How to save a small fortune on asbestos management

10 QUICK TIPS TO HELP REDUCE YOUR COSTS ON SURVEYING, AIR TESTING AND REMOVAL

Clifford Devlin

GLOBAL ENVIRONMENTAL

QUANTITY SURVEYORS' EDITION

Introduction

If you are responsible for procuring a project involving a building built before 2000 the chances are it may well contain some asbestos. Since 1999 it has been illegal to use asbestos containing materials (ACMs) in construction or refurbishment. However asbestos was used extensively as a building material in Great Britain from the 1950s through to the mid-1980s and much of it is still in place.

It is estimated that 2.4 million homes and as much as 75% of commercial, industrial and municipal buildings still contain some asbestos containing materials.

According to the Health & Safety Executive (HSE) asbestos accounts for over 4,000 deaths each year in the UK. Given the long delay between first exposure and the onset of disease (15-60 years) and its widespread use after the war this number is expected to go on rising for the next ten years.

Asbestos is therefore a key healthy & safety issue which needs to be managed at the outset and throughout the lifetime of demolition, refurbishment or maintenance projects.

It is estimated that managing asbestos accounts for 10% of the cost of demolition and as much as 5% of spend on refurbishment projects is allocated to the identification, removal and reporting asbestos containing materials.

The following document provides 10 tips to enable you to minimise the amount you spend on managing asbestos without compromising the safety of those involved. The suggestions have been complied by experts in all disciplines from surveying to analytical work and removals at asbestos consultancy Global Environmental and licenced removals contractor, Clifford Devlin.

It is unlikely that all ten tips will be applicable to your individual circumstances but, even if you find just two or three useful, this short read will have been valuable.

Paul Clarke-Scholes
Asbestos Consultant, Clifford Devlin

Note: All of the advice contained in this document is consistent with current best practice pertaining to asbestos management. If implemented correctly none of our suggestions will compromise the integrity of the process involved or the health & safety of those affected by it.

1 Share your information

Share as much information as possible with your asbestos constancy/s to minimise the cost of an R&D survey.

Unlike Management surveys, R&D asbestos surveys target only the areas which are likely to be disturbed by the building works. If you are procuring or pricing forthcoming works for which a scope has been prepared - pass this to your consultancies in advance or publish this as part of the Invitation to Tender so that they can accurately assess the area and locations that they will need to survey.

On large or complex projects you may wish to invite prospective consultants to visit site so they can see for themselves the location of the works

Sitting down at the planning stage with the consultant is vital to ensure that only the planned refurbishment areas are targeted for the survey. It is not necessary to blanket an entire property or housing archetype raising survey costs and potential reinstatement costs. We can focus on what is actually required.

This will therefore affect:

- Survey time - a greater yield of surveys per day based on day rates
- Less impact on the occupants - reducing potential for costly complaints
- A reduction in reinstatement costs if there are delays in programmes

> The refurbishment and demolition survey will only be necessary in the specific area/location where the works will take place, eg cupboard, part of a room, kitchen/bathroom.
>
> **HSG 264**

CASE STUDY

A order was received to carry out an R&D survey to a flat in this property. After the surveyor arrived it was quickly realised that the property had a significant value to it due to the extensive and expensive decorations.

After an impromptu conference call with the developers and the buyers it was apparent that no consideration had been made to the impact of a full scale R&D. A management survey was carried out but revealed little due to a lack of scope from the client and only surface areas inspected. We have subsequently returned to carry out a specific R&D to areas affected only by reinstatement works.

During this second attendance the scope changed again from the developers and a third visit will now need to be made. Our works could have easily been completed on the first visit with careful planning and involving the consultancy at the outset.

The survey cost has now trebled. After speaking to the client subsequently when the plans had been finalised it transpires that that the original surveyor inspection was adequate.

2 Limit the damage

Minimising damage caused during asbestos works will reduce the costs of reinstatement

Asbestos surveying and removal works, by their very nature are intrusive procedures and damage to the fabric of properties is an inevitable consequence of the discipline. However, there are a number of techniques which consultancies and contractors can use to minimise damage and reduce the costs of re-instatement.

Many surveyors now use endoscopes to identify ACMs in concealed areas such as voids, cavities or behind semi-permanent fixtures. This can reduce the diameter of the cavity required to access these areas from approx 50mm to 10-15mm.

The financial benefit of this will be realised if the works are cancelled or indefinitely postponed for whatever reason. In such circumstances, intrusions created by the survey need to be fully re-instated. Smaller holes can be reinstated using quick drying filler and paint while larger intrusions may require replacement of building and potentially a second visit if the hole required bonding and skimming and taking drying time into account for the painting.

The value of this will be realised fully when dealing in large refurb programmes involving say, affordable housing.

Disassembly of asbestos removal enclosures, which are typically fixed to existing structures using tape/aerosol adhesive and foam to seal any gaps, can also cause damage to the decorative order.

There are techniques that can be used to prevent or minimise damage: Timber members wedged at a suitable point, say between two walls can be used to affix correx sheeting rather than fixing directly to the wall. An experienced operative should also know how to lap the polythene so that the majority of, if not all, the taped joints are on the inside and the polythene is not fixed to the existing structure at all.

3 Minimise survey exclusions

Areas that are excluded from an R&D survey will require a second visit before the works

If surveyors are unable to access a location without causing significant damage that would leave the premises unfit for occupation/re-occupation they are duty bound to identify these locations as inaccessible and exclude them from the report. This can cause significant additional costs of a second visit to access the excluded area before the works commence.

You can avoid some of the additional, unforeseen costs of re-visits, by instructing the Facilities or Site Manager to facilitate as much access as possible for the survey. Ideally they will escort the surveyor around the building or provide a full set of keys. In circumstances where ducting, closed risers or obstacles are preventing full access ask them to organise specialist labour to provide "opening-up works" on-the-spot. This might sound expensive but this will have to be done at some point before the works start - you might as well get this done in one visit.

Usually areas like this will be identified by the surveyor at the outset and communicated to the project manager.

CASE STUDY

Global Environmental's survey teams encountered some problems accessing areas that fell outside the scope of the HSE's survey guidance e.g. hidden risers and areas obstructed by kitchen worktops.

The building contractor was unhappy with these areas being excluded from the report. We discussed the issue with them and they were able to supply specialist labour to open-up the concealed areas in each property archetypes. Samples were taken and any positively identified locations were included in future surveys.

On smaller projects these will need to be identified prior so that a dual visit with a specialist trade and the surveyor can be arranged. High level access can be a co-operative arrangement by waiting until the erection of scaffolding or combined use of a scissor lift with other trades rather than a separate stand-alone arrangement that will need to be duplicated later in the project.

REASONS FOR EXCLUSIONS

- Area was locked
- Areas is enclosed i.e. void, duct
- location is too high to access using ladder
- Plant not isolated
- Biological hazards that prevent a surveyor entering (guano)
- Structural issues - unsafe access
- Inhabited areas
- Sensitive areas that require constant occupation- security etc
- Specialist trades for some areas like lift shafts etc

4 Challenge the conventions

Innovative methods to access external high areas can reduce costs considerably

When areas have been assigned for demolition the whole building fabric i.e. not just targeted areas will need to be surveyed intrusively to identify asbestos that will need to be removed beforehand to prevent asbestos fibres being released into the atmosphere during the works. Even controlled demolition will require the external parts of the buildings to be surveyed for asbestos.

If the building is to remain unoccupied before the demolition then it may be possible to leave the survey and removal works until a demolition scaffold has been erected allowing the operatives to work from it before the structure is dismantled.

However, if the demolition is not scheduled to start until some point in the future you will need to find ways of accessing the elevations.

You may encounter circumstances when conventional access methods are not available for example: Too high to use ladders (i.e. above 2 storey) or an enclosed location prevents the safe location of a cherry-picker or scissor lift.

Scaffolding just to allow asbestos surveys and removals to take place will probably be prohibitively expensive. A cost effective alternative is to use rope-access methods.

The surveyor will need to have minimum of Level 3 Rope Access training and you will need to hire the services of an industrial abseiling firm to facilitate the process. This all sounds expensive too but, compared to scaffolding, it is extremely cost effective.

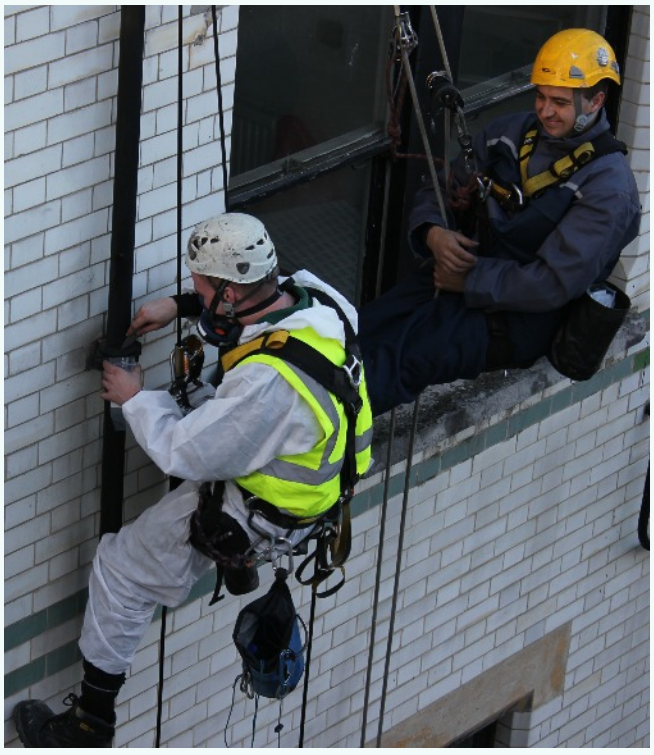
CASE STUDY

Global Environmental were appointed to carry out demolition asbestos surveys of two buildings at an NHS Hospital in Central London.

The buildings were enclosed on all sides by adjoining properties and the demolition was not expected to start within 2 years eliminating the possibility of using the demolition scaffold to work from.

Faced with these challenges we proposed using rope-access methods to survey the exteriors.

We enrolled the surveyor on a one-week training course to achieve Level 3 Rope Access accreditation and we engaged the services of industrial abseiling specialists to set-up and attend the rigs. The work took 3 days to complete but, despite this, we estimated we saved the Trust over £50k on scaffolding the buildings.



5 Avoid 'out-of-hours'

Explore the feasibility of keeping asbestos works in normal working hours

The risk of fibre release means that intrusive asbestos surveying and all asbestos removal needs to be carried out in vacant areas i.e. segregated from occupants, other contracts and/or the general public.

If properties requiring surveys or remediation are occupied the areas where these works are required need to be isolated. If it is not feasible to decant occupants then the only other option is to schedule the works out-of-hours i.e. 18:00-07:00 or weekends in normal workplaces. However, you will almost certainly pay an additional 30-35% for the privilege.

For a simple survey or small removal project the reduction in disruption or inconvenience to the tenants by not decanting them and scheduling the work outside their normal occupation may be a price worth paying. However, in larger, complex properties or when large volumes of hard to access ACMs are involved the out-of-hours premium may become a significant cost.

With a bit of imagination and no little of tenacity there may be some workarounds that you can identify and implement to eliminate, or at least reduce, the amount of work that needs to be conducted at a premium rate. Here are some suggestions:

- Discuss with the Facilities Manager the occupants' normal routines to explore any patterns of occupancy which might afford you a window of opportunity?
- Could the survey be conducted during the lunch-break? Perhaps there is a training day scheduled when area will be vacant?
- Would the occupants be prepared to decant to an adjacent area to allow the works to be conducted on an area by area basis?

- Could any void space such as risers or ducts - typical locations for ACMs - be safely segregated from the adjoining occupied area? For example Retail environments often segregate service areas by careful management rather than wholesale evacuation. Warning signage, and people management can be effective where there is really only one point of entry to manage.
- Because a management survey does not involve fully invasive methods when sampling, it can usually be conducted safely in occupied areas i.e. surveyors can carefully work around staff and visitors - make sure they are briefed in advance and accompanied

Finally if a survey must be conducted out-of-hours explore ways in which you can avoid the issue of lone-working and reduce the work to a one-person team if there is someone available to accompany them i.e. security personnel.

Rather than accepting the orthodoxy of out-of-hours and the increased costs it is worth discussing these and other options with the Facilities team and the consultant/contractors involved to see if there are ways of reducing the bill.

Ask for a risk assessment to be carried out in advance to ensure that safety is not being compromised.

6 Ask for priority risk assessment

A more detailed evaluation of asbestos containing materials may identify cost savings

A scoring system is used in asbestos survey reports to rate the risk of Asbestos Containing Materials (ACM's) that have been found. A formula is used which rates asbestos type, condition and material type to create a Material Hazard assessment. This ranges from 3 (lowest risk) to 12 (highest risk).

Based on this score the consultant will typically make a recommendation for how to proceed. You may find that most consultants will automatically recommend "removal" for any ACM's rated perhaps 9 or 10 and above.

Priority Risk Score	Fibre Release Potential
10 -12	High
7 – 9	Medium
5 – 6	Low
3-4	Very Low

However, there is another more detailed evaluation which can be used - known as a priority risk assessment - which can be conducted which takes into account a variety of other factors that can contribute to the risk posed such as accessibility, occupancy, frequency of maintenance and the usual activities carried out in its vicinity etc.

By using this additional scoring system what appears to be a high risk item may be mitigated down to a medium risk and the subsequent cost of managing reduced. For example - an AIB panel identified and scored within a cupboard has a higher score when scored on material assessment alone and typically the recommendation would be to remove.

However, additional factors in the priority risk assessment such as it being within a locked cupboard which is opened only annually may reduce its score and recommendation down to 'encapsulate' or even 'manage' - considerably less expensive actions than removal. When extrapolated across a large building or property portfolio the savings could be significant.

> The combined material and priority assessment results should be used to establish the priority for those ACMs needing remedial action and the type of action that will be taken. There are various remedial options available: in many cases the ACMs can be protected or enclosed, sealed or encapsulated, or repaired. These options should be considered first. Where such actions are not practical, ACMs should be removed.
>
> **HSG 264 (130)**

Asking your consultant to carry out priority risk assessments when embarking upon a management survey may incur an additional fee as it will entail additional scrutiny of the locations and may involve discussions with occupants or Building Managers. However, it could deliver significant savings over the lifetime of an asset management contract. In truth, you will have to conduct this exercise at some point anyway to complete your management plan later, so you may as well allocate the costs up front.

7 Commission a remediation specification

A forensic interpretation of the survey could cut removal costs by half

Here is a typical scenario: the surveys have been completed, an inventory of asbestos has been generated which together with the reports you forward to removal contractor to price... right...? **WRONG!**

We would strongly recommend that you invest in the preparation of an asbestos remediation specification that could reduce the volume of removal work by as much as 30%.

The specification, prepared by an independent consultant (possibly your survey company) will provide a forensic interpretation of the inventory of ACMs which the removals contractor will not. After all it is in their interests not to find areas that won't be disturbed by the refurb works or suggest encapsulation which is less expensive.

While the survey records the findings it doesn't necessarily assess the implications. The specification should be prepared in consultation with other stakeholders i.e. FM team, building contractor or the wider design team, so that it can take account the locations, methodology and extent of any activity which has been planned.

SOME EXAMPLES

Your building contractor provides an inventory of works to the consultant who is also in possession of the asbestos register and reports. They are then in a position to cross-reference the two inventories to identify any locations where ACMs have been found but where invasive refurbishment is not taking place.

During routine social housing refurbishments some tenants may decline the offer of a bathroom refurb and, for example, Asbestos Insulating Board (AIB) identified in the bathroom riser can be encapsulated rather then removed - a significantly cheaper and faster method of remediating it.

A factory area requires a new floor. The tiles have been removed and there is a bitumen coating to the concrete. Whilst the bitumen is an ACM it would not be cost effective to remove the bitumen. A simple screed will encapsulate the bitumen adequately to mitigate the risk down to a simple update to the register to be kept on file.

While the spec will require some investment perhaps cost a few days work to compile and complete, it could reduce the removal costs by as much as 50% as well as generating significant associated programme savings and certainty.

The document can be prepared in-house if you employ a knowledgeable person who is responsible for collating asbestos information and providing advice. Alternatively this task can be outsourced to an asbestos consultancy - the existing surveying company or a third party.

They key point here is that the specification should **NEVER** be completed by the removals contractor. Well, not if you expect it to save you money, anyway.

8 Consider the big picture

Contemplate the long-term plans for your property/s before embarking upon intrusive works

Asbestos removal is usually a very invasive and disruptive process which is best scheduled concurrently with other planned works, if possible, to share the associated costs involved such as decanting live areas, opening-up works maintenance of lift shafts, window extractions, voids upgrades in social housing etc

The HSE advice has always been to leave good condition ACMs in situ and manage them, if possible. Therefore in circumstances when reinspections, due to change of ownership or use, have recommended removal it may worth pausing before embarking upon any remediation to investigate any future developments in the property's lifecycle when the works could be undertaken.

Investigating any forthcoming events until when the removal could be postponed such as planned major refurbishment or even demolition could save considerable sums in the short term and enable the works to be carried out more conveniently and cost-effectively at the time.

Discuss the feasibility of managing the ACMs with your asbestos consultant first (you may want to request a Priority Risk Assessment - see tip 6), to ensure that the ACMs can safely be encapsulated and managed until this eventuality.

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9 Plan for the unexpected

Make sure you have contingencies in place

Asbestos removal is not an exact science and unexpected challenges can occur after the works have started that can have an impact on costs on programme. The surveyor can only estimate the quantities of ACMs to be removed and often much more is found once the works commence. Your removal contractor will almost certainly submit a change request and there is not a lot that you can do to offset the increased costs but, the additional work may also have an impact on the timeline which can cause delay to reoccupation of areas that have been decanted.

BUILDING CONTRACTOR
IN PARTNERSHIP WITH
ABC HOUSING ASSOCIATION

EMERGENCY PLAN

Contract: Kitchen & Bathroom Refurbishment scheme 2014-15 for ABC Housing Association
Contract Ref: FGT/KB2/2014/1
Prepared by: Building Contractor
Date: 23rd March 2014

Reviewed by:
Sam McDermott (Project Manager, Building Contractor)
Jonathan Jones (Health & Safety Manager, ABC Housing Association)
Phil Brotherton (CDM Coodinator, WHG & Co)

In these instances alternative arrangements will have to be made for occupants which can be very costly when organised at short notice. We find it pays to have contingency arrangements in place to cover the potential overrun. These should be drawn-up and costed at the planning stage in conjunction with the Facilities Team or Tenant Liaison Officer.

TYPICAL SCENARIO

AIB has been identified in the airing cupboard and bathroom of a 3-bedroom flat occupied by elderly tenants.

The removal contractor estimates that a 2-person team will need no more than 6 hours to remove it. The RLO organises for the tenants to be decanted to a community facility for the day - and is present at 9am when the handover takes place and arranges to organise reoccupation at 5pm.

The removal works take longer than expected and at 4:30 pm the stage-3 air test fails - requiring a second environmental clean. This needs to be scheduled for the next day, perhaps because the analyst has commitment elsewhere, or the operatives do. Alternatively, by the time site is cleared there is no access to the bathroom or the master bedroom before 8 pm and the occupant to takes their medication and go to bed.

The RLO needs to find alternative overnight accommodation for the tenants at short notice which is expensive, time-consuming and causes no little distress.

We therefore recommend that the Contractor's RLO should be involved in the drafting of the contract's emergency plan at the lead-in phase.

This will allow them to have alternative accommodation in place and, perhaps more importantly, give them the opportunity to manage the tenants' expectations. Perhaps a cut-off point of 4pm should be defined as the trigger point for organising alternative arrangements.

10 Target the air testing

Think carefully when you need an analyst to be present

Air testing, carried out by a UKAS-accredited analytical consultant, is required to ensure areas are safe to re-occupy following both asbestos removal and intrusive surveying work. Below are a number of tips to potentially save reduce costs on analytical works and enhance the veracity of this vital part of the asbestos management process.

Firstly, ensure that you procure an independent analytical company - don't ask the removal contractor to arrange the air testing. This will avoid a potential conflict of interest between the contractor and the analyst. There have been cases when familiarity between them has compromised the integrity of the process.

There may be circumstances when you may not even require an analyst at all. For example, HSE guidance document s for non-licensable material removal which lists a number of lower-risk ACMs such as floor tiles and textured coatings. A certificate of cleanliness following intrusive work of the materials can be safely issued following a visual inspection by a person appointed by the client (Ref HSG 210 EM10). In practice this means someone with experience or even the contractors that removed the ACMs themselves.

Similarly smoke testing of asbestos enclosures, required before licenced removal commences, can again be safely conducted by a person appointed by

the client - in this instance this can be undertaken by a "trained contractor" following instruction on a task sheet. At least two persons should carry out this test with the LARC supervisor acting as the witness. For good measure it can be witnessed by an independent person appointed by the Client (e.g. analyst). The witnessing of the smoke test is not part of the 4-stage clearance process, so it is not a prerequisite that it is witnessed independently just good practice.

While it is only compulsory for the analyst to attend during the 4-stage clearance process it is good practice for them to be present at the outset also to carry out initial test to establish a baseline fibre count, to conduct initial "Leak Tests" and personal testing during the removal, to demonstrate that work is being conducted safely. The minimum unit for analytical work is typically ½ day as this will include travel, setting-up, fibre counts and paperwork. Therefore, for minor removal works involving just an hour or two on-site will require a full day of analysts' time to be present during the commencement and completion.

However, for more substantial projects there is no need for blanket attendance by the analyst. For example a 3-day project involving the removal of 40-50 sqm AIB ceiling from an unoccupied area you may only need to book a ½ day to cover set-up and another ½ day for the clearance duties. For major programmes of remediation lasting several weeks it may be sensible to invite the analyst in for a significant period initially, but once good data is available from a range of different activities, airtest frequency can be reduced to periodically to carry out check testing, to show that the works remain well controlled.

About Clifford Devlin

Clifford Devlin is one of the South East's most experienced and well-respected asbestos management companies. We have been providing planned and responsive asbestos remediation to support the construction sector for over 30 years.

The company has been continuously licenced since 1986 and a member of the industry's trade body, the Asbestos Removal Contractors Association (ARCA).

All of our work is carried out in compliance with industry best-practice and is independently audited under the ARCA Site Audit Accreditation Scheme.

We work directly for clients as well as principal contractors and members of the professional team. Our Asbestos Division directly employs over 20 highly trained operatives who work in supervised field-teams.

Our own fleet of purpose-built vehicles for transporting ACMs has been customised with air-tight compartments that can only be accessed from a side-loading door to prevent fibre from being released during transit.

We operate our own asbestos waste transfer station in London which is licensed by the Environment Agency to process up to 32 cubic metres of asbestos waste on a daily basis and can be used by clients who require immediate disposal of damaged or fly-tipped asbestos containing material.

Field personnel are therefore familiar with working in occupied premises and all staff are given training in how to behave in residents' properties and how to manage their requirements and expectations. Particular emphasis is placed on liasing with the elderly, disabled or vulnerable tenants and communicating with those whose first language may not be English.

For more information please contact us on Tel 020 7538 8721 email info@clifford-devlin.co.uk or visit www.clifford-devlin.co.uk

About Global Environmental

Global Environmental has been providing a comprehensive range of asbestos management services for over 6 years to help public and private sector clients to manage their duty of care responsibilities and comply with the Control of Asbestos Regulations 2012. Services in this sector include:

Asbestos surveying - refurbishment, refurbishment & demolition and management surveys of all types of property including residential, commercial, municipal and industrial

Asbestos management - consultancy and preparation/maintenance of asbestos management plans to enable landlords and property managers to deliver their duty of care to tenants, residents and the public

Asbestos consultancy -specialist advice and guidance to clients on how to manage asbestos containing materials (ACMs) in their property portfolios and the correct response to emergency situations

Training - range of asbestos awareness and technical courses

Project management - considerable experience of project managing removal works. This service can include procurement of licenced asbestos removal contractors, preparation of specifications, supervision of works on-site, arranging air testing and 4-stage clearances, liaison with the client's representative and any third parties.

For more information please contact us on Tel 020 7300 7288 email info@globalenvironmental.co.uk or visit www.globalenvironmental.co.uk

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