Asbestos based materials

This Technical Bulletin is to notify the publication and distribution of the above titled Defence Works Functional Standard - Design and Maintenance Guide 16 which supersedes PSA Mechanical and Electrical Engineering Guide Section 56.

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DEFENCE ESTATE ORGANISATION
MINISTRY OF DEFENCE

April 1997
### TECHNICAL BULLETINS -
A CUMULATIVE LIST FOR 1997

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INTRODUCTION

1. This advisory Bulletin is for the attention of Commanding Officers, Chief Executives, Heads of Establishment, Property Managers and Line Managers with responsibility for MOD buildings and facilities.

2. Design and Maintenance Guide 16 supersedes PSA Mechanical and Electrical Engineering Guide Section 56. A copy of the Guide is attached and should be made available to Project Managers, Establishment Works Consultants (EWCs), Works Services Managers (WSMs) and Line Managers for use in connection with asbestos based materials.

3. No work involving expenditure on an MOD account is to be carried out without authority from the Property Manager or appropriate MOD officer for that location or facility.

4. This document has no direct impact on cost as the guidance reflects current practice on the Defence Estate. Costs incurred in meeting MOD mandatory requirements are necessary so safeguard the Department's interests and to secure the health and safety of MOD employees and others.

Bulletin Authorised By:

[Signature]

P D MEAKIN
Head of Industrial Group

January 1997
Asbestos based materials
Foreword

This document was prepared under the patronage of the Industrial Group of the Defence Estate Organisation. It replaces the PSA Mechanical and Electrical Engineering Guide (MEEG) Volume 8, Section 59.

This Design & Maintenance Guide is intended to aid the safe conduct of activities that may involve work on, or the maintenance of, asbestos materials.

This document gives guidance on how to establish and operate the asbestos register and what action to take when asbestos materials are discovered, damaged or removed.

This document has no direct impact on cost as the guidance reflects current practice on the Defence Estate. Costs incurred in meeting MOD mandatory requirements are necessary to safeguard the Department's interests and to secure the health and safety of MOD employees and others.

Technical advice and assistance on asbestos related matters can be obtained from the Defence Estate Organisation through local offices or direct from:

Head of Industrial Group
Defence Estate Organisation
Blakemore Drive
Sutton Coldfield
West Midlands B75 7RL

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Fax: 0121 311 3636

Amendments to this document will be advised via DEO Technical Bulletins issued to Property Managers and HQ Works staff. It is the responsibility of the user to check with the Property Manager or Project Sponsor to ascertain if amendments have been issued.

This Standard has been devised for the use of the Crown and its contractors in the execution of contracts for the Crown. The Crown hereby excludes all liability (other than liability for death or personal injury) whatsoever and howsoever arising (including, but without limitation, negligence on the part of the Crown, its servants or agents) for any loss or damage however caused where the Standard is used for any other purpose.
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Asbestos based materials

Contents
Asbestos is the name given to a group of naturally occurring fibrous silicate minerals commonly found in rocks worldwide. There are three principal types of asbestos produced commercially:

- chrysotile - white asbestos
- amosite - brown asbestos
- crocidolite - blue asbestos

In the UK chrysotile has been the most commonly used asbestos fibre, accounting for around 95% of asbestos usage.

For many decades it has been known that asbestos fibres can present a serious health hazard. Therefore, many documents have been produced containing guidance on the subject. Chapter 37, Section 2 of The Health and Safety at Work Act 1974 requires:

"...every employer to ensure, so far as is reasonably practicable, the health, safety and welfare of all employees".

This duty extends to protecting employees from any risks associated with asbestos exposure. In addition, under Sections 3 and 4, employers, the self-employed and occupiers, must conduct their undertakings and keep their premises in such a condition as to ensure that others (visitors, general public etc.) are not exposed to any risk.

To enable the employer to discharge this responsibility this document describes requirements and procedures for dealing with asbestos. These procedures cover:

(i) The requirement to maintain an Asbestos Register in which a record is to be kept of the location of asbestos based products for each site.

(ii) The action to be taken when there is a risk that asbestos dust has been released into the atmosphere.

(iii) The display of Warning Notices where the presence of asbestos could give rise to the emission of asbestos dust in some circumstances.

(iv) The action to be taken when asbestos is discovered or suspected.

(v) The need to avoid, as far as is practical, the use of asbestos based products.

(vi) The action to be taken when a building is being acquired, dismantled or demolished.

JSP 375 and JSP 418 describe MOD policy based on elimination, substitution, control, segregation, information, instruction and training.
1 Definitions and Legislation

1.1 ASBESTOS TYPES

White asbestos - chrysotile
Brown asbestos - amosite
Blue asbestos - crocidolite

Other asbestos based materials include fibrous actinolite, fibrous anthophyllite and fibrous tremolite.

1.2 ABBREVIATIONS

HSE    Health and Safety Executive
HSC    Health and Safety Commission
ACOP   Approved Code of Practice
BS     British Standard
NAMAS  National Measurement Accreditation Scheme

1.3 LEGISLATION

Regulations governing the control of asbestos have been introduced under a number of Acts of Parliament. The principle of these regulations is to match precautions to the proven level of risk. The employer has a duty to employees engaged in works which expose them to any form of asbestos and these responsibilities are extended to include any person who may be affected by the work activity.

The regulations most likely to be relevant to maintaining the MOD estate are listed in Annexe C. A precis of their content is given below.

Note that it is MOD policy (ref. JSP 375) to employ specialist contractors for repair and replacement, as well as for removal, of asbestos.

The Asbestos (Licensing) Regulations 1983, prohibit work by an employer or self-employed person with asbestos insulation or asbestos coating without a licence issued to them by the HSE. A licence is not necessary where the employer or self-employed person carries out work in premises of which he is the occupier and has notified the enforcing authority at least 28 days in advance. Where any person carries out work with asbestos insulation or asbestos coating, and the work carried out does not exceed a total of one hour in any period of seven consecutive days and the total time spent on such work by all persons working does not exceed two hours, the provisions of the Regulations do not apply, and no licence is required.

The 1992 Regulations extend the prohibition on the importation of crocidolite (blue asbestos) and amosite (brown asbestos) to all amphibole asbestos (namely crocidolite, amosite, fibrous actinolite, fibrous anthophyllite and fibrous tremolite and mixtures containing any of these materials). The prohibitions on the supply and use of crocidolite and amosite introduced under the previous Regulations are extended to all forms of amphibole asbestos. The Regulations also prohibit the supply and use of products containing chrysotile (white asbestos) specified in the Schedule to the Regulations.

The Control of Asbestos at Work Regulations 1987 revoke in their entirety the earlier 1969 Asbestos Regulations, and apply 'when any work with asbestos or with any product containing asbestos is carried out by the employer'. The Regulations require that employees' exposure to asbestos be prevented or reduced so far as is reasonably practicable. They also set down control limits at, or above, which employees must not be exposed unless they are wearing suitable respiratory protective equipment (type approved by the HSE). Under these Regulations, employers are obliged to assess the risk to employees prior to any work being carried out with asbestos, so that a decision can be made concerning the measures necessary to control exposure. If the assessment indicates that the cumulative exposure over a continuous 12 week period will, or is likely to, exceed the prescribed action level, then other provisions of the Regulations are actioned. This includes notifying the enforcing authority of the work concerned, measuring the amount of asbestos in the air at the workplace, posting warning signs in work areas, health surveillance and maintenance of health records. The duties imposed on employers to protect their employees are extended to cover anyone else who may be affected by their work, including visitors to the workplace and members of the public. There is also a specific requirement that the spread of asbestos from any place where work is carried out is reduced so far as is reasonably practicable. In addition, emphasis is placed on adequate information, instruction and training for employees.

The Control of Asbestos in the Air Regulations 1990, implement the emission limit of 0.1mg/m³ of asbestos to the air by industrial installations. The Regulations also include further general provisions to prevent significant environmental pollution from activities involving the working of products containing asbestos and the demolition and removal of materials containing asbestos.

The Control of Pollution (Special Waste) Regulations 1980 establish additional controls over wastes which are particularly difficult or dangerous to dispose of. They allow for tighter controls over the transport of wastes and require a consignment note procedure to be carried out before the waste is moved.

The Trade Effluents (Prescribed Processes and Substances) Regulations 1989 enable precise control of asbestos discharges to public sewers derived from processes such as the manufacture of asbestos-cement and asbestos paper and board.

The Control of Asbestos at Work (Amendment) Regulations 1992 include a new tighter action level for chrysotile asbestos, allocation of all other forms to the lower level, a requirement to retain health records for 40 rather than 30 years, and the prohibition of a further range of products containing chrysotile.
1.4 USES & LIKELY OCCURRENCE OF ASBESTOS IN BUILDINGS

Asbestos in various forms has been used in building construction for some considerable time, chrysotile (white asbestos) being most common. It was mainly used in the manufacture of asbestos-cement products. Listed below are the most likely areas where asbestos will be found in building construction:

**Asbestos-Cement Products:**
- roof and wall cladding systems
- rain water gutters and downpipes
- flat roof decking tiles and troughed sections
- flue pipes and cold water cisterns
- roof slates, wall sidings and shingles
- fascia and soffit boards
- window boards and cill sections.

**Thermoplastic and Vinyl Floor Tiles:**
- floors in domestic, industrial, commercial and institutional buildings.

**Asbestos-Reinforced Roofing Felts:**
- built-up roof weathering systems.

**Asbestos Insulating Board:**
- industrial wall and roof linings to provide fire protection and condensation control
- internal partitions which may be providing fire protection
- duct and pipe covers, and other applications where board needs to resist changing temperatures
- suspended ceilings, either screwed up to metal grids or as lay-in panels in exposed grid systems
- fire door conversion
- soffit, porch and canopy linings and other semi-exposed areas
- electrical switch rooms, backing to cable racks.

**Sprayed Asbestos Coatings and Insulation:**
- fire protection, acoustic control and condensation control on structural surfaces in buildings (girders, roofs, ceiling areas and sometimes walls)
- thermal insulation to pipes and storage vessels
- pre-1980's Artex.

**Asbestos Cloth:**
- fire blankets
- insulation to electrical fuse carriers.

**Asbestos Gaskets and Ropes:**
- heating boilers
- chiller plant
- pipeline gaskets
- internal combustion engines (generators)
- fire resisting seals to dumb waiters and incinerators
- seals to fuseboards and fuseswitches.

**General:**
- brake linings
- dust accumulation on structures that contain, or have contained, asbestos
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- linings within cavity walls
- rawiplugging materials.

Clearly, there are a considerable number of incidences where works services tasks could disturb hitherto safe asbestos materials (eg. internal decoration/rubbing down of surfaces, drilling, easing doors, removing ceiling tiles etc.).

1.5 ACTION LEVEL AND CONTROL LIMIT

The Control of Asbestos at Work Regulations 1987, Approved Code of Practice - (Second Edition) regulation 2 (1) provides definitions for action level and control limit, as follows:

"...'action level' means one of the following cumulative exposures to asbestos over a continuous 12 week period when measured or calculated by a method approved by the Health & Safety Commission, namely:-

(a) where the exposure is solely to chrysotile, 96 fibre-hours per millilitre of air; or
(b) where exposure is to any other form of asbestos either alone or in mixtures including mixtures of chrysotile with any other form of asbestos, 48 fibre-hours per millilitre of air; or
(c) where both types of exposure occur separately during the 12 week period concerned, a proportionate number of fibre-hours per millilitre of air"

and

"...'control limit' means one of the following concentrations of asbestos in the atmosphere when measured or calculated by a method approved by the Health and Safety Commission, namely:-

(a) for chrysotile:
   (i) 0.5 fibres per millilitre of air averaged over any continuous period of 4 hours
   (ii) 1.5 fibres per millilitre of air averaged over any continuous period of 10 minutes;
(b) for any other form of asbestos either alone or in mixtures including mixtures of chrysotile with any other form of asbestos:
   (i) 0.2 fibres per millilitre of air averaged over any continuous period of 4 hours
   (ii) 0.6 fibres per millilitre of air averaged over any continuous period of 10 minutes."

The control limit does not represent safe working levels, but are upper levels of permitted exposure. There is still a statutory duty to reduce this level wherever reasonably practical.
2 Roles and duties

Property Manager

Management responsibility is stated in JSP 375. In particular the Property Manager is to:

- receive reports and advice from the Establishment Works Consultant (EWC) and act accordingly
- ensure that contractors and other relevant personnel on site but not employed by the Works Services Manager (WSM) are aware of known asbestos risks.

Establishment Works Consultant (EWC)

The EWC is responsible for preparing, reviewing and maintaining the Asbestos Register for the establishment, and monitoring that the WSM complies with all health and safety legislation. The EWC is also responsible for making recommendations to the Property Manager for action required on asbestos related issues including:

- any urgent action required following discovery of or damage to asbestos
- the need for further more detailed studies
- consideration of any work to be included in the Forward Maintenance Register
- completing the regular inspections of asbestos materials against the Asbestos Register as set out in Annexe B
- inspection tasks stated in DEO(W) Specification 005, Schedule B.

Works Services Manager (WSM)

The WSM is responsible for the supervision of all health and safety related matters of his employees and subcontractors and the impact of their activities on the health and safety of others. This includes informing all persons intending to carry out work on any part of the establishment where asbestos based material is known, or is suspected, to exist.

When the WSM arranges work to asbestos, the WSM is responsible for notifying the HSE where applicable.

The WSM is also responsible for arranging any remedial work to damaged asbestos materials arising from the regular inspections completed by the EWC.
Roles and duties

WSM actions are to include:

- ascertaining from the EWC the location of known asbestos products identified in the Asbestos Register
- obtaining record drawings/other information on known asbestos products from the EWC
- incorporating provisions for investigation, sampling, testing, access repair/remedial works to asbestos materials into the design of works services.

General

Adequate information, instruction and training for all employees and anyone who may be affected by work being carried out on asbestos is a requirement of both the Health and Safety at Work Act 1974 and the Control of Asbestos at Work Regulations 1987. The information, instruction and training provided should include:

- the uses and likely occurrence of asbestos in buildings
- the control limits and action levels and their meaning
- the correct use of control measures to limit the spread of asbestos fibres outside the work area, and to limit the exposure to workers inside the work area to as low as reasonably practicable
- the maintenance of control measures, including the maintenance and monitoring of enclosures and any negative pressure equipment
- procedures for reporting and correcting defects
- the assessment of exposure and the purpose of air monitoring
- proper work methods to minimise dust emissions
- hygiene procedures
- waste disposal
- emergency procedures
- record keeping
- the correct selection, cleaning, storage, maintenance and use of respiratory protective equipment and protective clothing including the health hazards to employees' families and others which could result from taking home contaminated equipment and clothing
- the health hazards of asbestos
- the role of medical surveillance
- the increased risk of lung cancer for asbestos workers who smoke.

The level, extent and frequency of any training clearly needs to be tailored to the level of risk to exposure.
3 Mandatory requirements and procedures

3.1 ASBESTOS REGISTER AND SURVEY

It is the responsibility of the Head of Establishment to maintain an Asbestos Register (ref. JSP 375). Normally the EWC is to compile and maintain the Asbestos Register. The Register is to form an up to date record, for each asset, of all asbestos based materials at the Establishment. Any new Register is to contain the same level and extent of information as shown in Annexe A. The EWC is to amend the Register to include additional asbestos discovered and delete asbestos removed by the WSM as necessary. The EWC is to review any existing Register annually to ensure that it contains sufficient and accurate information.

The initial compilation of any new Register is to be carried out by the EWC who is to carry out a thorough visual survey. The person undertaking the survey is to have competence in identifying and sampling asbestos materials. A competent specialist may be employed.

The survey is to comprise:

- sampling
- analysis
- recording and cataloguing of the results
- clear labelling of any asbestos material found
- priority plans for action taking into account the nature, position and condition of the asbestos-containing materials.

The person responsible for a facility is to be informed of the location of any asbestos materials in that facility, and the permanent location of the Asbestos Register.

The asbestos listed within the Register is to be inspected at regular intervals by the WSM. Annexe B provides a sample inspection sheet.

3.2 ACTION FOLLOWING AN INSPECTION SURVEY

Following any survey the EWC is to issue a report on the findings, including estimated costs for any proposed remedial work, to the Property Manager, and is to enter any work required in the Forward Maintenance Register. (DEO Specification 005 refers).
When the asbestos based material or the protective covering is:

(i) in good condition, intact, non friable and adhering firmly and has adequate warning notices

Action: Manage and monitor.

(ii) disintegrating, breaking away or the protective covering is damaged, but only to a small extent

Action: The damaged parts are to be temporarily sealed until a permanent repair can be effected. Sealing and permanent repairs are to be done in accordance with Standard Specification ASB:SS 1989 by a contractor who is licensed to do such work by the HSE.

(iii) extensively deteriorated or damaged

Action: The EWC is to inform the Property Manager and the person in charge of the building immediately. Should there be any risk of exposure above the recommended level, the Property Manager or the person in charge of the building is to arrange immediate evacuation of the area.

The Property Manager is to:
• authorise the funding for the remedial work
• instruct the WSM
• ensure that competent specialists are used to carry out the work.

The EWC is to:
• confirm to the Property Manager the need for removal
• amend the Asbestos Register.

The WSM is to:
• issue statutory notices to the HSE
• seal doors etc. to the area affected and ensure that correct pressure differentials are maintained during operations and use vacuum equipment where required
• arrange for removal in accordance with Standard Specification ASB:SS 1989 by a contractor who is licensed by the HSE to do such work
• specify asbestos-free substitutes
• obtain air tests and clearance certificates before allowing re-entry to the area.

The material removed must be disposed of by the specialist contractor in accordance with:

a) The Control of Asbestos at Work Regulations 1987
b) The Classification, Packaging and Labelling of Dangerous Substances Regulations 1984
c) The Dangerous Substances (Conveyance by Road in Road Tankers and Tank Containers) Regulations 1981
d) The Road Traffic (Carriage of Dangerous Substances in Packages etc.) Regulations 1986.

In the case of any product that contains crocidolite, the words 'Contains asbestos' on the disposal bag are to be replaced by the words 'Contains crocidolite/blue asbestos'.
Asbestos based materials

Mandatory requirements and procedures

No work is to be carried out until the HSE have been notified in writing. This notification must be made at least 28 days before work commences.

3.3 ACTION TO BE TAKEN WHEN ASBESTOS IS DISCOVERED OR SUSPECTED IN A NEW LOCATION

The person making the discovery is to inform the Property Manager or person in charge of the building immediately.

The Property Manager or person in charge of the building is to:

- inform the EWC
- arrange for the EWC to inspect the material discovered
- ensure that any work in that area, likely to increase the risk of exposure, ceases
- arrange for the area to be evacuated, sealed and warning notices displayed, if there is a risk of exposure above the recommended level.

The EWC is to:

- arrange for the identification of the type of asbestos and determine the nature and degree of exposure
- include in the Asbestos Register
- advise on remedial action including any need for evacuation.

The EWC action points will involve the use of a specialist laboratory selected by the EWC. The specialist laboratory is to be NAMAS accredited to ensure competency and compliance with HSE Guidelines.

If the asbestos material discovered is in a deteriorated or damaged condition, an air sample is to be taken within the space to confirm the level of asbestos within the air. If the levels are above the recommended minimum, the areas must be evacuated, sealed and cleaned by a specialist contractor. Warning Notices must be fixed outside the area.

The action required following the identification of asbestos is to be as Section 3.2.

3.4 SPECIALIST CONTRACTORS

The following list is to be considered when the WSM appoints a specialist contractor:

(i) Contractors are to demonstrate performance reliability in their work (through the provision of references from persons who can verify the quality of work carried out) and be members of a relevant trade association.

(ii) Contractors must demonstrate ability to carry out asbestos activities by providing certificates etc. of successfully completed training courses covering asbestos abatement. The contractor is to provide proof that employees have received instruction on:

- the dangers of asbestos exposure
- respirator use
- decontamination and relevant legislation.

(iii) Contractors must be able to demonstrate prior experience in performing previous abatement projects through the submission of a list of prior contracts. The list is to include the names, addresses and telephone numbers...
Mandatory requirements and procedures

of building owners (or companies) for whom the projects were performed. Contractors new to asbestos abatement work, but who have undergone the necessary training may be considered for certain types of work. Such contractors are to submit evidence of training and other supporting information for consideration.

(iv) Consideration is to be given to any fines received by the contractor, claims and/or court cases pending in connection with any asbestos abatement work.

(v) Contractors are to demonstrate competency in abatement work through:

- the provision of air-monitoring data from previous projects
- written procedures on safe systems of work
- maintaining details of equipment to be used during the work, eg. respirators, protective clothing, shower and mess facilities, scaffolding, etc.

(vi) Contractors must hold a valid licence under The Asbestos (Licensing) Regulations 1983.

3.5 ACTION TO BE TAKEN WHEN THERE IS RISK THAT ASBESTOS DUST HAS BEEN RELEASED INTO THE ATMOSPHERE

Where asbestos dust has been released into a contained area the action is to be as section 3.3. Should asbestos dust be released into open atmosphere the Local Authority Environmental Health Officer and the HSE is to be informed.

There are circumstances when a possible release of dust into the atmosphere need not be monitored. The HSE list the following as reasons why air monitoring may not be required:

i) where exposures are known to be very low (ie. well below the recommended control limit)

ii) where the work is so brief that monitoring results could not be obtained in time to affect it

iii) where such a high standard of personal protective equipment is provided for the predicted exposure that no foreseeable measurement result could indicate a need for a higher level of protection.

The Property Manager is to keep records of any air monitoring that has been carried out. Certain details, listed below, are required by law and must be kept for 40 years:

i) the name and address of the employer

ii) the date(s) the air monitoring took place

iii) the type of work being done eg. removal of asbestos insulation

iv) the type of sample, ie. personal, clearance etc.

v) the location of any static sampler

vi) the sampling time and flow rate

vii) the fibre count

viii) the fibre type if known
ix) the names or organisations of the sampler and analyst.

The WSM is responsible for ensuring that the requirements of Section 3.5 are met.

3.6 ACTION TO BE TAKEN WHEN A BUILDING IS BEING ACQUIRED OR DISPOSED OF

Acquisition of Premises

When premises are surveyed with a view to the MOD acquiring them (normally via DEO (Lands), the survey is to incorporate a statement regarding the availability of an up to date Asbestos Register, and the extent, location and purpose of any asbestos based materials on the premises. Given the variation in the standards employed in the execution of asbestos survey reports and in the compilation of Asbestos Registers, the accuracy of these documents is not to be wholly relied upon. If a Register is not available, or the reliability of the Register is in any doubt, an asbestos survey of the premises must be commissioned. The asbestos survey is to be carried out by a competent person and written permission obtained from the vendor before any samples are taken.

Before acquiring the premises, account is to be taken of the findings of the asbestos survey:

(i) If the building contains asbestos materials but they are not considered to be in a hazardous or potentially hazardous condition, it may, after careful consideration, be left alone. However, provision is to be made for the future monitoring and maintenance of the register.

(ii) A prioritised action plan is to be formulated, taking into account:

- the nature, location and condition of the asbestos materials
- associated risk assessment
- the acquisition and occupation timetable
- associated costs.

In any through-life cost assessment the full cost of safe removal is to be included.

Disposal of Premises

When premises are being disposed of, the Property Manager for the site is to ensure that the person responsible for the disposal of the premises has been informed of the location and extent of any known asbestos based materials on the premises, and of the location of the current up to date Asbestos Register for the premises. No warranty as to the accuracy of the information contained in the Register can be given. Refer also to Design and Maintenance Guide 12 - Site Closure Guide.

3.7 THE DISPLAY OF WARNING NOTICES

Warning Notices are Mandatory on hazardous waste and packages containing asbestos. Warning Notices are to be displayed as a reminder to those who may have to break into or disturb asbestos insulation or asbestos based materials in areas where asbestos is known to exist and which could be readily damaged. The notices are to be located where they will be readily visible to anyone likely to damage the asbestos. However, the location and type of notice is to be carefully considered to avoid causing any unnecessary concern to the building occupants or visitors. Persons working in areas where asbestos is known to exist must have been notified of its existence.

Edition 1 - 1997
3.8 THE NEED TO AVOID AS FAR AS IS PRACTICAL THE USE OF ASBESTOS BASED PRODUCTS

In all practical cases, material containing asbestos is not to be introduced into the estate and is not to be used where there is a suitable inert, harmless alternative. MOD policy is set out in JSP 375.

3.9 PERSONAL PROTECTION

All work in an area known or suspected to have asbestos is to be carried out on the assumption that it is present until testing confirms otherwise. Risk assessments are to be carried out before anyone enters an area where airborne asbestos fibres above the recommended levels are considered possible.

Contractors are to minimize or eliminate risks to all persons in areas under their control. Should the WSM (or responsible MOD person where there is no WSM) determine that operatives under his/her control work in a location where they are exposed, or are liable to be exposed, to airborne asbestos during their work, the following precautions are to be taken:

(i) Ensure that only those operatives under his/her control are in such areas.

(ii) Suitable certified respiratory protective equipment (RPE) is to be provided and adequate training on its use given. Selection of the type of RPE is important. The correct equipment for the particular task must be selected.

(iii) Protective clothing is to be provided for employees wherever there is a significant risk of asbestos being deposited on the clothing. Where the exposure to asbestos is very slight (ACOP - 'Control of asbestos at work' provides some guidance on definition) full protection may not be required (although some form of RPE may be required). In all other cases protective clothing is to be provided and worn. Protective clothing includes both clothing and footwear worn to reduce contamination of the body by asbestos. The type of clothing used is to be fit for the purpose.

(iv) The clothing is to be worn only in the work area, or the hygiene area, or between the two, and must never be taken home. The HSC do not recommend the use of gloves with asbestos, although if being worn for other risks, they are to be made from a material which will not readily retain and later release asbestos.

(v) Non-disposable protective clothing is to be washed at regular intervals. If not cleaned by the employer, the clothing is to be bagged and sealed (in dust-tight bags that will remain so during transport and handling). The bags are to be labelled in accordance with the Control of Asbestos at Work Regulations 1987, and sent to a laundry which specialises in asbestos-contaminated clothing. Heavily contaminated clothing is to be washed at the end of each shift. Disposable clothing is to be bagged, sealed and labelled as above. The bags are to be stored in a suitable area for waste disposal or sent for waste disposal immediately.
This is not a required format, but is indicative of the level and extent of information required. This Register may be maintained in electronic form, but a hard copy of the current register must be available for inspection.
WARNING - DO NOT DISTURB ASBESTOS MATERIAL DURING THIS INSPECTION

Date: 1 July 2000  Operative: JSB

Site: Anywhere
Building: Boiler House
Floor Level: Basement

<table>
<thead>
<tr>
<th>LOCATION OF ASBESTOS</th>
<th>CONDITION</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiler casing</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Flue insulation</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Pipework above ground</td>
<td>✓</td>
<td>Section damaged by door, needs repair</td>
</tr>
<tr>
<td>Pipework in ducts</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Protection to steelwork</td>
<td>✓</td>
<td></td>
</tr>
</tbody>
</table>

Notes:
1. Completed form to be returned to the Property Manager for action.
2. A copy is to be maintained by the EWC

All asbestos materials noted in the Asbestos Register are to be inspected at the frequencies detailed in Specification 005, or following an event that may have affected the condition (e.g. storm damage, major refurbishment).

This is not a required format but is indicative of the level and extent of information required.
Annexe C  References

Further information may be found in the following documents:

**Ministry of Defence:**

DEO Specification 005 - Property management of the Defence estate

JSP 375 - Health and safety handbook

JSP 418 - Environmental manual

**Statutory documents:**

Health & Safety at Work Act 1974. Chapter 37

The Control of Asbestos at Work Regulations 1987: SI 1987 no.2115

The Control of Asbestos at Work (Amendment) Regulations 1992: SI 1992 no.3068

The Control of Asbestos in the Air Regulations 1990: SI 1990 no.556

The Asbestos (Prohibitions) Regulations 1985: SI 1985 no.910

The Asbestos (Prohibitions) (Amendment) Regulations 1988: SI 1988 no.711


The Asbestos (Licensing) Regulations 1983: SI 1983 no.1649

Control of Pollution (Special Wastes) Regulations 1980: SI 1980 no.1709


Asbestos (Licensing) Regulations (Northern Ireland) 1984 SRNI 1984 no.205

Control of Asbestos at Work Regulations (Northern Ireland) 1988 SRNI 1988 no.74

Asbestos (Prohibitions) Regulations (Northern Ireland) 1993 SRNI 1993 no.25

Control of Asbestos at Work (Amendment) Regulations (Northern Ireland) 1993 SRNI 1993 no.26

The Control of Asbestos in Water Regulations (Northern Ireland) 1995 SRNI 1995 no.93

**Health & Safety Executive:**

EH10 - Asbestos: exposure limits and measurement of airborne dust concentrations. Rev. ed. 1995

EH47 - Provision, use and maintenance of hygiene facilities for work with asbestos insulation and coatings. Rev. ed. 1990

EH51 - Enclosures provided for work with asbestos insulation, coatings and insulated board

EH57 - The problems of asbestos removal at high temperatures

EH71 - Working with asbestos cement and asbestos insulating board


L27 - The control of asbestos at work: Control of Asbestos at Work Regulations 1987. Approved code of practice. 2nd ed. 1993
Annexe C - References


MDHS 39/4 Asbestos fibres in air: light microscope methods for use with the Control of Asbestos at Work Regulations

Other:

Asbestos Use in Buildings. Published by the Loss Prevention Council.