**INTRODUCTION**

**Lot 1 – fire compartmentation works**

Bristol City Council (BCC) intends to enter into a 4 year DPS Contract anticipated start date May 2020 with approved contractors for the purpose of remedial fire stopping and asbestos removal to low-rise flats and maisonettes. This contract involves carrying out fire compartmentation works to occupied residential flats and communal areas to blocks of between 2 & 5 storeys high blocks with various tenures. In addition some work may be required to be carried out in our high-rise blocks. The value of the work is estimated to be around £1,000,000 per year with individual contracts ranging from £50,000 to £450,000 depending on the package of work. Where possible packages will be made up of blocks of flats in close proximity to each other.

Although most properties are fitted with either self-contained battery operated smoke alarms or individual hard wired smoke alarms, most Bristol City Council (BCC) housing blocks do not have integrated fire alarm systems due to the risk of vandalism. Instead the blocks were constructed to meet the requirements of the Building Regulations, using a compartmented design to limit the spread of smoke and flames in the event of a fire. Individual dwellings and communal areas are sub-divided by way of solid block walls and concrete floors.

The Fire and Rescue Service (AFR) now has primary responsibility for enforcing post occupation safety in all blocks that contain communal areas under the Regulatory Reform Order 2005. The order requires landlords, such as BCC to carry out risk assessments of buildings to identify, remove or reduce risks and to put in place measures to protect occupants.

BCC seeks the services of a specialist FIRAS or IFC or LPCB or TRADA (or equivalent where the accreditation is with the company, supervisors and operatives) accredited contractor who is well resourced and experienced in this type of specialist fire safety work. The successful contractor will be invited to provide evidence of its accreditation with FIRAS or IFC or LPCB or TRADA and any other relevant bodies, demonstrate it has undertaken a project of a similar nature in the recent past and is fully up to date with current legislation and practice, as well as the usual compliances such as ISO 9002, adequate insurances, CSCS cards and CRB/DBS checks for site operatives.

Remedial intumescent products used are to comply with BS 476 part 22 and BS EN 1366 and provided by recognised suppliers such as Hilti/ Rockwall / Promat or similar approved. It is necessary that work is carried out in accordance with current best practise and in a way that enables BCC to self-certify to AFR that the building meets at least the minimum standard for compartmentation. In all cases the choice of repair solution made must take into account all relevant factors including the circumstances of the repair, materials have been independently tested and passed for the scenario, different materials have been proven to work together, codes of practice, British Standards, the requirements of AFR, the guidelines from accreditation bodies and the contractors own past experience.

In all cases asbestos panels will need to be removed by a licensed contractor to provide access to service ducts prior to fire stopping works and penetration sealing. These panels along with damaged non-asbestos panels will need to be replaced with approved materials. Promat Supalux boards or similar approved. Other buildings works may be required to ensure that the ducts are fully fire resistant. Prospective contractors must be aware that they will be responsible for organising the asbestos removal via a domestic sub-contractor. This work will include the removal of asbestos debris and providing BCC with the correct documentation.

**What the work involves**

1. This DPS contract is to carry out fire safety surveys and remedial works to packages of blocks of flats. Work to be carried out over an agreed period with starts date to be agreed. Only if there is a void property available during the tender period a viewing will be arranged for any interested contractors, although viewing of some of the communal areas may be possible.
2. Prior to commencement of each package contract, the successful contractor is to prepare a works programme that must be regularly updated and they must correspond with the appointed project Construction Health & safety co-ordinator during the lead-in period to ensure all required H&S documents are in place at the right time. The contractor may be expected to participate in some initial tenant consultation and the contractor must appoint a dedicated tenant liaison operative (TLO) as this is an important element of the work, this person may also act as the site agent/supervisor. The contractor must also appoint a licensed asbestos removal contractor.
3. BCC will inform tenants and others affected of the project start date, after which it is the contractor’s responsibility to set up the site compound and facilities in an agreed location, which may not be immediately adjacent the building, although some assistance will be available from the BCC’s M&E department with regards to connecting power, water and drainage to the site cabin(s). BCC will publicise the project and appoint a project surveyor to administer the contract.

Upon commencement, the TLO must arrange access with occupiers by all appropriate means; by letter, telephone communication, consultation meetings and calling in person. The contractor is to arrange for the surveying of all flats, communal areas, storerooms, roof spaces and other areas. It is suggested that at the start of the project the contractor arranges a Tenants Meeting to explain the upcoming work. This can be arranged through BCC appointed Project Surveyor. Our tenants and other occupants are to be at the heart of all that we do. Tenants and their belongings are to be treated with due respect and care at all times. The contractor is to maintain a site diary during the works, recording all deliveries, all removals of waste, personnel present and most importantly of all attempts to gain access to flats and other areas, successful or otherwise. The contractor is also to be aware that some tenants may not speak English as their first language.

1. The contractor must enter all flats, communal and other areas to carry out a full survey of the area, identifying situations where the compartmentation has been breached; and rectify these in what they consider to be the most suitable way e.g. intumescent batts, mastic or high expansion mastic, compound, pipe collar or putty. All materials are to have been previously tested for use in the scenario being worked on. Where the scenario has not been previously tested a desk top assessment by an approved expert based on observed test performance, will be required and the assessment documentation provided to the client. Where a mix of materials is required to seal a breach e.g. batt and mastic, then the materials are to be compatible and previously tested together in a similar scenario.
2. Before the duct panel or any items affixed to it are removed a digital photograph of the duct panel must be taken. The work will involve the removal of the duct panel and all items fixed to them, it is likely that some or most of these panels may contain some form of asbestos material (ACMs) Where this is suspected, the advice of the specialist contractor is to be sought (some initial duct panel surveys have been carried out and details are enclosed with this document).
3. Following the completion of fire stopping works, duct panels are to be carefully refixed except where the original panels were ACM or combustible material such as plywood all of which are to be replaced with Promat Supalux boards or similar approved. Panels to be fixed in a bead of Intumescent mastic with cups and screws at 200mm centres.
4. For quality assurance purposes, digital photographs identifying the flat number must be taken of all service ducts internally, before and after remedial works are carried out. Photos to include all walls floor and ceiling surfaces as well as detail photos of the areas where works are completed. These photographs together with those of the duct panel must be collated together and presented to the contract administrator at the end of each sectional completion. The form of this presentation to be agreed in advance. If requested to do so the contractor must be prepared to present the photographs at shorter intervals during the contract, e.g. with weekly progress report.
5. The contractor is also to prepare a schedule of any recommended follow up works which do not form part of the work described in the schedule. This is in addition to the normal FIRAS/ IFC/ LPCB documentation and asbestos clearance documentation. This may be required with the weekly progress report.
6. The contractor is to allow, if required to do so by BCC, to open up, up to 10% of completed works for inspection up to the end of the defects period. The contractor will be expected to bear the cost of the opening up, even if the workmanship if found to be of an acceptable standard. In this context “opening up” only means the removal and refixing of access panels.
7. Data Protection. The contractor must ensure that they, their staff and their sub-contractors take all reasonable steps to ensure that data provided to them by BCC, either printed or electronic, is not allowed to be seen by persons other than those required to view it. Data is provided for the purposes of carrying out the work under the contract for which it is issued and for no other purpose. As soon as the data is no longer required all copies must be destroyed or deleted and in all cases this should happen at the completion of the contract. All GDPR rules are to be followed.

**Tender submission and contract administration**

The contractor is to take careful consideration of the following points and will be deemed to have priced accordingly.

1. Form of contract. The Council is to follow the procedure set out in the Financial Regulations and for the purpose of this contract the contractual conditions, clauses, procedures and liabilities of the JCT Intermediate Building Contract 2016, as amended by a Schedule of Contract Particulars and Amendments, shall apply.
2. Preliminaries. The contractor will be deemed to have included for the above access arrangements in his unit prices and also for liaising with the AFR, HSE and other statutory bodies as required. He is also to include for the supply of normal equipment and hand tools, but not external scaffolding. The contractor will provide a TLO / site agent and a secure compound including a site hut, telephone, welfare facilities and storage for materials. Welfare facilities will include one toilet for 1-6 operatives or two toilets for 6-25 operatives. Use of existing toilets connected with the laundries or community rooms will not be permitted. Toilets to be provided with hot & cold running water, soap and hand drying facilities. Welfare facilities will also include a rest room with suitable seating for all operatives, a supply of potable water, drinking vessels, and means of boiling water and heating food. There should also be a first aid kit. If the site hut is positioned in a grassed area the turf must be replaced on completion if it has died. The site huts and facilities will be positioned in a suitable location is to be agreed with the project surveyor. Where required the contractor is to allow for the resitting of all welfare facilities and huts from one location to a second location.
3. Construction (Design & Management) Regulations 2015 [CDM]. The contractor is reminded that these regulations will apply to the contract. BCC will appoint a Construction Health and Safety Coordinator (CH&SC) for the project and the contractor will accordingly need to participate with the preparation of various method statements and risk assessments as well as general record keeping for the preparation of the CDM file. If as part of their fire procedure the contractor erects a fire assembly point the sign must read “contractor’s fire assembly point”.
4. Interim valuations. Monthly or at the discretion of the contract administrator. Under current Right to Buy legislation, a proportion of the cost of the work to communal areas as well as the cost of carrying out the work to the flat itself can be claimed back from the leaseholders. There are leaseholders in these blocks. However the contractor is to maintain a spread sheet as the job progresses, stating which flats and communal areas have been claimed for on each invoice. This is to enable clear and transparent cross checking for all parties should a flat be purchased during the course of the works.
5. Direct Supervision. The contractor will employ and retain on site at all times a Foreman / TLO / Project Manager who will maintain a site diary, keep and collate all site delivery notes, dockets, asbestos clear sheets etc.
6. Insurance and procurement compliances. All site personnel are to have CSCS cards appropriate to their level of operation. The contractor is to demonstrate it has a robust H&S policy in place and the current rates of insurance:
* Employers Liability - £10 million
* Public Liability - £5 million
* Professional Indemnity Insurance – at least 2 million

All the contractor’s site staff must have had a suitable Disclosure and Barring Service (DBS) (previously the Criminal Record Bureau CRB) check carried out, and if required this is to be made available to BCC. It is the contractor’s responsibility that only suitable staff are employed on this site. BCC reserve the right to ask the contractor to exclude from site any staff with a DBS record that is deemed unsuitable for the location and works to be undertaken.

The contractor is to allow for either making good any damage caused to the residents flat or the residents property or coming to a mutually agreed financial compensation agreement with the resident whereby the contractor pays for any damage. This is to include any damaged caused to decorations due to the removal of tape used in the formation of airlocks.

**Part 1: Contract lead in, access arrangements & site staff.**

Following the appointment of the successful contractor, a pre-contract meeting will be held between the contract administrator, the main contractor, and a representative of the asbestos contractor, CHSC and any other interested parties. During the meeting, a contract lead in period will be agreed and before work begins on site the contractor is to provide an acceptable programme showing timescales and likely sequences of works. This must be updated regularly.

The contractor is to ensure adequate resources are available to undertake the work within the allotted timescale of the block, commencing from a date to be set.

BCC tenancy conditions require occupiers to provide reasonable access to its staff and agents (the contractor) to enter and carry out the necessary work. The contractor will be provided with a key, fob or pass code to allow access to the communal areas and will be supplied with the contact details of the caretakers or other responsible staff. If car park passes are required a maximum of 6 No. will be issued. The contractor must park so as not to cause inconvenience to residents or other site users. The contractor will be expected to keep on site caretaking staff informed about which areas work is about to be undertaken in. BCC landlord staff will be involved in the consultation with residents before work starts on site.

It is envisaged that the contractor will make at least three separate attempts to gain access to flats at different times of the day on different days of the week, posting a card asking the tenant to make contact after each unsuccessful attempt. The contractor should attempt all other reasonable methods to contract the residents such as approaching them during their allotted laundry time, communication via email and text message or by asking neighbours about their normal exit and ingress times. At the start of the contract BCC will inform all residents about the purpose and start dates of the works. If asked to do so by the contractor, BCC will supply two further letters for the contractor to arrange delivery of. All attempts to gain access must be recorded with their time and date. Past experience indicates that although the vast majority of the tenants will be co-operative a very small proportion may fail to make contact or be unavailable for whatever reason. It is the contractor’s responsibility to identify the less cooperative occupiers at the earliest opportunity. If and when it becomes clear that a resident is not likely to co-operate in this respect, the contractor is to inform the project surveyor who will arrange for occupiers to be contacted formally, pointing out their duties to allow access for repair and inspection. Housing staff will then work to gain access, including only as a very last resort forcing access.

All site based staff employed by the fire proofing contractor and the asbestos removal contractor are to be carry ID and be provided by their employer with liveried work-ware. All staff that need to enter residents flats should have been subject to a suitable DBS check.

**Part 2: Asbestos testing and removal**

Type of Survey

Where it is reasonable to assume that asbestos may be present within a Bristol City Council owned property, BCC will commission an Asbestos Management Survey with Targeted Refurbishment & Demolition Survey to the specific works area in accordance with survey guide HSG 264 requirements. BCC will provide a copy of the survey to the Contractor prior to any works commencing, in accordance with Construction (Design and Management) Regulations 2015 & Control of Asbestos Regulations 2012 (CAR12).

Where a survey is not available or current and it is reasonable to assume that asbestos may be present within a property, the Contractor will commission an Asbestos Refurbishment & Demolition Survey to the specific works area, in accordance with HSG 264 requirements, and provide a copy of the survey to the Client, all operatives & subcontractors prior to works commencing on site; in accordance with CAR12. The survey to be undertaken by surveyor qualified to BOHS P402 Surveying and Sampling Strategies for Asbestos in Buildings, such as CASA Environmental Services Ltd. Unit 9 Londonderry Farm, Keynsham Road, Willsbridge, Bristol BS30 6EL Tel no. 01179322323, or other approved.

Site Inspection

The Contractor shall inspect the Asbestos Survey prior to works commencing and take appropriate action dependent on the complexity of the survey report in order to mitigate risks to the occupants, employees and the public at large. The Contractor shall undertake a Site Inspection in relation to the Asbestos Survey prior to any works commencing; and bring to the attention of BCC any ACM’s required to be worked upon, or removed, to facilitate the works. The Contractor to agree with BCC the appropriate action and suitable control measures, in order to mitigate risks to occupants, employees and the public.

The contractor is to assume that a duct will containing asbestos contaminated debris. Where accessing the duct does not involve the removal of an asbestos panel then a hygienic clean by the licenced asbestos removal contractor will be required, followed by a reassurance air test. The hygienic clean to include, but not be restricted to, a visual survey of all surfaces with special attention to areas where pipes and cables pass through walls, floors and ceilings, the brushing down/ cleaning of all surfaces, the removal of all loose debris, and an air test. Any embedded suspicious materials that cannot be removed as part of the clean, are to be sampled to confirm if they contain asbestos or not. The duct is to be re-sealed until the results of the sampled are known and where asbestos is confirmed the process to remove or encapsulate the material is agreed with BCC.

Training and accreditation

The Contractor shall be responsible for ensuring that all employees have received training as appropriate to the nature of work that they are employed to carry out, in accordance with CAR12. All operatives to site are to have received as a minimum requirement to United Kingdom Asbestos Training Association (UKATA) standards by an approved UKATA provider. Any employee who does not hold such accreditation shall NOT be permitted to work on site.

Identification of materials

Where an element is known or believed to contain Asbestos material that is not identified in the survey report, the Contractor shall if deemed necessary, cease work and immediately notify the Contract Administrator/ Project Manager for advice.

Incident management and reporting

Should an incident occur where ACM is disturbed then the Contractor shall take immediate and appropriate action to minimize risk in accordance with the HSE recommended guideline and inform the Contract Administrator/ Project Manager. The Contractor will conduct their own investigation into the incident and provide BCC with their findings.

All Accidents, Incidents, Dangerous Occurrences or Near Miss events are to be reported to BCC. If an incident occurs which potentially disturbs an Asbestos Containing Material, then the Contractor is to stop works with immediate effect and put in place Emergency Procedures to minimize risk. The Contractor is to arrange for immediate and appropriate action to be undertaken to rectify the situation and to notify BCC with immediate effect; especially should an incident occur within a tenanted property. The Contractor is to conduct their own investigation into the incident and provide BCC with a copy of their findings. ACM incidents may require RIDDOR Reporting and further investigation.

Handling and removal of ACM

Handling or removal works will only be carried out by accredited (licensed) specialists and this will be clearly documented. A clearance certificate must be issued by an independent United Kingdom Accreditation Service (UKAS) accredited analytical company in accordance with legislation.

Compliance

The Contractor shall upon request, provide Bristol City Council with proof of compliance with any or all of the above requirements (3.1 – 3.6)

Record keeping

The contractor will be required to record where asbestos has been removed or identified and encapsulated on a spreadsheet at the completion of each block

Health and safety

In addition to the above, due regard is to be given to Health & Safety in respect of the provisions and compliance of:

• The Health and Safety at Work Etc. Act 1974.

• The Management of Health & Safety at Work Regulations 1999

• The Construction, Design & Management Regulations 2015

• The Control of Asbestos at Work Regulations 2012

• The Asbestos (Prohibitions) Regulations 1992

• All other relevant legislation and Approved Codes of Practices.

All asbestos removals, sampling, air testing Etc. will be charged on a “per item” basis. With regards to these works, it is our intention to remove any asbestos associated with the ducts within flats; but not necessarily to remove all asbestos.

Testing of previously untested or doubtful materials. The contractor is to use a UKAS accredited asbestos testing laboratory to carry out any further tests. All work is to be done in consultation with the Contract Administrator and the project . All test certificates are to be retained and forwarded to BCC. Panel products are to have a water absorption test undertaken as described in the Control of Asbestos Regulations 2012. If the test reveals that the material consists of a semi-cementatious material, it may be removed using partial containment measures, reducing cost and most importantly reducing disruption to the occupants.

Asbestos removal is to be carried out under fully controlled or semi controlled conditions as applicable. Transfer routes through communal areas Etc. to be clearly marked before commencement. Prior to removal, the following will be required.

1. Contractors up to date full asbestos removal licence.
2. Contractors up to date hazardous waste carriers licence.
3. Copies of the relevant completed consignment notes.
4. Method Statement / Plan of Work and Risk Assessments
5. A copy of the HSE notification form ASB5.

Disposal is to be in accordance with the Special Waste Regulations 1996. Re-occupation air tests to be carried out by an independent UKAS accredited analyst and forwarded to BCC. Works to be carried out in line with Asbestos: The Surveys Guide and relevant HSE approved codes of practice (L143). Some low level, non-licensed AMC removal e.g. drilling of Artex may be carried out in accordance with The Control of Asbestos Regulations 2012. The regulations state such work is to be carried out by a competent person in accordance with the appropriate HSE Asbestos Essentials task sheet. However, it is BCC policy that all asbestos removal, including non-licensed removal is carried out by a licenced contractor.

**Part 3: The fire safety survey**

The attached works specification is only based on the project surveyors limited sample survey of properties and communal areas within each building. Due to the possibility of asbestos being present ducts may not have been opened up as part of their survey. It is possible that not all compartmentation work will have been identified. Therefore upon entering flats, communal areas, roof voids, ducts and other areas and after the removal of any asbestos components detected, the contractor is to carry out a full survey to identify instances where separation between compartments has been compromised and remedial works required. In the case of flats the survey will be priced per flat. In the case of roof spaces and communal areas the survey will be priced per floor level. Lines of compartmentation to be agreed with the surveyor but will normally be the party walls, ceiling and floor, of each flat, maisonette or communal area/room.

The survey will include:

a) Instances where service penetrations e.g. power, CCTV, data cables, fire risers, waste pipes, gas carcasses, heating pipes between floors or walls, either within ducts or exposed have not been properly fire stopped.

b) A visual inspection to confirm that the physical construction of the flats continues to provide the required 30/ 60/ 120 minute fire protection from adjacent cells. Although this work is not expected to be very time consuming or problematic, the contractor will need to check that subsequent alterations to the structure have not adversely affected fire safety and that the original inherent fire separation is still intact. This will involve checking that the separating walls are continuous up to the underside of the ceiling slab/ roof and that inappropriate construction materials have not been used as in fill panels above doors. The whole flat must be inspected as surface mounted services such as horizontal or vertical heating pipes have been known to pass between flats, leaving gaps which will require attention. Where the contractor has concerns, he is to bring them to the attention of the project surveyor. If any ducts are found to be satisfactorily compartmented record photographs are still required.

c) Sleeving of services is non-combustible and sealed or that combustible sleeving e.g. plastic pipes are suitably protected from fire. Any pitch fibre pipes are identified and a suitable means of fire protection is agreed.

d) Floors, walls and soffits of services ducts are to be examined for combustible materials embedding in the structure. Where practical these materials are to be removed and all holes filled with suitable, batt, mastic or other intumescent product tested for the scenario. Where the material cannot be removed then the contractor is the check who far it penetrates the structure and the amount of fire protection cover in place and advise the project surveyor. Where a minimum of 1hr fire resistance or that required by part B of the building regulations for the height of the building, cannot be confirmed then the contactor is to agree a tested solution with the project surveyor.

**Part 4: Fire stopping systems**

Fire stopping around pipes, cables etc. the contractor is likely to find multiple scenarios requiring compartmentation works, this could include but not be limited to; single cables, multiple cables, bunches of multiple cables, cast iron, metal pipes, plastic waste and water pipes of various sizes, pitch fibre pipes, steel ventilation ducting, asbestos cement pipes, steel conduit and trunking, plastic or metal sleeving, passing through compartment walls, floors and ceilings. The compartmentation is to be carried out using intumescent products the most common are set out below. All materials are to have been previously tested for use in the scenario being worked on. Where the scenario has not been previously tested a desk top assessment by an approved expert based on observed test performance, will be required and the assessment documentation provided to the client. Where a mix of materials is required to seal a breach e.g. batt and mastic, collar & fixings then the materials are to be compatible and previously tested together in a similar scenario. All materials are to comply with BS EN1366 – 3 or other appropriate codes and are to be provided by a recognised supplier such as Rockwool, Hilti or similar approved. The contractor is to provide data test sheets for each material used to confirm that they have been tested for use in the scenario they are being used. Where the contractor comes across a scenario that they cannot readily identify a suitable solution then they are to inform the project surveyor and contact material manufacturer’s technical support to assist them in identifying a suitable tested material and application method.

**SYSTEM PERFORMANCE**

DESIGN

Design: Complete the design of the fire stopping system in accordance with manufacturer’s recommendations. Design assistance and site support to be provided by chosen supplier by sending a technical specialist/representative to site to assist in design, specification and training.

Proposals: Submit drawings, technical information, calculations, engineering judgements where required and manufacturer’s literature indicating fire performance appropriate to applications, durability, air and smoke tightness performance and where required acoustic performance.

FIRE RESISTANCE OF COMPARTMENT FLOORS

Fire Resistance:

Rating to BS 476-20:1987 to be 30/30,60/60 or 120/120 minutes

Rating to BS EN 1366-1,-3 to be 30/30, 60/60 or 120/120 minutes

Smoke Resistance: Air leakage rate(maximum): 5 m3/hr/m2

FIRE RESISTANCE OF COMPARTMENT WALLS

Fire Resistance:

Rating to BS 476-20:1987 to be 30/30,60/60 or 120/120 minutes

Rating to BS EN 1366-1,-3 to be 30/30, 60/60 or 120/120 minutes

Smoke Resistance: Air leakage rate(maximum): 5 m3/hr/m2

**PRODUCTS**

PRODUCT CERTIFICATION

Certification: For products specified generically, submit evidence of compliance with the specification

Acceptable evidence: - CE marking,

Test reports and/or assessments by NAMAS approved laboratories. Tests to be representative of end use application.

Test reports /assessments by approved laboratories from EU member states. Tests to be representative of end use application.

Engineering judgements by manufacturer to be under the terms of the Passive Fire Protection Federation ‘Guide to Undertaking assessments in lieu of Fire Tests

INTUMESCENT MORTARS

A fire resistant, gypsum based mortar with thermal insulating properties used to seal medium to very large penetrations and provide loadbearing properties. Designed for use in walls and floors, in concrete, porous concrete and masonry.

Tested to BS 476: Part 20, 1987, and EN 1366-3:2007 Fire resistance 1 - 4 hours

Provided by a recognised supplier such as Hilti (Gt Britain) Ltd,(CP 638 high Strength Compound), or Rockwall Ltd. (fire stop compound) or similar approved.

INTUMESCENT PUTTIES

A mouldable, non-setting, self-adhesive fire and smoke resistant putty in pad form for fire, smoke and acoustic sealing of electrical fittings in fire rated partition walls

Tested to BS 476: Part 20, 1987 Fire resistance: up to 2 hours

Age tested as defined in the DafStb guidelines, with subsequent fire testing.

Acoustically tested to DIN EN ISO 140-3: provides up to 71dB

NHBC and Robust Details approved

Provided by a recognised supplier such as Hilti (Gt Britain) Ltd, (CP 617 Putty pad) or similar approved.

GUNNABLE INTUMESCENT PUTTIES

A gunnable mastic paste for firestopping single and bunched cable penetrations through solid walls and floors and partitions

Tested to EN 1366-3:2004, Fire resistance: up to 2 hours

Age tested as defined in the DafStb guidelines, with subsequent fire testing.

Acoustically tested

Provided by a recognised supplier such as Hilti (Gt Britain) Ltd, (Hilti Firestop Intumescent Sealant CFS-IS (CP 611A) or similar approved.

MINERAL WOOL RIGID BATTS

Ready to use fire resistant ablative paint coated mineral wool panels to seal service penetration openings and voids in solid walls and floors and partition walls and to provide an acoustic seal where required.

Tested to BS 476 Pt 20:1987 and BS EN 1366-3:2004, CE marked.

Provided by a recognised supplier such as Hilti (Gt Britain) Ltd, (Hilti Firestop Single/Double Board Seal CFS CT (CP 670) or Rockwall Ltd. (50mm Ablative coated batt) or similar approved.

PIPE COLLARS-CONCEALED INTUMESCENT

Flexible Intumescent graphite impregnated band for sealing PVC, PP, HDPE and ABS pipes from 32 mm to 160 mm diameter in event of fire where they penetrate solid walls and floors and insulated partition walls.

Tested to BS 476: Part 20: 1987. and BS EN 1366-3:2004, CE marked

Fire resistance: up to 4 hours

Provided by a recognised supplier such as Hilti (Gt Britain) Ltd, (Hilti Firestop Wrap CFS-W (CP 648) or Rockwall Ltd. (Intumescent pipe wrap) or similar approved.

PIPE COLLARS-SURFACE MOUNTED INTUMESCENT

Galvanised sheet steel housing containing intumescent material, which foams and expands in a fire to seal flammable pipes ranging in diameter from 32mm to 160 mm with pipe wall thickness from 1.8 to 14.6 mm. PVC, HDPE, ABS, Pneumatic tube conveyors, and pipes with acoustic insulation. To be used on solid walls and floors and partition walls, fixed with manufacturers approved fixings.

Tested to BS 476 Pt 20:1987 and EN 1366:3

Fire resistance: up to 4 hours CE marked

Provided by a recognised supplier such as Hilti (Gt Britain) Ltd, (Hilti Firestop Collar CFS-C (CP 643N) or Rockwall Ltd. (firestop pipe collars) or similar approved.

PIPE COLLARS-SURFACE MOUNTED INTUMESCENT

Galvanised sheet steel housing containing intumescent material, which foams and expands in a fire to seal flammable pipes ranging in diameter from 32mm to 250 mm with pipe wall thickness from 1.8 to 22.8 mm. PVC, PP, PE, ABS, Pneumatic tube conveyors, and pipes with acoustic insulation. To be used on solid walls and floors and partition walls, fixed with manufacturers approved fixings.

Tested to BS 476 Pt 20;1987 and BS EN 1366-3:2004, CE marked

Fire resistance: up to 4 hours

Provided by a recognised supplier such as Hilti (Gt Britain) Ltd (Hilti Firestop Collar CFS-CP (CP 644) or Rockwall Ltd. (firestop pipe collars) or similar approved.

ENDLESS COLLAR

Flexible Intumescent graphite impregnated band for sealing PVC, PP, HDPE and ABS pipes from 16 mm to 160 mm diameter in event of fire where they penetrate solid walls and floors and insulated partition walls where access is restricted due to bends, connections or close proximity to walls, fixed with manufacturers approved fixings..

Tested to BS 476 Pt 20;1987 and BS EN 1366-3:2004, to include pipe elbows, inclined pipes and pipes with limited clearance to the wall.

Fire resistance: up to 4 hours

Provided by a recognised supplier such as Hilti (Gt Britain) Ltd (Firestop Collar Endless CFS-C EL) or similar approved.

SEALANT BACKING MATERIAL

Backing to be used with fire rated sealants and mastics to control depth of applied mastics and sealants. To also provide additional insulation against heat penetration where required

Fire Resistant mineral wool 100 kg/m3 density.

SEALANTS-FIRE RESISTING SILICONE (High expansion)

For sealing metal pipe, bunches of cables and duct penetrations through solid floors and walls and partition walls particularly where movement accommodation of up to + 25% is required

Sealant width and thickness to be in accordance with manufacturers written instructions

Standard: To ISO 11600, Tested to EN 1366-3, CE marked

Provided by a recognised supplier such as Hilti (Gt Britain) Ltd, (Hilti Firestop Silicone Sealant CFS 1S SIL or Rockwool (Firepro high expansion intumescent sealant) or similar approved.

SEALANTS-ONE-PART FIRE RESISTING ACRYLIC (smoke seal)

Seal metal pipe and duct penetrations through solid walls and floors and partition walls and in low movement connection joints in walls, floors and heads of walls accommodating movement up to +12.5%.

For sealing movement joints up to 30 mm wide and also at heads of walls in solid walls and floors and partition walls particularly where movement accommodation of up to + 12.5% is required

Filler width and thickness to be in accordance with manufacturers written instructions

Tested to EN 1366-3 and 1366-4, CE marked.

Provided by a recognised supplier such as Hilti (Gt Britain) Ltd, (Hilti Firestop Acrylic Sealant CFS-S ACR (CP 606) or Rockwool (Acoustic Intumescent sealant) or similar approved.

FIRE CURTAINING

In loft spaces and other voids where compartmentation needs to be provided to divide up the loft/ void areas to aline with compartmentation lines of adjacent areas. To provide minimum 60 minutes fire resistance integrity and 60 minutes insulation.

Tested to BS 476: parts 20/22

Provided by a recognised supplier such as Culimeta-Saveguard Ltd, (firehalt, 120:60) or other approved.

WORKMANSHIP GENERALLY

Standard: Installation by IFC, LPCB or FIRAS accredited contractors with a minimum of 3 years’ experience. Evidence of accreditation to be presented to the client before work commences. Firestop Contractor shall also be able to show that they have undergone Installation training from the manufacturer of the products & systems used.

Gaps: All gaps and imperfections of fit between building elements and services to provide fire resistance and resist the passage of smoke. All to be in accordance with manufacturer’s written instructions

Labelling: All firestopped service penetrations to be labelled with a unique reference number to aid traceability and must indicate date of installation, date inspected and name of installer

Recording of penetration seals: installer to provide records of locations of all Firestop seals and all necessary data for completion of health and safety file

Adjacent surfaces: Prevent overrun of sealants and mortars onto finished surfaces

APPLYING FIRE RATED MORTAR 

Installers: use trained and 3rd party accredited installers as recommended by manufacturer of mortar

Sequence: Install mortar after services have been permanently installed and secured, allowing access to remote corners.

Base material suitability: Remove loose builder’s material, degrease and ensure that opening bounded by suitable structural elements

Shuttering: Install suitable shuttering panels to opening, providing adequate support for wet weight of mortar

Support framework: Install support framework as recommended by manufacturer and in accordance with said manufacturer’s recommendations where required

Temperature: Do not apply mortar when it could be damaged by frost

Powder:water ratio: To manufacturer’s recommendations. Contractor to submit proposals and manufacturer’s written instructions

Mortar Cure: Do not disturb mortar before final set has taken place

Load bearing: Only permit foot traffic after curing has taken place and only when manufacturer’s written evidence has been provided to prove suitability

Shuttering: Remove combustible shuttering after mortar has cured

INSTALLING BATTS 

Installing Batts: Fit tight into void between the floor or wall and the penetrating services. All cut edges to be coated with appropriate mastic both produced by the same manufacturer before jointing.

Supporting of batts and services: refer to manufacturer’s instruction for suitable support frame where required and fixing details for support of batt and services where required (e.g dampers)

Face of batts: Flush with surface of wall, floor or soffit

Joints: Seal and close butt joints with appropriate fire resisting sealant, kept to minimum

Gaps between services and bulkhead: For non-combustible services seal with appropriate fire resisting sealant. Combustible services to be sealed with appropriate Intumescent sealing product as per manufacturer ‘s recommendations and supporting test evidence

FIXING PIPE COLLARS / ENDLESS COLLARS

Collar fixing: secured with metal fire rated anchors as recommended by manufacturer

Gap around pipe: Gap to be between10 and 30 mm and sealed with backing foam and Intumescent Sealant to depth recommended by manufacturer. Wider gaps to be filled with fire rated mortar. Wide gaps can be sealed with fire safety board and Collars mounted thereafter. Contractor to submit proposals based on manufacturers recommendations.

Endless collars are only to be fitted after consultation with manufacturers technical support to ensure collar is suitable for location and fitting system approved.

INSERTING SEALANT BACKING MATERIAL

New Joints: press in manufacturer’s recommended backing material to give recess to match required depth of fire rated sealant as listed in manufacturer’s written instructions

Old Joints: Remove all existing sealing material and treat as new

APPLYING SEALANT TO JOINTS

De-greasing: Contractors choice

Surface preparation: ensure surfaces are cleaned of all dust & debris, dry and ready to receive mastic to allow it to bond and staff in position without slumping.

Priming: check manufacturer’s recommendations and contractor to submit proposals

Depth of Sealant: Minimum depth is 6mm. Required depth to be obtained from manufacturer and in accordance with written instructions and appropriate for joint width, required fire rating and/or acoustic rating

Finishing: Joint to be tooled to ensure correct adhesion to joint sides and to achieve suitable appearance

Temperature: Do not apply sealants outside manufacturer’s application temperature recommendations. Water based sealants to be protected from frost.

FITTING FIRE CURTAINING

Fire curtaining to be fitted to surrounding structure using galvanised steel angle to details and with suitable fixings to manufacturer’s directions and recommendations. Curtain sections to be overlapped and joints formed as per manufacturer’s directions. Where access is required through the curtain a suitable fire door access point is to be provided using details provided by curtain manufacturer.

REPLACEMENT DUCT PANELS.

Upon completion of asbestos removal and fire stopping, panels to be replaced and the area made good, as appropriate and in accordance with the Building Regulations. The panels should be replaced with 12 mm Promat supalux board or similar approved product or as specified. Work includes all notching, readjustments, re-measuring, refitting and mastic around as required to achieve necessary fire resistance and reasonable aesthetic appearance. Board is to be fixed in accordance with manufactures recommendations to meet the fire protection requirements for it’s situation (30/60 mins), including using steel framing, steel screws and cups at 200mm centres. To give a good finish the contractor is to allow for joint cover beads/ architraves etc.

Ventilation ducts. Ventilation ducts and grills etc are to be checked, cleaned and if required intumescent grills to be replaced or fitted for the first time. If the intumescent grill is a loose fit it is to be bedded in intumescent mastic or high expansion mastic.

New studwork. Where existing stud members are inadequate, remove timber and replace with good quality 75x47 C16 timber fixed at 600mm centres. Where a stud partition is required to provide minimum 30/ 60 minute fire protection then then the timber frame work is to be replaced with a metal section framework to the board manufacturers tested details.

Minor repairs. The contractor is to allow for making good damage caused by the works to the decorations or tenants effects. The method of compensation is at the discretion of the contractor but could involve repainting areas damaged by the removal of tape or the supply of paint to enable the tenant to do the same or the touching up or complete redecoration of the new or refixed panel. The contractor will be expected to take these sorts of measures to where possible to stop complaints escalating.

Reinstatement. The contractor is to allow for securely refixing all shelves, pictures, mirrors etc removed to allow the asbestos removal and fire proofing works to proceed.

Smoke & Heat detectors. The contractor may come against situations where it is not feasible to fit a collar to a plastic SVP to the soffit of a duct. Where this occurs they are to inform the project surveyor. If after discussions with collar manufacturers there is no know solution and it is not possible to create a fire proof duct (Chimney) then the contractor will be instructed to fit a standalone detector in the room. (heat in kitchens, smoke in other rooms not bathrooms). Detectors to be AICO Ei 603 heat alarm and AICO Ei605, with built in 10 year battery. Where practical these are to be interlinked with any existing standalone detectors in the hall/ landings. Detectors to be fitted in line with manufacturer’s instructions and guidance.

**Part 5: Tenant liaison**

1. When removal of asbestos is to take place in a tenants flat they are to be informed as to the extent of the works required, what restrictions will be in place (rooms or areas not accessible) and how long for. Where the work and associated protection will mean that it will be difficult or impossible for the tenant to stay in their flat they are to be informed and asked to make arrangements to be out of their flat for an agreed amount of time. (This could be visiting friends, family, or use the communal facilities). Similarly the contractor is to inform the tenant of any restrictions and time scales for the fire stopping and reinstatement works. Disruption to the tenants is to be kept to a minimum with all works completed, where practical, on the same working day.
2. Where removal of asbestos is to take place in the community facilities the contractor is to liaise with the project surveyor as to the most appropriate time to carry out the work. Once a time is agreed then the contractor is to post a notice giving advance warning to the tenants that the room/ area will not be usable at the agreed date. The notified time period will include the time needed to carry out the fire stopping and reinstatement works.
3. Where removal of asbestos is to take place in the communal corridors the contractor is to inform the affected tenants, advising of the date and period when the corridor will be restricted. Some residents may not be able to use stairs and need level access to be able to enter and leave the building. On the first floor and above this will mean having access to and from the lift were provided. On the ground floor this will mean having access to the main entrance door. The contractor is to liaise with the project surveyor as to which tenants may be adversely affected by the work. The contractor is to take steps to contact these tenants individually and ensure they are aware of the restrictions that will be in place, and agree a date/ time that the work will take place. No more than one corridor location is to be worked on at the same time. Barriers with no access signage are to be erected at a suitable points between the work area, flat and access doors.

Similarly the contractor is to inform the affected tenants of any restrictions and time scales for the fire stopping and reinstatement works.

**Part 6: Documentation.**

In addition to work sheets to accompany invoices, following the completion of the survey and the necessary fire stopping, the contractor is to provide BCC with a number of additional documents, and is to price accordingly. They are as follows :-

1. A spread sheet showing the position of asbestos removal and other relevant information. This document will be used by BCC to self-certify to Avon Fire and Rescue that it has taken the necessary steps to inspect these properties and take corrective action.
2. A brief report specifying any recommendation concerning remedial works outside the remit of the contract and highlighting any works that have not been carried out, for whatever reason.
3. Copies of all relevant asbestos documentation, sampling, air tests etc.
4. Before and after photographs of the works as described above presented on DVD / memory stick. These are to be presented with the following information-
	* Name of contractor
	* Initials of operative
	* Block name and flat number
	* Location (room name)
	* Date (format: date/month/year)

This information can be displayed either by writing on a slate or white board and positioning it at the side of the picture or by use of the cameras internal menu to mark the information onto the image. A picture must also be taken of the work from the outside i.e. closed duct.

**Part 7: Certification**

3.13 FIRAS/ IFC/ LPCB/ TRADA certification compliance and site audit inspections.

All fire safety works are to be carried out to ensure full compliance with the contractor’s certification body’s requirements to ensure certification at the end of the contract. Where it has not been possible to access any duct or area to complete the compartmentation work then the location is to be recorded on the certificate. (E.g. where an occupier has not given access for the works to be completed).

The contractor will carry out all compartmentation works in line with good practice, product data sheets and manufacturers recommendations. Where it is not possible due to access or other restrictions to carry out compartmentation in line with good practice, then the project surveyor is to be informed. The reasons for this variance are to be recorded along with what mitigation measures that have been taken.

On request the contractor is to provide evidence that all supervisors and site technicians/ operatives have been assessed as competent by the contractor’s certification body. Or that any trainee technicians/ operatives are in a recognised monitored training scheme that will lead to a competency assessment.

The contractor will be required to arrange a minimum number of certification body auditor site visits per contract whilst the works are being carried out. Inspections to be carried out on completed and in progress work in flats, roof voids and communal areas. The project surveyor is to be made aware of when the auditor will be on site. The contractor will be responsible for making all access arrangements, opening up of ducts and refitting of duct panels and any related making good. Copies of the audit reports are to be provided to the client. The reports are to confirm that the work carried out complies with best practice and that the materials used have been tested for use in the scenario checked. The contractor will be required to rectify any deficiencies identified at these inspections to all locations where they may occur, not just those inspected, at no additional cost.

When requested to do so by the client, the contractor is to arrange for material manufacturer technical representatives to attend site to confirm materials being sued are suitable for the scenario and are being installed correctly.