SAFETY PROCEDURE NO. 14

ASBESTOS MANAGEMENT POLICY AND PLAN

Contents

Asbestos policy

Property and Facilities, will take appropriate action to ensure the health and safety of staff, students and others who may be affected by the risks associated with asbestos containing materials present in any building structures or plant throughout City estate.

PAF will:

- Systematically and proactively identify throughout City, any material containing asbestos or presumed to contain asbestos.
- Presume that materials contain asbestos unless there is evidence to support that they do not.
- Maintain an up to date asbestos register of the condition and location of asbestos, or materials presumed to contain asbestos; This is kept within the Property & Facilities Department and stored electronically.
- Ensure that materials that are known to contain or presumed to contain asbestos are kept in a good state of repair and regularly inspected.
- Ensure that the asbestos register is made available for reference to anyone potentially at risk.
- Maintain a safe system of work to protect City students, staff, visitors and contractors from exposure to asbestos.
- Train in asbestos management and awareness employees who may be at risk of coming into contact with or need to manage asbestos containing materials;
- Not purchase any new equipment containing asbestos or use asbestos containing materials on new project works.
- Remove or repair asbestos or asbestos containing materials using best environmental practices, and only use licenced trained and competent persons;
- Use only licensed contractors to work on any asbestos containing materials.
- Dispose of asbestos waste following the Hazardous Waste Regulations 2009 (as amended 2011), using an approved waste transfer contractor and an approved licensed landfill site.
- Yearly review the Asbestos Policy and Asbestos register and Management Plan.

Asbestos Management Plan

Definitions and abbreviations

Asbestos Removal Works	Any works involving asbestos removal either notifiable or non-notifiable removal works
Construction Site	A ring-fenced area under control of a Principal Contractor
Principal Contractor	The contractor appointed as Principal Contractor under the CDM 2015 regulations
Asbestos Contractor	Licensed asbestos removal contractor
RAMS	Relates to full risk assessment and method statement to be produced in line with City's standard list of requirements
PD	Principal Designer appointed by the Project Team under CDM 2015
Pre-construction document	The document produced by City's Project Management Team and Principal Designer
CPHSP	The Construction Phase H&S Plan produced by the Principal Contractor
Management Survey	A non-intrusive survey to determine and record known asbestos occurrences. Previously known as a Type 2 survey
Pre-Demolition and Refurbishment Survey. (PDR)	The intrusive survey (requiring areas of survey to be clear of occupants and area sealed in accordance with asbestos regulations) – previously known as a Type 3 survey
Asbestos Regulations	Control of Asbestos Regulations (CAR) 2012
Asbestos Analyst	Licensed asbestos consultant appointed to undertake air monitoring, clearance certificate, monitoring of works
ACMs	Asbestos Containing Materials
Duty Holder	City, University of London is the Duty Holder

Introduction

Asbestos is a generic term for naturally occurring fibrous silicates. The fibres are hazardous because they cause lung diseases; the most important of which is mesothelioma, which is an aggressive cancer of the pleural membrane surrounding the lungs and lining the thoracic cavity, surrounding the heart (pericardium), and lining the body cavity (peritoneum).

City, University of London will comply with the Control of Asbestos Regulations 2012 (the Asbestos Regulations) and other relevant legislation to manage risk from asbestos on its premises and in its activities.

City policy is to prevent risk of exposure to asbestos, or to reduce it to as low a level as reasonably practicable.

This plan relates solely to the management of Asbestos Containing Materials (known as ACMs), it is a live document and will be reviewed periodically as and when new legislation, Approved Codes of Practice (ACOP) and good practice is changed.

City recognises that asbestos is present in areas of the properties under its control and that an effective strategy and associated procedures need to be in place to manage the risks to staff, students and visitors.

The asbestos management plan outlined has been implemented to minimise the risk to staff, students, visitors, consultants and contractors by effectively managing and controlling work where asbestos materials are present.

Scope

This document sets out City's, policy, plans, objectives and procedures that must be followed by designated staff responsible for procuring, controlling or carrying out construction or maintenance work.

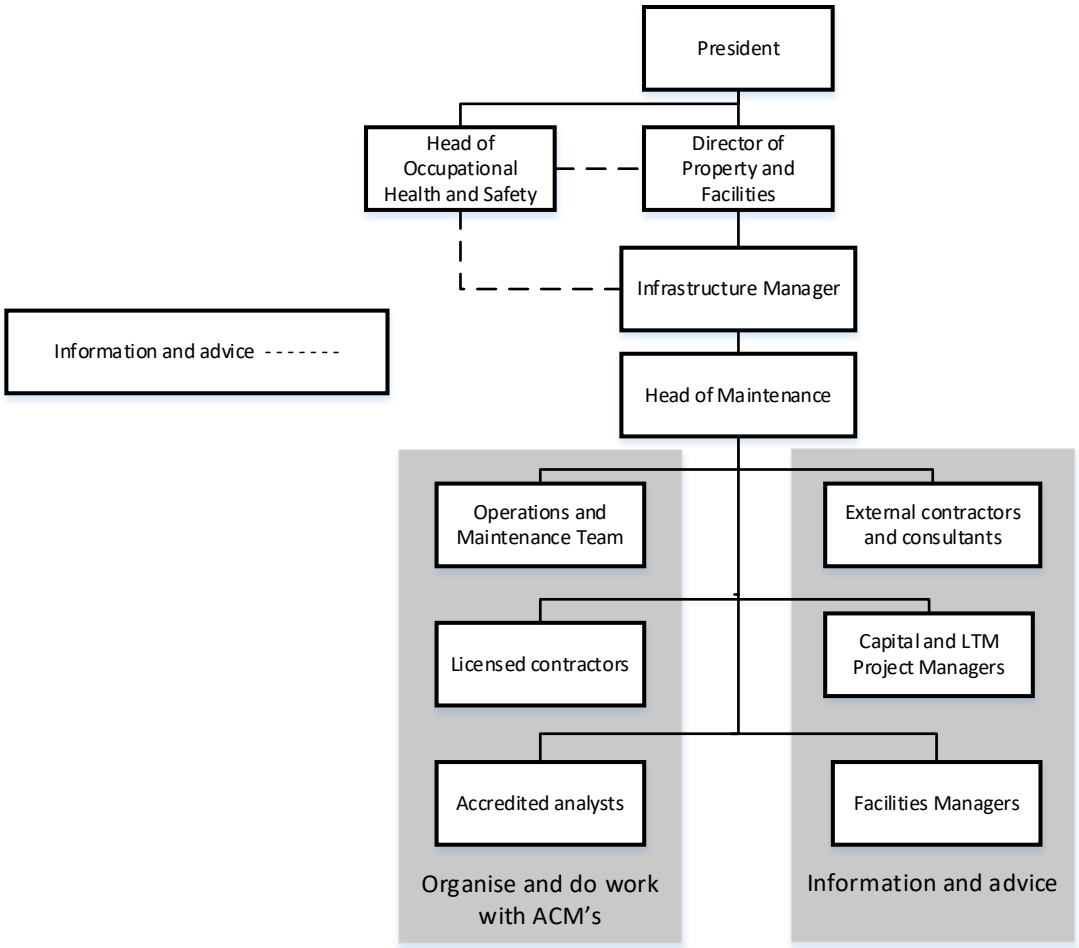
City's Asbestos Management Plan (AMP) shall be controlled within PAF and will ensure that asbestos management of City's estate is compliant with current legislation and best practice.

The University will not accept the importing of asbestos-containing materials (whether as components or contaminants) onto its grounds or into its buildings.

Roles and responsibilities

Specific roles and responsibilities are outlined below.

Organisation chart



Head of Occupational Health and Safety

- Responsible for approving policy on health and safety and asbestos management on behalf of City.
- Offers advice and guidance on complying with the City asbestos policy and asbestos management plan.
- Audits compliance with the City asbestos policy and asbestos management plan and makes recommendations to improve its effectiveness or remedy deficiencies.
- Liaises with Occupational Health Services if any staff member or student is exposed to asbestos.

- Investigates any incident which involves an uncontrolled release of asbestos fibres that result in persons being exposed to asbestos fibres, records findings and any recommendations to City's Joint Health and Safety Committee.
- Provide suitable training as appropriate.

Director of Property and Facilities

- Overall strategy for the safe operation and execution of Property and Facilities activities including legislative compliance with regards to asbestos.
- Execute the principal functions of asbestos management by assembling and maintaining a suitably qualified asbestos management team consisting of staff, consultants and contractors.
- Ensure adequate staff and resources to implement the Asbestos Management Plan.
- Ensure the appropriate range of asbestos training is provided for all staff in Property and Facilities.

Infrastructure Manager

- Maintain a safe system of work to manage the risks from asbestos or asbestos containing materials.
- Ensure all relevant Property and Facilities staff are appropriately trained to effectively comply with this Plan.
- Regularly review and implement the Asbestos Policy and Management Plan;
- Arrange for the survey of the estate and take reasonable steps within the resource available to determine the location of ACMs by appointing competent Consultants and Contractors.
- Presume materials contain asbestos unless there is verifiable evidence to the contrary.
- Make and maintain a written Asbestos Register of the locations of asbestos and presumed asbestos materials.
- Manage the asbestos, assess & prioritise the risk of exposure and document any necessary actions based on the results of the programme of re inspections and in line with the risk reduction principles.
- Liaison with external bodies and enforcement agencies.
- Arrange asbestos removal / remediation based on risk assessments and incident investigation.
- Review the asbestos management plan.
- Maintain and up to date Asbestos Register of ACMs that records the location, condition, maintenance and removal for all ACMs on city's estate.
- Periodically monitor the condition of ACMs, update the asbestos register and reassess the risk.
- Provide day-to-day advice on specific projects at the request of project managers.

Head of Maintenance

- Deputise on behalf of the Head of Infrastructure in his absence for asbestos management.
- Holds the Asbestos Register for City estate.
- Implements the asbestos procedures and Safe Systems of Work, to manage the risk of exposure to asbestos within their area of responsibility.
- Is trained in emergency response procedures to deal with asbestos incidents.
- Is trained to offer the appropriate level of advice.
- Records any breaches of the policy on City's Health and Safety Incident/Accident Investigation Report Form.

- Offers advice and guidance on complying with the policy and asbestos management plan.
- Ensures that regular asbestos surveys and inspections are carried out, and that the presence of asbestos or asbestos containing materials is recorded within the Asbestos Register.
- Is responsible for ensuring that any asbestos or asbestos containing materials which are removed between planned surveys and inspections are correctly recorded within the Asbestos Register and Plan.
- Ensures that any asbestos or asbestos containing materials which have been identified as being in a poor condition are either remediated or removed as appropriate;
- Manages contracts for asbestos analysts and asbestos contractors.
- Holds copies of asbestos training records for appointed staff.

City Project, Head of Maintenance and Long-Term Maintenance Managers

- Will be trained in and hold an in-date certificate of Control or Management of Asbestos at Work Regulations 2012 and refreshed every 2 years.
- Ensure that all asbestos and asbestos containing materials (as far as practicable) are identified prior to demolition or refurbishment works by undertaking intrusive survey;
- Ensure the removal of any asbestos or asbestos containing materials (where practicable) if they are identified within the area of refurbishment or project.
- Ensure that City will not purchase any new equipment containing asbestos or use asbestos containing materials on new project, maintenance or refurbishment works.
- Ensure that all asbestos waste is disposed of following City policies.
- Ensure that any asbestos or asbestos containing materials that are removed or are left in-situ are correctly documented, and that the information is promptly supplied to the Maintenance Manager to update the Asbestos Register.
- Disseminate information about asbestos to staff and contractors under their control by requesting information from the Maintenance Manager and the implementation of their subsequent recommendations.

Asbestos contractors / City approved consultants

- Any repair, encapsulation or removal of ACMs is undertaken by a contractor licensed for work with asbestos by the HSE, ensuring where necessary that those works are inspected, tested and certificated by an independent laboratory accredited by the UK Accreditation Service for the four-stage clearance testing (UKAS accredited Testing Laboratory) as mandated by the HSE for all works where an enclosure is required.
- Report any defects or suspected ACMs prior to starting / continuing with work.
- Make full and proper use of any control measures put in place for working with or adjacent to ACMs, e.g. PPE.
- Follow carefully all the procedures set out in the ‘Plan of Work’ for the works.
- Keep the work place clean.
- Eat and drink only in agreed locations.
- Ensure that any damaged materials that are suspected to contain asbestos are reported to PAF immediately.
- Attend any necessary training when requested.

Asbestos analysts

- Survey, sampling or testing of materials for asbestos will be carried out by specialists who are accredited by the UK Accreditation Service as an Inspection Body (for survey) and/or as a Testing Laboratory (testing materials for asbestos content).

Premises Team

- Inform the Infrastructure Manager of any concerns they have over the presence of ACMs within their areas of responsibility.

External contractors and consultants

- Will follow this Asbestos Management Plan and all other City rules and procedures for safe systems of work.

Risk assessments for work activities

- Staff responsible for planning projects and work activities must consider the possible presence of asbestos when carrying out risk assessments for these activities. The assessment must consider the possible presence of asbestos at the earliest planning stage. This is extremely important where the work involves disturbance of the building fabric and materials, such as drilling, sanding and demolition.
- The Asbestos Register must be consulted and the presence of asbestos clearly shown within the risk assessment.
- Where asbestos is identified as being present and there is a possibility of disturbance, the risk assessment must be approved by the Infrastructure Manager or the Head of Maintenance.

Training

- The Head of Maintenance and the Infrastructure Manager should have training addressing Regulation 4 of CAR 2012 – the duty to manage. This may be a via a course such as BOHS P405 or other professional training.
- Contractors carrying out works with ACMs which require a licence, or lower level tasks which do not, must provide evidence of appropriate training and certification, as specified by HSE and UKAS before commencing.
- Certification of this training shall be provided to external auditing bodies which are recognised by City.
- It is the responsibility of a principal / main contractor to ensure that any sub-contractors employed on City premises hold suitable training.
- All PAF Operations, Project Management, Sustainability and Premises Team staff will be informed about asbestos and asbestos containing materials at their health and safety or site induction. They will also be shown the location of the hard copy and electronic versions of the Asbestos Register.
- All Property and Facilities Operations, Premises Team, Maintenance and Project Management staff are required to attend asbestos awareness training, this would normally be provided by an outside training provider, which will be refreshed at periods of no longer than 24 months. Records of the training are held by PAF.
- New employees will attend the next available asbestos training awareness course held at City.

Asbestos Register

- The Asbestos Register contains information on the location and condition of all known asbestos or asbestos containing materials.
- The Asbestos Register consists of room/floor drawings, written assessments and sample certificates. It is available either electronically or in a hard copy in the PAF Maintenance Office.
- The Asbestos Register is maintained, reviewed and updated by the Infrastructure Manager and the Head of Maintenance.

Records management

Records of asbestos clearance will be maintained within each project file for the duration of the project file.

Asbestos Registers will be archived in the PAF archives for ten years following each annual survey and inspection.

Review of Asbestos Management Plan

The Asbestos Management Plan will be reviewed annually by the Infrastructure Manager and other key PAF personnel holding asbestos management duties to incorporate changes in legislation, best practice, University safe working practices, and actions from audits.

Emergency procedures

Action in the event of discovery of a suspect material

In the event of asbestos materials being suspected or known asbestos being disturbed:

- STOP work.
- Vacate and immediately secure and seal the area including windows and doors to prevent any spread of the materials.
- Report the incident to the Head of Maintenance or Head of Infrastructure via the Service Desk on Ext.7777.
- PAF Service Desk will inform the Head of Occupational Health and Safety and PAF Security, and relevant Premises Team personnel, providing any details of the incident.
- Under no circumstances should you attempt to clean up or sample suspected asbestos materials.
- Do not re-enter the area to collect personal belongings or tools etc.
- PAF will arrange sampling and assessment of area using an asbestos contractor, who is competent to identify, test, clean the area if the required, and provide the necessary clean air certification.
- The Infrastructure Manager or Head of Maintenance will complete City's online Health and Safety Incident/Accident Investigation Report Form, even if the material is found not to contain asbestos.
- Where a site is under control of a Principal Contractor and ACMs are discovered, the procedures contained in the Construction Site Health and Safety Plan will be followed and the Project Manager and Head of Maintenance informed.

Guidance for Those Inadvertently Exposed To Asbestos.

- Any member of staff, contractor, visitor or student, who thinks that they may have been exposed to asbestos because of their activities within City must complete City's Health and Safety Incident/Accident Investigation Report Form and report their concerns to their line manager, contract manager, host or supervisor.
- An assessment will be carried out as to the likelihood of any exposure, with the findings recorded by the Safety Office.
- If the incident involves a member of City staff or student, then the assessment must be recorded on their health record held by Occupational Health which must be kept for 40 years.
- Occupational Health will offer prompt advice about the risks associated with the person's exposure to asbestos.

What constitutes a RIDDOR incident relating to asbestos?

Exposure to asbestos is reportable under RIDDOR when a work activity causes the accidental release or escape of asbestos fibres into the air in a quantity sufficient to cause damage to the health of any person. Such situations are likely to arise when work is carried out without suitable controls, or where those controls fail – they often involve:

- Use of power tools (to drill, cut etc.) on most ACMs.
- Work that leads to physical disturbance (knocking, breaking, smashing) of an ACM that should only be handled by a licensed contractor e.g. sprayed coating, lagging, asbestos insulating board (AIB).
- Manually cutting or drilling AIB.
- Work involving aggressive physical disturbance of asbestos cement e.g. breaking or smashing.

If these activities are carried out without suitable controls, or the precautions fail to control exposure, these would be classed as a 'dangerous occurrence' under RIDDOR and should be reported. Remember, if you need to report a dangerous occurrence relating to asbestos, you should review your asbestos management plan or your working practices and inform the Safety Office.

References
City, University of London Procedures

- City, University of London Standard Operating Procedures
- City, University of London Safe Systems of Work
- City, University London Health and Safety and Accident Investigation Report.
- City, University London Contractor Management Procedure 28
- Asbestos Register

Current Legislation

- Control of Asbestos Regulations 2012.
- Health and Safety at Work Act 1974.
- Hazardous Waste Regulations 2009.
- Approved Code of Practice work with materials containing asbestos 2012.
- Approved Code of Practice The management of asbestos in non-domestic premises 2012.

Document control

Revision No	Issue Date	Author	Comment	Review Date
No 4	12/10/2020	Vincent King	**Approved**	12/10/21

Purpose of the document:	Detail Asbestos Management Plan
Name of document:	Asbestos Management Policy and Plan
The document is the responsibility of:	The Safety Office
This document applies to:	All City, University of London employees, students and visitors
Approval date:	**10/10/20**
Proposed date of review:	02/10/2021 (subject to changes in legislation before this date)
Location of document:	On the Safety Office Intranet Page: under Safety Procedures
This document replaces:	N/A
Other supporting documentation:	

Appendices

1. Management of works to control the risk of exposure to asbestos
2. Asbestos environmental waste management
3. Removal and replacement of asbestos gaskets
4. Asbestos removal procedures for ring fenced sites

Appendix 1: Management of works to control the risk of exposure to asbestos

Purpose

This procedure describes the actions required to ensure that potential disruption of Asbestos Containing Materials (ACMs) is fully considered, when performing construction/engineering works on the City estate.

Scope

For the purposes of this procedure major works can be considered as; demolition, any invasive engineering or construction works that substantially affect a facility or asbestos remediation and removal works. Minor works would typically include:

- Work which penetrates the fabric of the building e.g. drilling, removal or demolition of sections of walls, ceilings or fire doors.
- Work which could disturb pipe lagging.
- Access into infrequently accessed areas particularly if grossly dusty e.g. roof spaces, void areas.
- Cleaning in infrequently cleaned areas or removal of debris associated with old project work.
- Access into areas that are restricted due to the potential asbestos risk.
- Work which could either through incident or practice damage the fabric of the building.
- Installation of new services e.g. pipes, cable/tray, data and telephone.

Responsibilities

It is the responsibility of the **Project Manager/Engineer/ City Responsible Person** (CURP) to:

- Consult the Head of Maintenance when planning works in an area known to contain ACMs.
- Ensure a safe system of work is established and monitored throughout the works;
- Establish restrictions for access as part of the safe system of work (if required);
- Ensure that all asbestos containing waste is disposed of in accordance with University and regulatory requirements.
- Communicate the risks and control measures, as appropriate, to the working party prior to the works commencing.
- Report any actual or suspected disturbance of ACMs from works to the Head of Maintenance via the Service Desk on x7777.
- Ensure the Asbestos Contractor is aware of and complies with the following
    - Undertakes work in accordance with the agreed method statement.
    - Prevents or minimises the spread of ACMs during the work.
    - Immediately stops work and makes area safe if advised to do so by the Asbestos Analyst or CU Responsible Person.
- Ensure the asbestos analyst is aware of and complies with the following:
    - Advises the main and Project Managers on risks and control measures;
    - Undertakes additional sampling and analysis in accordance with ISO 17025 when requested.
    - Acts as the project manager for asbestos remediation/removal works reporting directly to City.
    - Undertakes air monitoring throughout the duration of the works in accordance with ISO 17025.

- Undertake clearance checks and issues clearance certificates in accordance with ISO 17025 following completion of removal/remediation works and provides copes to the CURP.
- Provides, when requested, a statement based on their expert knowledge giving information on the potential for exposure to asbestos following an incident where there is the potential for anyone to have been exposed.
- The area must not be re-occupied until clean air certificate has been issued.

It is the responsibility of the **Head of Maintenance** or CURP to:

- Refer to the Asbestos Register when discussing works within their area of responsibility.
- Provide information on the location and type of asbestos and advice on the appropriate control measures to minimise risks.
- Engage the services of an Asbestos Analyst to provide specialist advice and/or undertake additional sampling, analysis and air monitoring as required.
- Review and agree the method statement/risk assessment for major and minor works in accordance with City's Permit to Work Procedure.
- Complete City's Asbestos Certificate to authorise work through City's Permit to Work Procedure.

It is the responsibility of City **Permit Authoriser** to:

- Arrange for the issue of an asbestos certificate where required.
- Ensure the risk of asbestos exposure is identified on the area Permit to Work form.
- Monitor the working practices in accordance with University procedures.

It is the responsibility of the **Working Party** to:

- Adhere to the safe system of work agreed including adherence to any restrictions;
- Ensure they are face fit tested for any close fitting respiratory protective equipment worn as a protective measure.
- Report any suspected or actual ACM disturbance because of their activities;
- Seek permission from the CURP before any change to the work method is started.
- Hold relevant and current training.

PROCEDURE

Introduction

City's Asbestos Management Plan has been developed to ensure invasive, demolition and project works implement the following:

- Asbestos Containing Materials (ACMs) are identified;
- Identify where there is potential to discover ACM;
- Records of the condition and location of ACMs are maintained;
- The risks from ACMs are fully assessed;
- A plan to manage the risks from ACMs is developed and implemented;
- All information is fully communicated.

In previous years, comprehensive surveys and testing have been performed by Asbestos Analysts for the whole site. A Refurbishment and Demolition Survey may be required to identify ACMs in previously inaccessible areas.

Parts of City estate may have buried ACMs. Any ground penetration (sampling) works must take full account of this.

For an overview of the process refer to the flow charts at the end of this procedure.

Planning

The Project Manager/Engineer/CURP assigned to the works must consider the possibility of exposing ACMs when developing the scope of works.

The Infrastructure Manager or the Head of Maintenance must be contacted as soon as possible during the planning stage to discuss the scope of works. As part of these discussions, the Infrastructure Manager/Head of Maintenance will refer to the Asbestos Register to determine if known ACMs are likely to be disturbed by the proposed works.

If the work area is clear of ACMs which could impact the task, then the work can continue.

If the asbestos information for the work area is unknown or incomplete, the Head of Maintenance will arrange for the area to be surveyed or additional sampling and analysis (in accordance with ISO 17025) to be undertaken by a competent Asbestos Analyst.

If the scope of works has identified that there is a significant risk of exposure to asbestos fibres, an Asbestos Analyst must advise on the risks and control measures. From this a safe method of work must be agreed and documented with the AWC, before any work can commence.

For work in an area known to contain asbestos and which presents a risk of exposure, it is unlikely that minor works will be able to proceed without prior removal/making safe of the asbestos e.g. an environmental clean. Minor engineering/construction works may still require a specialist asbestos contractor.

For demolition invasive works in a building known to contain asbestos, a full destructive survey (PDR) must be undertaken by a City approved Asbestos Analyst. The will arrange for this to be performed as soon as practicable, with the report forwarded to the Project Manager for review and comment, before issue to the project team.

Where a Principal Contractor has been appointed in accordance with the Construction (Design & Management) Regulations, this information should be included within the Pre-tender Health & Safety Plan and include the Management Survey and PDR survey reports.

For substantial works which will involve asbestos removal or confirmed disturbance e.g. demolition, an on-site meeting will be required. This meeting must be attended by the Asbestos Analyst, Asbestos Contractor and Infrastructure Manager/Head of Maintenance in addition to project personnel.

For remediation or removal work, the Asbestos Analyst will prepare the scope of works; this will be forwarded to the Asbestos Contractor as a basis for their method statement. The Asbestos Analyst will review all method statements for asbestos remediation or removal works.

All asbestos removal and remediation works are notifiable to the Health & Safety Executive in accordance with regulatory requirements. Form ASB5 will be completed by the appointed Asbestos Analyst and the Asbestos Contractor undertaking the work. Fourteen days notification is required for all (except emergency) works. Emergency works require justification and a waiver, which must be received prior to works commencing. Copies of these forms must be retained in the project documentation.

ASB5 should not be submitted until City University PAF department, and the Asbestos Analyst have reviewed the method statement and risk assessment and deemed them suitable and sufficiently developed for the works to proceed.

The Asbestos Analyst will ensure that the Asbestos Contractor has completed the relevant notification to the HSE.

If there are any issues regarding the planned works, the Infrastructure Manager/Head of Maintenance must be consulted.

Commencing work

The Project Manager/Engineer/CURP must ensure that information on the location and type of ACMs identified are fully communicated to the working party. For City managed work this will be through City's Permit to Work procedures.

The Project Manager/Engineer/CURP must ensure that the contractor provides full details of the proposed method, including arrangements for preventing or controlling the risk of exposure (RAMS Risk Assessment/Method Statement) from airborne asbestos fibres and environmental releases. Because no survey will guarantee that all ACMs are identified, the methods of work must include details of actions to be performed and communication, should ACMs be unexpectedly exposed.

Before work commences a safe system of work and access restrictions must be agreed with the Maintenance Manager and Asbestos Analyst (where appointed). These conditions and restrictions must be fully briefed to the Working Party.

The Project Manager/Engineer/CURP must ensure that all members of a contractor working party have completed a Site Induction.

For University managed works, the Infrastructure Manager/Head of Maintenance will issue an Asbestos Certificate which must detail safety precautions including PPE/RPE to be used by the working party. This form is completed in association with the Permit to work and the numbers cross-referenced on each document in accordance with City's Permit to Work procedure.

Monitoring the Works

All works must be monitored throughout the project to ensure the working party continues to conform to the safe system of work agreed.

The Asbestos Analyst will monitor the Asbestos Contractor to ensure adherence to the agreed method. If a change to the agreed method is necessary the method statement and notification must be updated to reflect this change.

Where the Head of Maintenance has stipulated air monitoring from advice by the Asbestos Analyst, this must be performed by phase contrast optical microscopy (membrane filter method) in accordance with HSE Guidance HSG 248; Asbestos: The Analysts guide for sampling, analysis and clearance procedures (2005). This may include:

- Personal monitoring throughout the duration of the work.
- Smoke testing of any enclosure.
- Reassurance monitoring throughput the duration of the work.
- Reassurance monitoring during the removal of the enclosure.
- Reassurance monitoring and inspection after the removal of the enclosure.

Where air or personal monitoring has been undertaken the results must be forwarded to the Asbestos Analyst for archiving in accordance with regulatory requirements.

If elevated asbestos levels are detected, the work must be stopped, any exposed ACMs sealed/protected and the work method reviewed and revised to further minimise risk. The incident must be recorded on the CU incident database and the subsequent investigation led by City's Occupational Health and Safety Manager.

For asbestos removal works, the Asbestos Analyst will perform clearance checks and issue a clearance certificate for the completed works. This will be given to the City Project Manager.

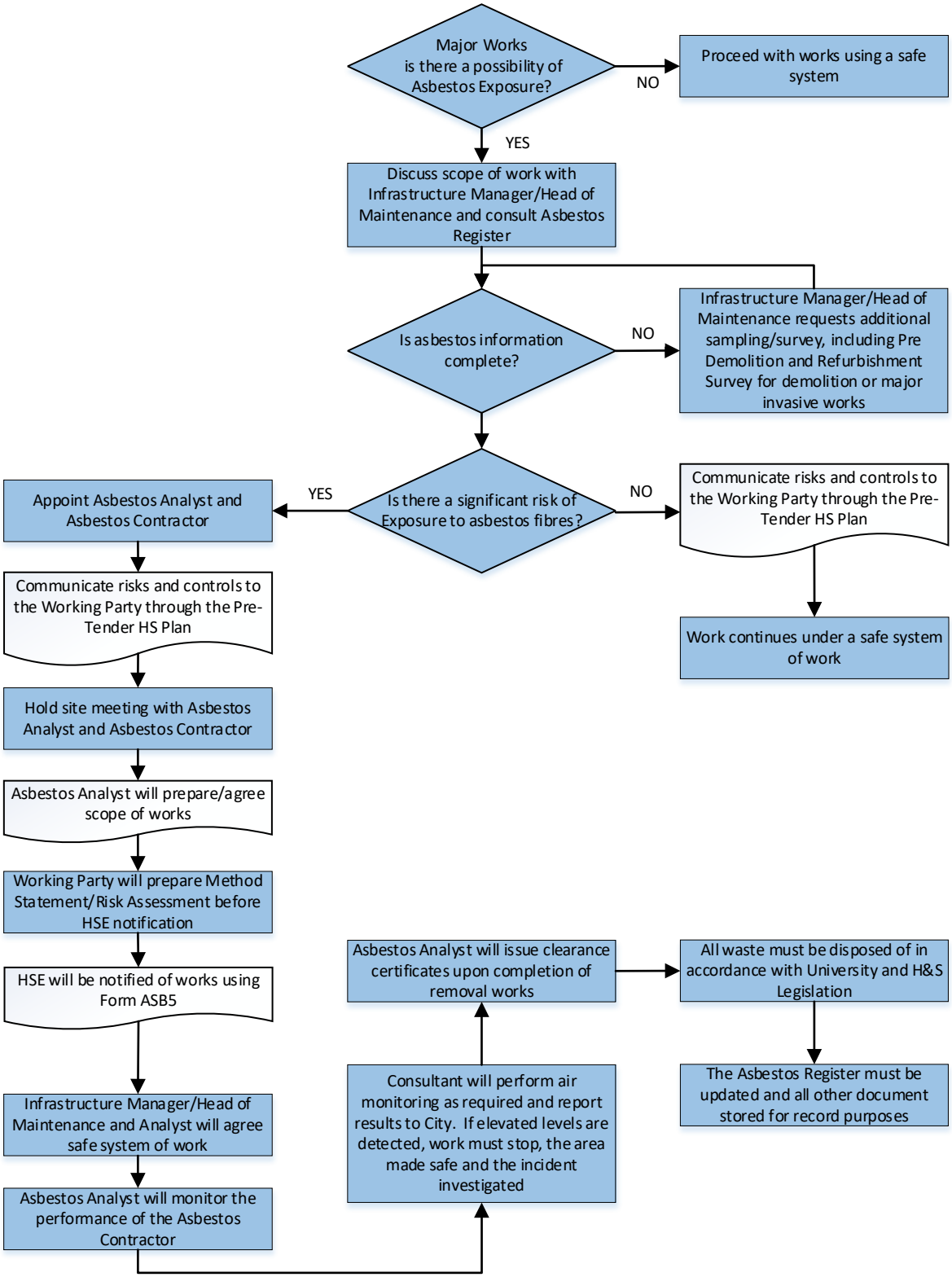
Disposing of waste

The Project Manager/Engineer/CURP must ensure that all asbestos containing waste is disposed of in accordance with University and regulatory requirements to ensure asbestos fibres are not released into the environment. ACM Waste must be disposed of by a licenced handling /disposal facility. Waste transfer notes must be provided to City.

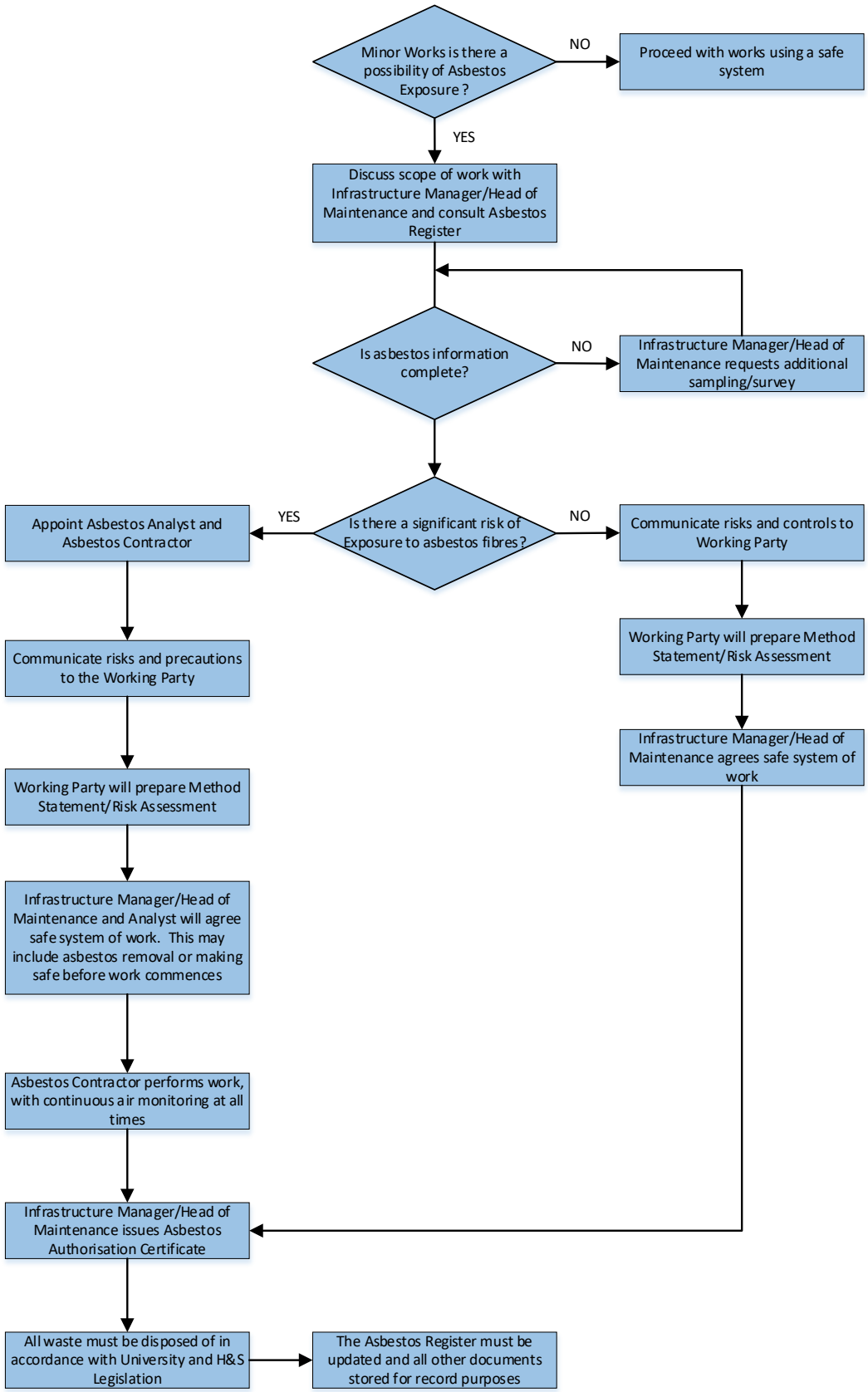
Update of Asbestos Register

Following any asbestos remediation or removal works, the Asbestos Register must be updated. The Project Manager/Engineer/PRP must ensure all information is supplied to the Head of Maintenance upon completion of the works, including survey reports, clearance certificates and waste disposal forms.

Quick Reference Flow Chart for Major Works



Quick Reference Flow Chart for Minor Works



Appendix 2: Asbestos environmental waste management

Purpose

This procedure describes the actions required to ensure that asbestos waste material is disposed of in accordance with City procedures and regulatory requirements.

Scope

The procedure applies to asbestos containing waste (including Personal Protective Equipment) accumulated during works on City estate.

Responsibilities

It is the responsibility of the CURP (City Responsible Person) to ensure that all asbestos containing waste from works they are managing is disposed of in accordance with this procedure.

Health Safety & Environmental Protection

This procedure deals directly with the Health, Safety and Environmental Protection issues related to Asbestos.

PROCEDURE

Introduction

In areas which contain ACMs (Asbestos Containing Materials), any work to remove or remediate asbestos will be carried out by licenced asbestos removal contractors. However, City still has a duty of care to ensure that any waste created is disposed of in an environmentally safe manner.

This procedure applies to all waste material which contains greater than 0.1% w/w (Weight-by-Weight) Asbestos regardless of the type of asbestos involved. All PPE/RPE (Personal Protective Equipment /Respiratory Protective Equipment) that has been used in asbestos work must also be regarded as asbestos waste material. See Appendix 1 for an overview.

Control of Waste

All ACM waste must be ‘double bagged’. This entails placing the waste inside RED polythene sacks and sealing securely with adhesive tape or bag ties and then sealing this sack inside a clear polythene sack. Bags must be sealed in a manner that avoids exposure to airborne fibres.

Large or sharp objects, which could puncture a polythene sack, must be double wrapped in plastic and all joints securely sealed with adhesive tape.

All waste must be transferred to a lockable asbestos waste skip as soon as possible, using the most direct route.

Asbestos cement sheeting may be disposed of in an open skip provided it has been suitably covered to prevent the spread of material.

Where such double bagged materials are to be temporarily stored it should be in a specified red lockable waste bin on-site those wishing to sign out the keys must provide details of the job number to the Estates responsible person to record on the Asbestos Work Record Sheet.

Waste Transfer

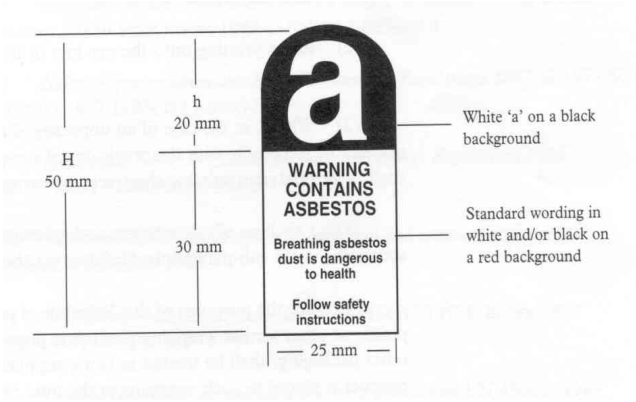
Waste carriers who collect asbestos waste must hold a waste carrier licence that allows conveyance of asbestos waste. All asbestos waste shall be disposed of strictly at a site licensed to receive it, all in accordance with the Hazardous Waste Regulations 2009 (as amended). The Contractor responsible for disposal of asbestos waste shall provide City with documentary evidence of safe disposal via copies of consignment notes.

The CURP must ensure a copy of this consignment note is forwarded to City Sustainability Manager.

All waste which contains or may contain ACMs must be disposed of to a licensed site, which must be verified by the Asbestos Analyst.

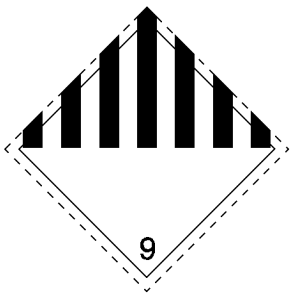
Labelling of Asbestos Waste

All asbestos waste bags and skips must be labelled in accordance with regulatory requirements. The label will be in the form below:



If the label is increased in size the dimensions must remain in the same proportions. Also, if the waste contains crocidolite (blue asbestos) the words 'Warning Contains Asbestos' must be replaced by 'Warning Contains Crocidolite/Blue Asbestos'.

It should be noted that waste asbestos skips held on site should be labelled by the Class 9 hazard diamond warning sign as shown below.



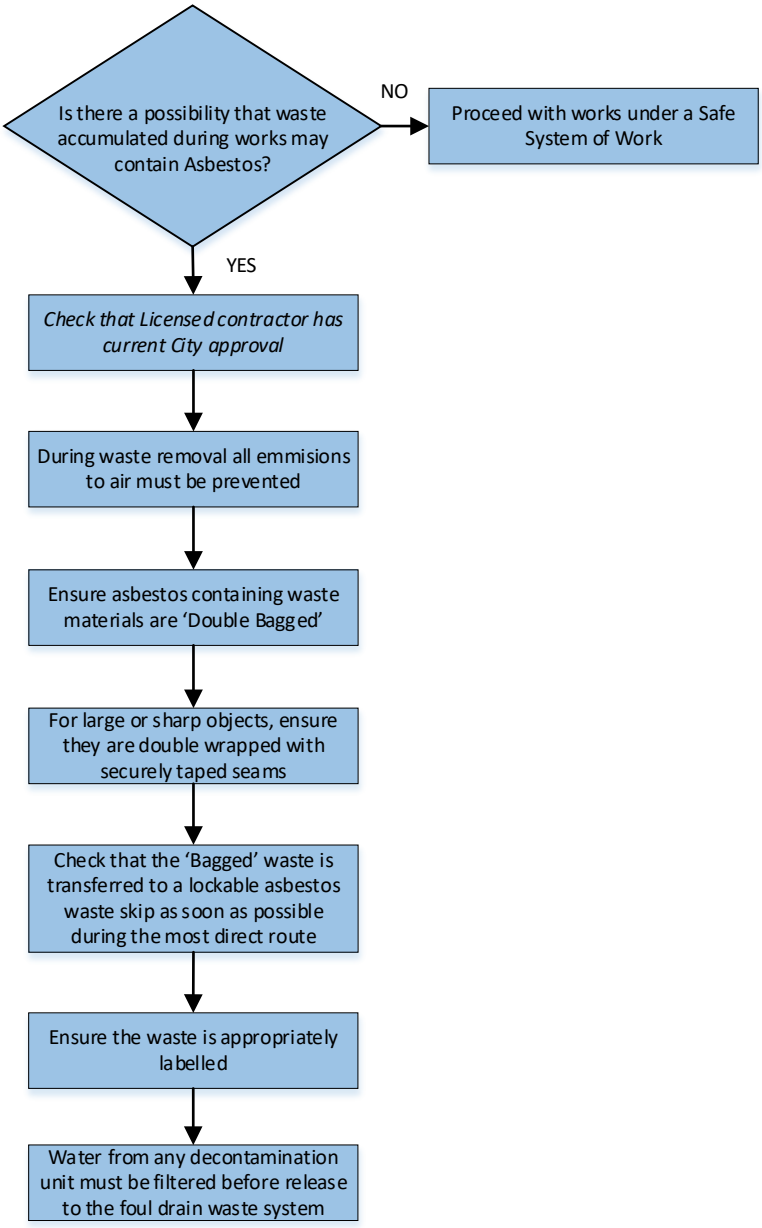
There are also specific requirements for the labelling of asbestos under the carriage of Dangerous Goods regulations. See below for specific requirements.

Asbestos Remediation Works

If a negative pressure enclosure is used the air must be HEPA (High Efficiency Particulate Absorber) filtered prior to venting to the external environment. Regulation 16 of the Control of Asbestos Regulations states that the spread of asbestos material must be reduced to the lowest level.

In addition, all liquid waste from any decontamination unit must be filtered before release to the foul drain waste system.

Quick Reference Flow Chart



Specific information on asbestos labelling under the Carriage of Dangerous Goods Regulations

Containers

There are three UN packing groups I, II and III. The lower the number the more dangerous the goods are. Amosite (Blue and brown asbestos) requires containers to UN packing group II. (Code UN2212). Chrysotile (White asbestos) requires containers to UN packing group III. (Code UN2590).

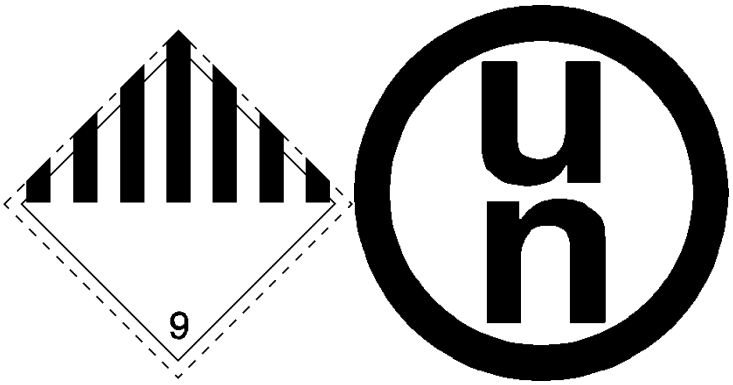
UN containers include plastic sacks and are marked on the package (not the label) with a circle containing the letters 'UN'. Close to this symbol will be a list of codes identifying the classification of goods that can be put in that container. Amosite (blue and brown asbestos) requires the code AY. Chrysotile (white asbestos) requires the code AX.

Labelling

Asbestos is assigned to class 9 for transport and the sign for this takes the form of a diamond with vertical black and white stripes in the top half of the diamond. The number 9 should be in the bottom half of the label. The sides of the label must be at least 100mm.

If the vehicle is carrying more than 200 kg of amosite asbestos or more than 500 kg of chrysotile then:

- A special reflectorised orange coloured panel must be displayed at the front and rear of any vehicle
- A danger sign must be displayed on both sides of the bulk container (250mm minimum side length).
- When carrying waste asbestos, a 2 kg dry powder fire extinguisher (or equivalent) must be provided in the cab.



Appendix 3: Removal and replacement of asbestos gaskets

Purpose

This procedure describes the actions required to ensure that Asbestos Gaskets are removed and replaced with an 'Asbestos Free' material.

Scope

The procedure applies to all asbestos gaskets fitted to systems on the City estate.

Responsibilities

It is the responsibility of the Maintenance Team Member.

- To ensure that a gasket due for replacement has been assessed for potential asbestos material before proceeding.
- To remove and replace the gasket in accordance with this procedure.

Health Safety & Environmental Protection

This procedure deals directly with the Health, Safety and Environmental Protection issues related to Asbestos.

Before working on a system ensure any fluids, gases or residual energy is dissipated.

PROCEDURE

Introduction

Although modern gasket materials do not contain asbestos fibres there are a number of existing systems which have joints sealed with asbestos containing materials.

This procedure describes the actions required to ensure that a gasket is fully assessed to ascertain whether there is a potential for release of asbestos fibres and then removed using a safe method to reduce the risk of exposure.

The change of material must be recorded by passing relevant information to the Property operations Manager who will record it in the Asbestos Register.

Preparing for removal

When a joint has been identified for replacement e.g. leakage, the Maintenance Team Member must initiate an assessment to identify the potential for asbestos containing material. This may be done by reference to the Asbestos Register or by discussion with the Head of Maintenance and/or Head of Infrastructure. If there is any doubt, assume that the gasket does contain asbestos and proceed as follows.

A City Asbestos Certificate must be arranged by consultation with the Infrastructure Manager/Head of Maintenance and if other conditions require e.g. working at heights, a Permit to Work must also be completed.

Before work commences, any conditions that have been stipulated on the Asbestos Certificate/Permit e.g. PPE (Personal Protective Equipment), must be implemented and a barrier erected around the work area to prevent inadvertent access.

A polythene sheet must be placed beneath the joint/s and a liberal application of fibre suppressant solution sprayed or painted onto the exposed surface of the gasket. A minimum of 30 minutes should be allowed to enable the solution to penetrate the gasket material.

Removing the Gasket

Loosen the joint clamping bolts and apply more suppressant solution.

Withdraw the bolts and separate the joint flanges.

Prise off the gasket into a red waste bag and use a scraper to clean remaining material from the flange into the bag.

Wipe any further material from the flanges and from the scraper into the waste bag.

Inspect the joint, bolts, nuts and any visible faces and wipe clean.

Place any cloths used and polythene sheeting into the waste bag and seal it securely.

Place the first bag into a second bag and then add any PPE, seal this second bag. Dispose of this waste in accordance with Asbestos Environmental and Waste Management procedure.

Replacing the Gasket

Check that the replacement gasket is asbestos free material, prepare the joint flanges and tighten the bolts securely.

Label the joint with a stainless steel ‘Asbestos Free’ tag.

The completed works must be recorded in the system logbook where available. The Infrastructure Manager/Head of Maintenance will ensure the Asbestos Register is updated accordingly.

Appendix 4: Procedure for asbestos removal works within ring fenced construction sites

Project Scope (Gateway 1)

The Project Manager is to identify with the Project Team whether the scope of the project is likely to involve asbestos removal works (by reference to the Asbestos Register and review with the Asbestos Analyst) and to identify this to the Principal Designer. This is to be captured in the Design Stage Risk Register.

Master Programme

The Master Programme will allow sufficient periods for:

- Refurbishment and Pre-Demolition Survey (and results) to be undertaken prior to issue of the main contract tender documentation – to seek to quantify the extent and type of asbestos.
- Removal of identified asbestos as part of an enabling works contract to be managed directly by City, using licensed contractors and licensed analysts for environmental monitoring – all as below.

City's policy is to remove asbestos prior to other construction works taking place. If this is not practicable by agreement with the Duty Holder then the following procedures will apply.

Role of Asbestos Analyst

City will appoint an Asbestos Analyst post completion of the Refurbishment and Demolition Survey to:

- Review RAMS submitted by the Principal Contractor to assess whether proposals follow Control of Asbestos Regulations 2012 and advise the Maintenance Manager.
- Inspect and agree safety provisions and notices, inspect decontamination unit, and witness enclosure integrity tests as required.
- Collect and analyse background, leak, clearance, reassurance and personal air samples as required.
- Sample and analyse in accordance with HSG 248 "Asbestos: The analysts' guide for sampling, analysis and clearance procedures".
- Carry out four-stage clearance process on enclosures as required under the Control of Asbestos Regulations 2012.
- Monitor all works on site (to be present at all times during asbestos removal) and report any non-compliance issues to the Principal Contractor and also notify the Maintenance Manager and Project Manager.
- Monitor all transit routes (and carry out air monitoring) and to report any non-compliance issues to the Principal Contractor and also notify the Maintenance Manager and Project Manager.
- Issue a Certificate of Reoccupation on completion of the asbestos remedial works;
- Analyse samples on site during the works.
- Ensure written reports are available on the day of analysis with typed reports issued within 5 working days.
- Liaise with relevant parties throughout the works.

Review of Principal Contractor proposals for Asbestos Removal

The Principal Contractor will set out proposals for asbestos removal, this applies to notifiable and non-notifiable asbestos removal works. (Pre-construction document is to require the following information to be provided including):

- Details of asbestos removal contractor.
- Outline site setup plan for asbestos removals and proposed transit routes for removal of asbestos from site.
- Master programme to show periods for asbestos removal – which needs to show no other works being carried out within same site enclosure and any adjoining area as asbestos removal works and no works to transit routes.

The Head of Maintenance will review the CPHSP and confirm if these issues have been covered. Any deviations will need to be reviewed and agreed with the Head of Maintenance/Infrastructure Manager.

The Principal Contractor will remain fully responsible for adequacy of RAMS.

- RAMS (from Principal Contractor and Asbestos Contractor) are to be submitted to the Project Manager and Maintenance Manager, in advance of any notification to the HSE. RAMS will include as a minimum:

- Methodology for the removal works.
- Programme to show periods for asbestos removal – which needs to show.
    - no other works being carried out within the same site enclosure.
    - no other works being carried out in any area adjoining the asbestos removal area.
    - no works to transit routes (transit routes not to cross work areas) until a clean air certificate is issued by the Asbestos Analyst.
- Site demise drawings showing exclusion zones and transit routes, on-site storage, air monitoring arrangements, enclosure details.
- Drawings showing details of transit routes and how they will be kept clear and separate from work areas at all times.

The Head of Maintenance Manager will review the above and seek input /comment from the Asbestos Analyst and issue comments back to the Principal Contractor for incorporation into the RAMS. Until all comments have been incorporated within the RAMS the ASB5 notification should not be submitted.

Asbestos removal works on site.

- The Principal Contractor will remain fully responsible for site safety and adequacy of RAMS and ensuring works are carried out in accordance with RAMS;
- The Head of Maintenance in conjunction with the Project Manager will carry out spot checks of transit routes and areas adjoining asbestos removal area;
- The Asbestos Analyst to undertake the role as set out above.