as lung cancer. About 150 cases a year are diagnosed by special medical boards.

Possible reforms?

There is a presumption in the regulations that, where a person has been diagnosed as suffering from PDD1 and has a minimum of two years' employment in a scheduled occupation, the job is presumed to have cause the disease. Yet often the difficulty facing asbestosis claimants is not showing that their condition was caused by occupational exposure, but lies in persuading the special medical boards that their condition is indeed asbestosis and not some other lung disease. In this context the presumption as to causation is of no value if the diagnosis question is answered in the negative.

Perhaps the answer therefore is to specify more explicitly in the legislation the factors relevant to a diagnosis of asbestosis. The most important of these are the occupational history, crackles at the base of the lungs, radiological features of diffuse interstitial fibrosis in the lower halves of the lung fields, and impairment of lung function. The danger is that these could be defined so narrowly that even fewer people succeed: see the saga of coalminers' chronic bronchitis and emphysema. Similarly, the experience of the Black Lung federal compensation scheme for coal miners in the United States suggests that amendments to the statutory definition are unlikely to be a fruitful avenue of reform.

An alternative strategy would be to increase the importance of presumptions in determining claims for disablement benefit. The existing presumptions are of no practical value to victims of asbestos-related disease. They are also difficult to justify in the light of modern scientific knowledge. Specific presumptions would be needed for each type of condition.

So far as asbestos-induced lung cancer is concerned, there is no prospect of improving the reach of this benefit unless the asbestosis requirement is repealed, and substituted by

a rebuttable presumption that lung cancer is caused by asbestos providing that there has been some occupational exposure in the past, irrespective of past smoking habits.

Conclusion

In a city such as Glasgow, with its massive legacy of asbestos-related disease, one could be forgiven for seeing industrial disablement benefit, and in particular the provisions relating to cases of industrial disease, as central to the debate about the future of welfare provision in the United Kingdom. The reality, however, is that this area of social security provision is now peripheral in the overall scheme of things: it has become a backwater, of real concern to those who are affected, but for policy-makers it represents an irritating hangover from our industrial history.

If we look back 100 years, the Workmen's Compensation Act 1897 is often regarded as the beginning of the modern British welfare state. Although at first confined to industrial accidents, its scope was extended to cover certain diseases in 1906. Since then the list has grown gradually longer and longer, with asbestosis itself being prescribed in 1931. The special status of workers' compensation was preserved with the creation of the industrial injuries scheme in 1948, with quite distinct funding and adjudication arrangements as compared with the mainstream national insurance scheme. Over the last 50 years those distinctions have steadily fallen away. This process stepped up a gear after the election of the first Thatcher government in 1979. Everyone here will be familiar with the erosion of the industrial injuries scheme since then: the introduction of the 14 per cent rule for most injuries and diseases, the abolition of industrial death benefit and so on. This graph illustrates the point well: in 1979, when the Tories came to power, industrial injuries benefits and war pensions together made up the second largest category of spending on benefits for the sick and disabled. In the two decades since then spending on these two benefit areas has remained static in real terms, and they now account for a relatively small proportion of the total spend. Instead, we have seen a significant increase in expenditure on invalidity benefit and incapacity benefit (partly as a means of disguising the growth in long-term unemployment) and in attendance allowance and mobility allowance, or now disability living allowance.

Thus industrial disablement benefit now looks increasingly anomalous. Like war pensions, the gateway to entitlement is based on the cause of the disability, not the severity of the impairment suffered. Thatcherite thinking would suggest that if the risk of injury or disease is faced in the course of working for an employer, then that employer, and not the State, should pick up the bill. The costs would then fall where they belong, on the employer (for which read customers and shareholders) and not on the taxpayer at large. A no-fault insurance scheme - back to 1897 - could be developed to spread the risks, but if market economics are taken to their logical extremes then premiums should be differentiated according to the level of risk in various industries. The idea of privatising the industrial scheme was a kite flown on a number of occasions under the last Conservative government. It may well be revisited by New Labour. After all, if SSP is administered by and paid for by employers, then why not industrial disablement benefit likewise? The main objection would be that not all workers would necessarily be adequately covered by employers' compulsory insurance arrangements. Cases of disease, however, and especially latent diseases such as those caused by asbestos, remain a special case, and it is difficult to see how these costs could be transferred over to the private sector.

The Government issued a series of Green Papers on welfare reform last week. *A new contract for welfare: support for disabled people* concentrates almost exclusively on DLA and on incapacity benefit. It has nothing to say about the industrial scheme other than a short descriptive paragraph in an annex to the Green Paper. This rather suggests that the fate of the industrial injuries scheme remains one of continued erosion, as under the Tories, and so a salami-style death by a thousand cuts.

WORKSHOP REPORT:- PALLIATIVE CARE & PAIN RELIEF

Elspeth Gracey
Clydebank Health Issues Group

Guest Speakers:

Dr Sheila Mackay, Medical Director, St Margaret's Hospice, Clydebank

Sister Mavis Robinson, MacMillan Nurse, Leeds General Infirmary

Facilitator:

Elspeth Gracey, Group Support Worker, Clydebank Health Issues Group

Participants:

- 2 Patients suffering an asbestos-related illness
- 3 Carers of Patients
- 1 Person who previously lost a parent to Asbestos related illness
- 1 Nurse
- 1 Lawyer dealing with people seeking compensation
- 1 Member of Community Care Forum

The speakers gave a short summary of their professional involvement in palliative care. Workshop participants introduced themselves and explained why they had chosen the workshop.

Following a general discussion common points were raised which participants felt should be forwarded to the Clydebank Asbestos Partnership.

Points arising from palliative care workshop National Asbestos Conference, Clydebank, November 1998 for consideration by Clydebank Asbestos partnership;

Lack of Information/Misinformation

Generally speaking, it was felt that patients and their families are not given clear information upon which to base properly informed choices about their care.

Examples included:

- The pros and cons of Biopsy and its usefulness for diagnosis and future treatment.
- Effectiveness of 'treatments'.
- Availability of hospice or home care services.

Emotional Ups and Downs

It was felt that lack of information contributed to this. One example of being given test results sharply illustrated how people's hopes were raised and dashed.

> First we were told there was nothing malignant but then he said he would just check *'Oh yes you do have Mesothelioma and I give you about a year to live'* imagine how we felt.

Not knowing the effects of procedures and treatments also contributed to this.

> *Should we have had the biopsy has it given him less time?*
>
> *Is surgery effective? Nobody else seems to know.*

Living Positively

One patient testified to living positively with her cancer;

> *I don't think I'm finished. I look forward to the day for Day Care at the Hospice. It's a wonderful place.*

It was generally agreed that patients and their families need the opportunity and facilities to have the best quality of life possible. Not to concentrate on dying but on living positively.

A Holistic Approach

It was agreed that caring for patients could not be restricted to their medical needs e.g. control of physical pain. It had to include the emotional, psychological and social factors contributing to their needs.

Access to 'Alternative & Complementary' Therapies

This was felt to be important. Concerns were raised by more than one participant of the use of 'strong' drugs for pain relief e.g. role of morphine. Access to information about alternative approaches to pain relief were needed.

Support for Carers, Family and Friends

It is not just patients who require access to information and services. People close to the patient may also need counselling, respite care, opportunities to relax; and recognition of THEIR circumstances also needs to be holistic taking account of emotional, psychological and social influences.

WOMEN AND ASBESTOS

Tommy Gorman
Welfare Rights Unit, West Dunbartonshire Council

Before she was married she cleaned overalls
Some contained asbestos dust . . . 20 years on she is dead
She was killed by an asbestos cancer called Mesothelioma
The last two years of her life were hell . . . she lost weight, 6 stone
She had constant pain in her chest which got worse each day
There was internal bleeding
Her fingers swelled up and she couldn't hold a cup
She was so short of breath she couldn't walk [79]

Two of the most severe difficulties which have been faced by women suffering from asbestos-related disease are the inadequacies of medical diagnosis and the resistance of the benefits system to recognise industrial disease when contracted by females. The most common argument used by decision-makers is that occupations traditionally associated with women exposed them only to low levels of asbestos dust. Acknowledgement of industrially-linked ill health by those in authority is a problem which has existed for women in one form or another since the Industrial Revolution. Literature is available dating from the 1920s onwards dealing with the unique situation in which many female asbestos victims have found themselves.

A recent study confirms that this gender-bias is not strictly a British phenomenon. In Norway sufferers of Pleural Mesothelioma were studied to investigate how many were receiving occupational injury benefit. Between 1970 and 1993 there were 766 recorded cases. Of these 662 were male and 104 female. At June 1996 the National Insurance Administration had considered the claims of 163 applicants. None of them was female.

[79] This quotation was extracted from an information poster *Asbestos is still a killer* which was produced by the General Municipal & Boilermakers Union (GMB). The woman in question was the wife of a GMB member.

There is a long and well-researched history of women's lives being destroyed by asbestos. The world's biggest asbestos manufacturers, Turner & Newall used "Lady Asbestos" as a symbol of protection in publicity material produced in 1918. It shows in allegorical terms asbestos defending civilisation from the elements. However, there are countless women who would regard this as the most bitter of ironies.

The earliest account of the serious health hazard of working with asbestos was provided in 1898 by Lucy Dean, one of the early Women Inspectors of Factories. It must qualify as the least cited significant early observations of serious disease in literature. One year after Lucy Deane's initial concerns Dr. Montague Murray identified the first reported case of pulmonary fibrosis in the UK.

A young woman, Nellie Kershaw, was the subject of what was probably the first detailed case report of Asbestosis in an individual worker published in English in general medical literature. British pathologist W. E. Cooke in 1924 described his patient as suffering from tuberculosis and also fibrosis of the lungs due to inhalation of asbestos dust.

Nellie Kershaw who started work at Turner Brothers Asbestos Company as a thirteen year old girl was totally disabled by the age of thirty-one. The Newbold Approved Society approached the company on her behalf in 1922 and asked for workers' compensation citing a doctor's certificate which had diagnosed her as suffering from 'asbestos poisoning'. In reply the company rejected the term 'asbestos poisoning' on the basis that it was not listed among the diseases prescribed in terms of the Workmens' Compensation Act.

When she died aged thirty-three years old Nellie Kershaw became one of the first in a long line of working women to have fought and lost in the battle for compensation against the asbestos industry. It is a matter of fact that this company operated an asbestos factory in Clydebank until 1970.

During the Second World War millions of women entered British industry and undertook what were in normal times almost exclusively male occupations. Between

1939 and 1945 over 1,500 women were employed by the Boots factory in Nottingham in the production of gas masks for the war effort.

The filters in the gas masks contained 15% crocidolite (blue asbestos). Because of the knowledge of the dangers of asbestosis, steps were taken to minimise the risk to the mainly female workforce. Part of the production process was conducted in an enclosed chamber with an extraction system which subsequently developed a fault. Precautions to avoid inhalation of asbestos dust were grossly inadequate. Between 1965 and 1974 the first 26 cases of Mesothelioma in former Boots employees were diagnosed: 25 were women.

However, the problem did not end in the 1970s for many of the former Boots workers. The death list continues to rise and the long debilitating fight for compensation goes on half a century after the war has ended. At present around 70 of the former Boots workers have died from asbestos-related diseases.

In a thoughtful and provocative article Joanne Leneghan and Sally Moore (New Statesman and Society, 10/2/95) paid tribute to the latest victim, Hannah Meres, who died of Mesothelioma fifty three years after working in the Nottingham factory for just 5 weeks. The day after her death Boots made public the fact that the company would not be prepared to set up a no-fault compensation scheme for former employees. The last tortured days of Hannah Mere's life were spent, along with other former workmates, in the difficult battle to achieve compensation.

A major obstacle for female asbestos sufferers pursuing claims for compensation is the mistaken belief that large doses of asbestos exposure over long periods are required to cause cancer. The fact that Hannah Meres was employed in this occupation for only 5 weeks, leaving through pregnancy, would seem to contradict this. It would also vindicate the claims of countless others contaminated by asbestos who worked for short periods at low levels of exposure.

Liverpool & District Victims of Asbestos Support Group are currently advising men and women who were formerly employed in the dockside bag warehouses. In 1975 Liverpool docks imported 25.3 thousand metric tons of asbestos. Hundreds of women

in the Liverpool area have been exposed to asbestos whilst working in the bag warehouses. Used cargo bags were sent from the docks to be recycled. Some contained a residue of dusts including nuts, grain, flour and asbestos. Hundreds of women who formerly worked in the Liverpool warehouses have contacted the local asbestos group for assistance in recent years.

Even more difficult to establish than low level exposure at the workplace is what Dr, lrvine J. Selikoff, the doyen of occupational cancer research, describes as Family Contact Asbestos Disease. This was first established in 1965 when eleven cases of Mesothelioma were reported in the London area where the only known exposure to asbestos was through living in the same household as an asbestos worker.

Since the 1960s it has been recognised that this method of contamination is possible and in fact does exist. Many cases have been documented world-wide. In 1989 there were a number of cases of wives and daughters of asbestos workers in the Glasgow area dying of lung cancer due to washing and handling men's dust covered overalls. This prompted the Transport and General Workers Union (TGWU) and others to call for a change in the law over compensation and protection to take into consideration the plight of these women who were mainly the wives and daughters of TGWU members.

There are several members of Clydebank Asbestos Group who have been damaged by asbestos through contact with their husband’s working clothes. In fact Margaret Lilly, a committee member of the group, contacted an asbestos-related illness this way, from her husband Owen’s overalls. He was employed at Turners Asbestos plant in Clydebank for some years during the 1960s. Margaret is angry mainly because the asbestos company he worked for had been aware of the dangers of asbestos dust for decades. In addition to this important research papers which confirmed this were suppressed in order that the accumulation of super-normal profits was not held back. Margaret’s response is to join Clydebank Asbestos Group and help others who find themselves in a similar situation.

The judgement delivered by Mr. Justice Holland in Leeds High Court on 27th October 1995 and mentioned earlier in the editor’s Introduction is significant in many ways

including the historic precedent accepting the link between environmental asbestos-exposure and the responsibility of an asbestos company. One of the plaintiffs whose separate cases were heard in a joint trial was awarded damages of £65,000. Her name was Judith Hancock.. It is a seldom mentioned fact that Mrs. Hancock's mother also died of mesothelioma. The defendants in the Leeds case also owned the asbestos factory in Clydebank where Owen Lilly worked.[80]

Mrs. Ann McPherson, a UNISON member, was recently awarded the sum of £110,000 in a legal settlement after she contracted Mesothelioma. Dust brought home by her husband, who died of the same disease in 1995, was the cause of Mrs. McPherson's illness. He had worked in aluminium processing for Alcan International since 1962. It was there that he breathed in the asbestos fibres which killed him 30 years later. Mrs. McPherson retired from her job as a hospital worker on grounds of ill health and pursued a claim against Alcan supported by her union UNISON.

lrene Jenkinson never worked with asbestos at any time in her life yet she died of Mesothelioma. In October 1993 the Coroner's Court in Portsmouth issued a verdict of death from industrial disease. Her husband was an engineer and although he did not bring his dirty overalls home to be washed it was accepted that it may have been on his shoes and in his hair. The majority of people contaminated in this way are women.

Although women represent only 4% of the Membership of the registered charity Clydeside Action on Asbestos, they account for 75% of those who are told by the Department of Social Security (DSS) that their Mesothelioma is not work related.

In both 1990 and 1991 according to the Scottish Cancer Registration Scheme 14% of Mesothelioma sufferers were female. The department of Social Security gave figures for successful claims, 3% and 4% respectively for these years.

[80] See chapter by Johnston & McIvor which appears earlier in this publication.

This means that of the 14% of women sufferers only the smaller percentage were deemed to have Mesothelioma due to their occupation in each of these years, according to the adjudicating authorities. The odds appear to be stacked against female claimants, and this is not simply a problem of gender bias. It is also because the DSS are reluctant to accept the fact that asbestos-related disease can occur due to low level exposure.

This stance has a significant impact on many female claimants due to their occupational history, working in jobs which brought them into contact with asbestos dust irregularly and at low levels of exposure. This is a grossly unfair practice as it is widely accepted that there are no acceptable safe levels of exposure to asbestos dust.

Women must be made more aware of the possibility of asbestos contamination in buildings where they are employed. Asbestos is not a hazard only to be found in the shipyards of the 1960s or 1970s. This substance is a serious health hazard for women workers and also the wider community. Although overshadowed in comparison to the male figures there has been a three-fold plus increase in Mesothelioma incidence among women; 124 cases were recorded by death certificate in the two year period 1968-70, rising to 397 between 1989-91.

Many women are unsung heroes in the fight against asbestos abuse. They include Mrs. Chrissie Marmion from Knightswood near Clydebank. She died after a brave fight against her illness. Her compensation claim was due to be decided nine days later. Mrs. Marmion came into contact with asbestos while working in a clothing factory. Assisted by her daughter she was often present at events organised by the local asbestos group. Late in October1998 she called the group to confirm that a place was reserved for her at the National Asbestos Conference. She duly attended and made a contribution in the discussion in one of the workshops. The attitude she took to her illness is described by Elspeth Gracey elsewhere in this publication. The spirit she demonstrated is an example to all.

These examples highlight the difficulties facing women in relation to occupational illness in general. Of particular concern are the most basic issues of recognition of

disease and accurate diagnosis. The reluctance to diagnose women's illnesses, diseases and conditions as occupational has led to inadequate medical care at their time of greatest need.

When faced with asbestos-related disease the fundamental discrimination which confronts women is the reluctance to diagnose, as work-related, the origin of illness. This leads to a spiral of despair which can involve legal, medical and social security matters.

In 1897 the Workmen's Compensation Act was established in Great Britain. Arguably, the title of the act can be taken literally. Legislation was and remains on the whole introduced to compensate working men who are injured by accident or disease in the workplace.

Of course it would be foolish to argue that women are not covered by health and safety laws in the UK. However, it seems to be the case that, despite their increasing numbers throughout this century, working women and the predominantly female occupations which many of them inhabit industrially, are pushed to the margins of inclusion by a male-dominated interpretation of legislation in social security adjudication and at civil law. The experience of female asbestos victims appears to substantiate this proposition.[81]

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[81] This chapter is an abridged version of *Women: The Most Forgotten Victims* published in Sourcebook on Asbestos Diseases,1999, Volume 19, pages 43-79, edited by George A. Peters & Barbara J. Peters, Lexis Law Publishing, USA.

CONFERENCE CONTRIBUTORS

Nigel Bryson is the GMB Director of Health and Environment. He has been prominent in the campaign to ban Chrysotile (white asbestos) in the UK and throughout Europe. He has advised many trade unionists and employers on safe working practices. Nigel has also influenced HSE and HSC thinking and has contributed much to the legislative progress which has been witnessed over the last decade.

Bill Clark is Strategy Manager with West Dunbartonshire Council. He has been a leading member of the Clydebank Asbestos Partnership. Bill is highly experienced in many areas of the provision of Social Work services. In addition to his generic experience Mr. Clark has been involved in a number of anti-poverty research projects

Alan Dalton is Health & Safety Co-ordinator with the TGWU. He has spent the past 25 years fighting the misuse of asbestos. He published *Asbestos Killer Dust* in 1979. Mr. Dalton has been involved in countless campaigns and has written numerous articles on the subject. While he feels strongly that anyone with an asbestos-related disease should be compensated without delay he is more interested in prevention issues and is of the opinion that those breaking asbestos laws should be incarcerated. He is currently campaigning for a worldwide ban on asbestos.

Dr Allan F. Henderson has significant expertise and experience in the treatment of asbestos sufferers. Today he will present a lecture, which will illustrate a number of the problems which affect asbestos victims in the areas of information, diagnosis and prognosis. Dr. Henderson is currently a Consultant Physician and is based at Lorn & Islands District and General Hospital, Oban.

Dr Helen Irvine is a Consultant in Public Health Medicine in Communicable Disease and Environmental Health at Greater Glasgow Health Board. Her work has included measuring the percentage of all lung cancer in the West of Scotland attributable to asbestos exposure. Helen Irvine is a published author in the British Medical Journal and elsewhere.

Robin Howie of Robin Howie Associates is a Past President of the British Occupational Hygiene Society and recognised as one of the leading UK experts on industrial hygiene. Mr. Howie is the author of many reports and papers at home and abroad on a wide range of safety issues. He is an acknowledged expert on respiratory protection in this country and is often in demand as an expert witness giving evidence in this complex area of occupational health.

Laurie Kazan-Allen is the current editor of the British Asbestos Newsletter. She is also head of Jerome Consultants, an independent organisation which specialises in the field of asbestos research. Her work has been published in the Sourcebook on Asbestos Diseases, the Association of Personal Injury Lawyers Newsletter, Occupational Health Review and the Journal of Architectural Conservation. She has spoken at numerous conferences and training seminars on a wide range of subjects associated with asbestos.

Dr. Leonard S. Levy is the author of a number of scientific reports and has presented numerous conference papers in the UK and internationally. He is head of the Toxicology and Risk Assessment Group at the Institute for Environment and Health, University of Leicester. Dr. Levy and his colleagues have conducted important research into the toxicity of substitutes which can be used in place of Chrysotile (white asbestos). The Institute has published an important report, *Fibrous Materials in the Environment, a review of asbestos and man-made mineral fibres*. This report contains important information including chapters on handling asbestos materials in buildings, man-made mineral fibres, airborne fibre concentrations, human exposure and a discussion of risk assessment of environmental exposure to fibrous materials. The report is available from Institute for Environment and Health, University of Leicester, 94 Regent Road , Leicester LE1 7DD.

Frank Maguire is a Solicitor/Advocate and senior partner with the leading firm of asbestos compensation solicitors in Scotland. He is widely acknowledged as an authority in this complex area of law. In addition to this Frank played a crucial role as a member of the Clydeside Action on Asbestos delegation which presented oral and written evidence to the Social Security Select Committee on Compensation Recovery. This led to significant changes in the law. These changes were of great benefit to

asbestos victims throughout Britain. However, Mr. Maguire contends that current legislation requires further scrutiny with a view to change.

Tanya Parker is Regional Chairperson of the Independent Tribunal Service (ITS). In this important role she is the person who ensures (among other things) that the work of ITS is properly conducted within the law and that tribunals fulfill their function in a fair manner. These tribunals can raise highly complex issues for adjudicators, representatives and, most importantly, the appellants. Tanya Parker's involvement in the National Asbestos Conference was of great assistance to all conference delegates who heard her speak.

Dr Sheila Mackay has a long association with St. Margaret's Hospice, Clydebank. She has expert knowledge in the treatment of cancer patients in the areas of palliative care and pain relief. In her work she has regular contact with terminally-ill patients and their carers.

Mavis Robinson was appointed as Macmillan Nurse specialising in chest malignancies in 1989 and has since developed an increasing interest in the care of Mesothelioma sufferers. This led to her publishing an excellent advisory booklet, *Mesothelioma, Information for Patients and Carers*. Mavis is acknowledged as being *the* specialist nurse in this field in this country. For three years she has been involved in the organisation of a telephone helpline for patients, carers and health professionals. Macmillan Cancer Relief, as a special project in response to the predicted UK increase in the number of Mesothelioma cases, finances this service. Mavis is currently Macmillan Mesothelioma Project Manager and is responsible for the Telephone Helpline. She can be reached on 0113 392 4327.

Professor Nick Wikeley, Dean of the Faculty of Law, University of Southampton. Is a leading expert on Social Security Law. Currently he is co-editor of the highly respected *Journal of Social Security Law* and co-author of the seminal work *The Law Of Social Security* which is now in its fourth edition. He has been conducting research into the law relating to compensation for asbestos-related disease for some years, culminating in the publication of *Compensation for Industrial Disease*.

Professor Wikeley is also a contributing author to the highly respected *Sourcebook on Asbestos Diseases*, which is published in Santa Monica, USA.

Dr Charles Woolfson has written a number of books and articles dealing with Health & Safety in the workplace particularly in relation to the offshore oil industry. Concern over the failure to prosecute employers following workplace death and injury has led Woolfson to add his voice to the growing campaign for a new statute of *Corporate Killing and Corporate Bodily Harm*. He is currently seeking to address deficiencies in the law and hopes to introduce these matters into the agenda of the Scottish Parliament.