



M3NHF Schedule of Rates

VERSION 8

Asbestos Works
Specification



**Your challenges
expertly solved
in partnership**

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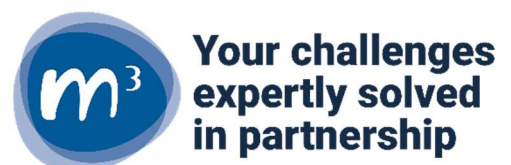
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SPECIFICATION OF WORKMANSHIP AND MATERIALS

SPECIFICATION OF WORKMANSHIP AND MATERIALS

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GENERAL

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GENERAL

Applicability

- 001 This initial general section applies to all subsequent sections of this Specification of Workmanship and Materials (**"this Specification"**).
- 002 This Specification is drafted as a series of instructions that the Provider must ensure are complied with in relation to the Works. Each instruction includes all tasks necessary to comply fully with the instruction and the Schedule of Rates item(s) to which it relates.
- 003 The Schedule of Rates payments, as adjusted by the Provider's tendered Rates, include for carrying out all tasks required by this Specification including detailed requirements as may be described or delineated on the Client's standard detail drawings as may be appended to this Specification. No further payment is due to the Provider in respect of any such tasks beyond the payments provided for in the Schedule of Rates.
- 004 Specifications across several trades may be relevant to each Schedule of Rates item. The Provider must comply with all requirements of this Specification applicable to the specific type of Works to be undertaken.
- 005 References to Paragraphs and Sections in this Specification are to the applicable Paragraph and Section of this Specification. If any contradiction appears within the Specification sections, Schedules of Rates, the Client's Policy documents etc., the most rigorous standard takes precedent.

Standards of workmanship and Materials

- 006 Carry out and complete all Works as required by this Contract including:
in accordance with Law including Health and Safety Law;
in accordance with Good Industry Practice;
in accordance with the Client's Policies;
in accordance with the Client's standard drawings and details;
in accordance with any specific requirements for those Works in this Specification; and
to the satisfaction of the Client's Representative (acting reasonably).
- 007 To the extent that the standard of any Works has not been specified in this Contract, agree the relevant standard for the Works with the Client's Representative before their execution. Where particular Works or working methods are to be "approved by" "agreed with" or are indicated to be "subject to the approval of" the Client's Representative, give the Client's Representative adequate notice when such approval or agreement is needed and retain evidence of all approvals given, and items that have been agreed, by the Client's Representative.
- 008 To the extent that it is necessary to Design any aspects of the Works, in preparing those Designs the Provider hereby warrants that the services have been and will be performed with such skill, care, diligence and expedition as would be reasonably expected of a prudent experienced contractor with Design obligations having experience in carrying out projects similar in size, scope, nature, complexity and value to the services.
- 009 Maintain all existing lines and levels at all times and carry through new Work to the same lines and levels unless otherwise Instructed by the Client's Representative.

British Standards & Codes of Practice

- 010 Ensure all Works undertaken and all Materials used in those Works comply with all applicable Standards and Codes of Practice that are current at the time of their use.
- 011 References in this Specification of Workmanship and Materials to any materials, components, procedures, testing, inspection, certification or workmanship being in accordance with British Standards or any other referenced Standards and Codes of Practice are to be construed as references to the version current at the time the Order is undertaken.

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- 012 Any reference to any material, component or procedure being in accordance with the British Standards or a Code of Practice is the minimum acceptable standard of Materials or workmanship.
- 013 Any requirement in this Specification of Workmanship and Materials to use Material or an article or follow a process which is defined by reference to a specified Quality Assurance Scheme, British Board of Agrément Certificate, Standard or other approval, may be met by a Material, article or process (as applicable) which has received an equivalent international standard recognised but not yet adopted in the UK.
- 014 A Provider offering a product or following a process on the basis of compliance with any such approval shall notify the Client's Representative of all such substitutions in advance of placing any order and will be required to provide, in English, technical or other details of the approval and its qualifying tests.

Materials

- 015 The Client wishes to standardise the use of Materials across its Properties. This is in order to simplify parts requirements and van stock loads, to improve its repairs processes and to reduce maintenance costs. Wherever possible, match all Materials used to materials currently used in the Properties, particularly in terms of their parts requirements and repair procedures. In this Specification the Client has set out details of its current Materials to which the Provider is required to standardise.
- 016 Where this Specification indicates that Materials are to be "approved by the Client's Representative", provide samples of the proposed Materials to the Client's Representative for approval. Any Materials that comply with the functionality and compatibility (including aesthetic compatibility) requirements of this Specification may be proposed. No further approval is required for any Materials listed in this Specification as being the Client's currently used Materials. The purpose of the Client's Representative's decision on the use and approval of such Materials is to ensure that they meet the Client's requirements for functionality and compatibility. The decision of the Client's Representative on this is final. No future precedence will be set by individual Client's Representatives, with exception to those authorised to do so by the Client. A 'common sense' and 'best practice' approach it is the recommended method of approval.
- 017 Where this Specification requires Materials to be matched to existing Materials or finishes, this match is subject to the approval of the Client's Representative.
- 018 Do not use any Prohibited Materials in carrying out the Works. Prohibited Materials are those materials which are generally accepted or (having regard to Good Industry Practice) are reasonably suspected of:
- being harmful in themselves;
 - being harmful when used in a particular situation or in combination with other Materials;
 - becoming harmful with the passage of time; or
 - being damaged by or causing damage to the structure in which they are to be affixed.

Prohibited Materials also include those materials which are generally considered to be deleterious within the building design professions in the UK.

- 019 Materials are to be regarded as harmful if, in the context of their use in the Works (whether alone or in combination with other materials) they:
- are prejudicial to health and safety;
 - may pose a threat to the structural stability or the physical integrity of any Property; or
 - could materially reduce the normal life expectancy of any part of the Property.
- 020 Sustainable Timber: All timber and wood derived products referred to throughout this document and which are supplied to the Client, or used Works, must be procured in accordance with all applicable Law.

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- 021 CE/UKCA Marked Products: All products referred to throughout this document and supplied to the Client, or used in the Works, must be supplied with a Declaration of Performance (DoP) and carry the appropriate CE/UKCA conformity assessment marking.

Performance Standards on the CE/UKCA mark must comply with relevant Building Regulations as required.

The CE/UKCA mark must be fixed visibly, legibly and indelibly either to the product or to a label attached to the product. If this is not possible or not warranted, then it must be fixed to the packaging or within the accompanying documentation.

The DoP must be made available by the manufacture (this may be via a website).

- 022 Use, fix and apply all Materials strictly in accordance with the manufacturer's recommendations, directions or technical data sheets.
- 023 Participate in joint initiatives with the Client and other contractors to establish supply chain agreements.
- 024 Where appropriate suggest (economically viable) amendments to this Specification where those amendments may lead to an improvement in environmental performance or sustainability.
- 025 Provide all information the Client's Representative reasonably requests regarding the environmental impact of the supply and use of any Materials the Provider selects for use in the Works.
- 026 **[optional clause]** This Specification incorporates the Client's Codes of Practice in respect of the following:

- **[insert details]**

In the event of any conflict or disparity between the requirements and obligations contained in the Codes of Practice and this Specification, the Codes of Practice will have precedence.

- 027 Client's Standard Details as may be appended to this Specification are to be referred to by the Provider to amplify both this Specification and the descriptions in the Schedule of Rates. The Schedule of Rates descriptions are deemed to be fully inclusive of any requirements delineated, described or illustrated in such Client's Standard Details. It should be noted that the Client's Standard Details may contain a referencing system that relates to an alternative Client's Specification, which does not form part of this Contract, and where this type of referencing occurs it should be considered as a reference to a comparable item of equal quality and performance within this Specification and Schedule of Rates.
- 028 **[optional clause]** If the Provider considers that decanting elderly, vulnerable, people with disabilities and other occupiers and carers from a Property whilst intrusive Works or disruption to washing and sanitary facilities are required to be undertaken, the Provider may be required to provide (at no extra cost) the following facilities:

Decant Mobile - Daytime Decant

Temporary Accommodation shall conform to all applicable Standards.

If it is agreed, prior to a scheme start, that daytime facilities are required this may either be a touring caravan used outside homes between 9am and 5pm and then removed, or a mobile unit located in a fixed position supplied with at least the following:

- External door;
- Bedroom;
- A toilet compartment with wc suite, wash-handbasin and shower unit;
- A flued gas fire/electric heater (note: gas is the preferred option);
- A flued gas fire multi-point water heater or electric water heater;
- Electrical installation complying with British Standard;

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- Mattresses with fireproof removable covers (which shall be thoroughly cleaned and changed after each decant);
- A cooking appliance and fridge;
- Warning notice for health and safety advice to users;
- Fire blanket (to be located by the cooking appliance);
- 1kg-powder fire extinguisher (to be located by the main door);
- Smoke Detector;
- Carbon Monoxide Detector; and
- User's handbook (to be used by Provider when demonstrating the mobile to new occupants).

The Provider shall also supply the following:

- A security cabinet for two 13kg bottles of propane gas if gas is to be used (red gas bottle);
- Entrance steps, handrails, level access ramp (maximum 1:12) to be provided for people with a disability to the satisfaction of the Client's Representative;
- Water supply; and
- Mains sewerage connection.

Daytime decanting must be as agreed by the Customer, the Client and the Provider including as to the hours required for the daytime facility, its location and siting. The provision of car parking by Customers of adjoining dwellings must be considered in all circumstances. The form of provision may vary in different situations.

The daytime facility is not required to provide laundry and storage facilities, telephone connections or television aerials or a dedicated car parking facility.

A chemical toilet compliant with all Standards for portable chemical closets may be used where no sewer connection is feasible.

All Temporary Accommodation must conform to the Health and Safety Law, which includes installation and checking. This is the responsibility of the Provider.

The Provider must comply with any Code of Practice for the transportation, siting and commissioning of caravans published by the National Caravan Council.

The location of the day-time mobile decant facility must conform to Health and Safety Law and be as agreed with the Client's Representative.

Service checks are to be carried out by suitably qualified personnel after each decant. These checks should cover:

- Electrical;
- Gas;
- Water;
- Fire prevention equipment;
- Warning Notices; and
- Steps and Handrails.

The facility is to be cleaned between each change of user.

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The following notice not less than 200mm x 130mm with the heading printed in red is to be fixed in a prominent position in the Temporary Mobile Accommodation.

ADVICE TO CUSTOMERS

Ventilation

Do not obstruct the ventilators, which are fitted; your safety depends on them.

In Case of Fire

Get everyone out.

Turn off the outside gas valve

Raise the alarm and call the Fire Brigade

Do not stay behind to put the fire out yourself

Do not put yourself at risk

Fire Precautions

Children - must not be left alone in the caravan.

When cooking never leave a cooker unattended

Do not use multi-adaptors.

If you smoke use metal or glass ashtrays-not plastic.

Make sure cigarettes are put out properly

Do not smoke in bed.

Means of Escape

Make sure you know the location and operation of the emergency windows and doors,

Keep door and window keys handy.

Keep all escape routes clear.

If there is smoke, keep low where the air is clearer

Do not go back into the caravan.

Combustible Materials

Keep them clear of all heating and cooking appliances.

Fire Fighting Equipment

In addition to the 1kg powder fire extinguisher by the main exit door, a fire blanket is provided next to the cooker. Make yourself familiar with the instructions on your fire extinguisher and fire blanket and the fire precautions arrangements on site. Do not stay behind to put the fire out yourself. Do not put yourself at risk.

The use of chip pans in mobiles is strictly prohibited.

Permit to Work Certification

- 029 If it is deemed necessary by the Client's Representative for the need for a permit to be issued before any Work is undertaken on the system, the Provider shall ensure his compliance with the permit to work system as employed by the Client.

Access

- 030 The Provider shall ensure that he undertakes a risk assessment and provides a method statement for his means of access to allow for inspection and testing.
- 031 All Works shall be carried out in strict accordance with the requirements of "The Work at Height Regulations 2005".

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Firestopping

- 032 The Provider is required to ensure that all holes for cables, pipes etc., in the structure of any Property formed or drilled by the Provider are to be fire-stopped in accordance with current BS regulations.
- 033 If the Provider ascertains that existing holes for cables, pipes etc in the structure of any Property have no or inadequate firestopping, this is to be reported immediately to the Client's Representative giving the detailed location of the hole or holes, including the provision of digital photographs.

PAS 2030, PAS 2031 and PAS 2035

- 034 The Client has adopted PAS 2030:2019 and PAS 2035: 2019 and compliance with British Standards in commissioning measures to improve the energy efficiency of their existing Properties and to undertake fuel saving improvements.
- 035 All Works in respect of the installation of energy efficiency measures in existing Properties are therefore to be undertaken in accordance with the requirements of PAS 2030:2019.
- 036 All Works in respect of retrofitting Properties for improved energy efficiency are to be undertaken in accordance with the requirements of PAS 2035:2019 in addition to PAS 2030:2019
- 037 The Provider or their approved Subcontractors must be registered as compliant with PAS 2030:2019 by a PAS 2031 accredited scheme provider/certification body, and provide evidence to demonstrate compliance with PAS 2030:2019. The Provider or their approved Subcontractors must be able to demonstrate compliance with PAS 2035:2019 to the approval of the Client's Representative.
- 038 Any person employed by the Provider or approved Subcontractor in any of the following roles:
- retrofit adviser;
 - retrofit assessor;
 - retrofit co-ordinator;
 - retrofit designer; or
 - retrofit evaluator

must have undertaken an approved accredited course approved by UKAS, and copies of their relevant certification provided to the Client's Representative when requested.

In addition, if the retrofit Works are in respect of energy efficiency and retrofitting of traditional (having solid, vapour permeable walls) or historical buildings which fall under the requirement with compliance with British Standards, the person or persons undertaking any of the roles indicated above, must hold an SQA Level 3 award in energy efficiency and retrofit of traditional buildings.

DEMOLITION

DEMOLITION

GENERAL

Generally

- 001 Execute all demolition Works and alterations in the most careful manner to avoid damage to the surrounding structures in accordance with British Standards. Make good any damage caused.
- 002 Do not allow dangerous portions of any structure to remain standing during idle periods or overnight except where this is unavoidable. Where this is unavoidable, adequately strut and prop such portions to ensure their stability until Works recommence.
- 003 Load and remove from site all materials (including debris) arising from the demolition or alterations. Do not allow these materials to accumulate. Ensure the care and protection of any Materials to be re-used.
- 004 Bear the risk of any damage in removing, re-fixing and storing old Materials that are set aside for re-fixing. Replace any damaged or defective Materials or missing parts.

Survey

- 005 Before starting the Works, examine all available information, survey the structure(s), site and surrounding area. When requested by the Client's Representative provide a survey report with a method statement covering all relevant matters listed in the Health and Safety Executive (HSE) guidance in relation to development of safe working practices (www.hse.gov.uk) for further information.

The Report and method statements should describe:

- Form, condition and details of the structure or structures, the site, and the surrounding area;
- Type, location and condition of features of historical, archaeological, geological or ecological importance;
- Type, location and condition of adjoining or surrounding premises that might be adversely affected by removal of the structure or structures, or by noise, vibration and/ or dust generated during deconstruction/ demolition;
- Identity and location of services above and below ground, including those required for the Contractor's use, and arrangements for their disconnection and removal;
- Form and location of flammable, toxic or hazardous materials, including lead-based paint, and proposed methods for their removal and disposal;
- Form and location of materials identified for reuse or recycling, and proposed methods for removal and temporary storage;
- Proposed programme of work, including sequence and methods of deconstruction/ demolition.
- Details of specific pre-weakening required;
- Arrangements for protection of personnel and the general public, including exclusion of unauthorized persons;
- Arrangements for control of site transport and traffic; and
- Any special requirements.

Bench marks

- 006 Report to the Client's Representative any bench marks or other survey information found on the structure(s) to be demolished. Do not remove or destroy unless so Instructed in writing.

Existing features and adjacent works to be retained

- 007 Keep in place and adequately protect from any damage all features and adjacent work/Properties that are to be retained. Trees are to be protected in accordance with the requirements of British Standards.

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UTILITIES AFFECTED BY DEMOLITION

Regulations affecting utilities

- 008 Carry out any Works affecting new or existing services in accordance with all applicable Regulatory Requirements.

Location of services

- 009 Locate and mark the positions of services affected by the Works. Arrange with the appropriate Utility Providers for the location and marking of the positions of mains services.

Disconnection of services

- 010 Before starting demolition, arrange with the appropriate Utility Provider(s) for the disconnection of services and removal of fittings and equipment unless the drawings provided by the Client's Representative state otherwise.

Disconnection of drains

- 011 Locate and disconnect all disused drains connections. Seal within the site all the connections to existing sewers to the approval of the Utility Provider.

Drains in use

- 012 Protect drains, manholes, gullies, vent pipes and fittings still in use. Keep them free of debris at all times. Make good any damage arising from demolition. Leave them clean and in working order on completion of the demolition works.

Bypass connections

- 013 Provide bypass connections as necessary to maintain continuity of services to occupied areas of the Property and adjoining properties. Give a minimum of 72 hours' notice to Customers if shutdown is necessary during changeover.

Services which are to remain

- 014 Notify the Client's Representative, Utility Provider and Customer of any damage. Repair such damage to the satisfaction of the Client's Representative and Utility Provider.

WORKMANSHIP

Generally

- 015 Demolish structure(s) in accordance with the Health and Safety Executive (HSE) guidance notices and British Standards. Staff undertaking demolitions are to be appropriately skilled and experienced for the type of demolition work and hold or are being trained to obtain relevant CITB Certificates of Competence. Staff responsible for supervision and control of demolition work are to be experienced in the assessment of risks involved and methods of deconstruction/demolition to be used.

Equipment

- 016 Use suitable types and standards of cutting and demolition Equipment for the location and type of Works.

Gas or vapour risks

- 017 Take adequate precautions to prevent fire or explosion caused by gas or vapour.

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Flammable liquids & gases

- 018 When removing tanks and pipes which may have contained flammable liquids or gases: inform the appropriate officer of the Statutory Authority and follow any advice given; display danger notices;
- prohibit smoking and the use of naked lights;
 - use only non-ferrous tools and equipment, with an ample supply of water, to reduce the risk of sparking;
 - empty tanks and dispose of their contents to ensure that none enters any drainage system or watercourse;
 - clean tanks and pipes and make them inert as described elsewhere in this Specification or as Instructed by the Client's Representative

Dust

- 019 Reduce dust by for example periodically spraying demolition Works with water (with suitable mitigation to prevent run off entering the drainage system). Use dust sheets and temporary screens.

Health hazards

- 020 Take adequate precautions to protect Staff and the public from health hazards associated with any dangerous fumes and dust arising during the Works. It is expected this will include suitable consideration of/testing for lead contamination in existing painted surfaces.
- 021 Perform all Works in such a manner to ensure the safety of the Works and the public and so as to cause the minimum inconvenience to the public.

Adjoining properties

- 022 Leave adequate temporary support and protection for adjoining properties at each stage and arrange for inspection by the Client's Representative when demolishing structure(s).
- 023 Maintain and alter temporary supports and protection as necessary as the Works progress.
- 024 Demolish structure(s) causing a minimum of damage to adjoining properties. Leave no unnecessary or unstable projections.
- 025 Do not disturb any support to the foundations of any adjoining property unless otherwise Instructed.
- 026 Report to the Client's Representative any defects exposed or becoming apparent in any adjoining property.
- 027 Promptly repair any damage caused to any adjoining property by demolition work. Make good to ensure safety, stability, weather protection and security.

Structure(s) to be retained

- 028 Adequately protect all parts of existing structure(s) which are to be kept in place.
- 029 Cut away and strip out with care the minimum amount necessary so as to keep the amount of making good to a minimum.
- 030 Prevent debris from overloading any part of the structure which is not to be demolished.

Services which are to remain

- 031 Notify the Client's Representative and Utility Provider of any damage. Make arrangements for repair to the satisfaction of the Client's Representative and Utility Provider.

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Partly demolished structure(s)

- 032 Leave partly demolished structure(s) in a stable condition, with adequate temporary support at each stage to prevent the risk of uncontrolled collapse.
- 033 Prevent debris from overloading scaffolding platforms.
- 034 Prevent access to partly demolished structure(s) by unauthorised persons.
- 035 Leave safe whilst not working at the Property.

Dangerous openings

- 036 Illuminate all openings as necessary, provide guarding and barriers at all times, including outside of normal working hours, and prevent access by unauthorised persons.

Asbestos-based materials

- 037 Where asbestos-based materials are known to be present in the structure(s) to be demolished, ensure they are removed in accordance with the Client's Policy for asbestos removal and the Health and Safety Executive's (HSE) Control of Asbestos Regulations 2012 where possible before any demolition works commence.

Unknown hazards

- 038 Inform the Client's Representative of any unrecorded voids, tanks, chemicals, etc. discovered during demolition works. Agree with the Client's Representative the methods for safe removal, filling, etc.

New openings

- 039 When forming new openings or altering existing openings:
- cut away existing arches, lintels or sills;
 - provide temporary strutting and supports and shoring;
 - cut away for hoist and insert new lintels, including cutting and pinning ends;
 - cut away for, and insert new sills, including cutting and pinning ends;
 - make good floors up to levels for new thresholds, sills etc., including latex levelling screed;
 - wedge and pin up to existing work and build up jambs as described;
 - extend and make good finishings to match existing as necessary;
 - remove all debris from the Property and site; and
 - retain supports until the new Works have adequate strength to support the existing structure.

Taking down

- 040 When taking down:
- provide temporary support;
 - remove all applied finishes;
 - make good finishes and match to existing as necessary;
 - make good floors up to levels with latex levelling screed; and
 - remove all debris from the Property and site.

Building up existing openings

- 041 When building up existing openings:
- build up in Materials to match existing or as described for the full thickness of the wall;
 - cut out existing thresholds, sills, arches, lintels, etc;
 - hack off finishings from jambs or reveals before building up;
 - prepare surfaces for raising, including lead core or similar damp proof course;
 - cut toothing;
 - wedge and pin up to existing work as required; and
 - extend and make good finishings to match existing as necessary.

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Extending finishings

- 042 Match all extensions to finishings, plasterwork, ceilings, flooring etc., and any making good exactly to the existing finishings.

MATERIALS

Ownership

- 043 Components and materials arising from demolition (other than any found during excavations) belong to the Provider. Remove them from site as the Works proceed.

The Client's Representative will indicate to the Provider whether certain components and materials are to remain the property of the Client, these components and materials are to be maintained and protected until they are removed by the Client or instructed to be reused in the Works.

Material and components other than brick, stone and concrete rubble or other hard material, arising from the deconstruction and demolition works can be recycled or reused elsewhere on the Contract, subject to compliance with the appropriate specification and in accordance with any site waste management plan, The Provider would be required to submit full details and supporting documentation as evidence of compliance with the specification, and to allow adequate time in his programme of Works for verification of compliance.

Hardcore

- 044 Reuse brick, stone and concrete rubble or other hard materials arising from demolition as hardcore, subject to compliance with this Specification.

Bricks

- 045 Use whole, sound bricks arising from the Works for replacing cracked or defective bricks or filling to existing openings.

Infected Timber

- 046 Inform the Client's Representative when infected timber is encountered. Remove timber infected by fungal/insect attack from the Property in a way which will minimise the risk of infecting other parts of the building. Destroy it as soon as possible.

Commencement condition survey

- 047 Before starting the Works:
- survey the existing state of the Property to be kept in place;
 - record the magnitude and extent of all cracks, spalling, flaking and other irregularities of the fabric of the Property; and
 - agree the commencement condition survey record with the Client's Representative.

Extent of support work

- 048 Where necessary, provide support systems to those elements of the Property which are to be retained.
- 049 Submit detailed proposals including drawings and calculations for all systems to the Client's Representative for approval, and resolve any amendments proposed. The Provider is responsible for procuring structural engineering services for drawings and calculations for support systems.
- 050 Provide adequate and stable support systems and thereby maintain the integrity of supported structure for the period of erection to completion of dismantling support systems.

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Workmanship

- 051 Carry out all work in accordance with the Order or any design brief issued with it.
- 052 Use Staff experienced in the methods of erecting and maintaining support systems to supervise and control the Works.

Erecting support systems

- 053 Locate the positions of existing and new services which may be affected by support systems and provide any necessary temporary diversions.
- 054 Prevent excessive loadings from foundations of support systems being imposed onto foundations of structure to be kept in place.
- 055 Erect and connect support systems to structure to be kept in place. Take:
 - all necessary precautions to prevent damage; and
 - due account of movement of the structure which may occur before, during and after demolition.
- 056 Promptly repair any damage caused to adjoining properties by the erection or connection of support systems. Make good to ensure safety, stability, weather protection and security.
- 057 Report to the Client's Representative any damage caused to retained features or works by the erection or connection of support systems. Agree the methods of repair with the Client's Representative.
- 058 Check support systems at agreed stages during erection for compliance with design proposals.

Unknown hazards

- 059 Inform the Client's Representative of any unrecorded voids, flues, services, etc., discovered during the erection of support systems. Agree with the Client's Representative methods for infill, making good, relocation of support connections, etc.

Loading support systems

- 060 Complete the erection and connection of the support systems before starting the demolition of any adjoining structures.
- 061 Inform the Client's Representative when support systems are erected and all connections are made to the structure to be kept in place. Obtain any required permissions to load systems.

Maintaining support systems

- 062 Provide safe access and safe places of work in the support systems for inspection and maintenance.
- 063 Regularly inspect and maintain support systems, making good ties, wedges, connections, corrosion protection, etc., as necessary.
- 064 Adequately protect support systems from impact by vehicles, plant and site operations. Prevent access by unauthorised persons. Leave safe when not working at the Properties and outside the Provider's Working Hours.

Dismantling support systems

- 065 Inform the Client's Representative when all permanent connections between the supported structure and new construction have been made. Obtain permission before disconnecting and dismantling support systems.

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Making good

- 066 Repair any connection holes made in the structure kept in place, using Materials to match those existing. Repair damage caused to buildings, roads or pavements.

Site clearance

- 067 Clear away all debris, excess materials and temporary Works and leave the Property and its site in a tidy condition on completion of the Works.

Guarantees, Warranties etc.,

- 068 The Provider is required to supply to the Client's Representative a copy of all relevant guarantees, warranties, service and maintenance manuals applicable to the products installed when requested by the Client or the Client's Representative, the cost of the provision of such guarantees, warranties etc is deemed to be included in the rates within the Schedule of Rates, other Tendered rates, and the Provider's tendered percentage adjustments.

Client's current manufacturers/suppliers/products

- 069 Ensure all Materials are compatible with and standardised to the Client's current products specified in the table below (listed by manufacturers, suppliers and/or brand names).

Product	Brand name	Manufacturer's details

[complete table as appropriate]

ASBESTOS WORKS

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ASBESTOS WORKS

GENERAL

- 001 Removal of licensed asbestos can only be carried out by an Asbestos Licensed Contractor.
- 002 The Provider shall employ the services of an Asbestos Licensed Contractor before undertaking any Asbestos Works. All works classed as Asbestos Works should be undertaken in accordance with the Control of Asbestos Regulations (CAR) and the general procedures listed in this Specification.

Removal

- 003 Asbestos should be removed when: deemed by the survey Risk Assessment to be:
- A high risk material i.e. Insulation materials;
 - In a damage state;
 - It is breaking away from the substrate base; or
 - The asbestos is likely to be abraded or otherwise damaged.

As there is a possibility that non-asbestos materials may become contaminated from adjacent asbestos, consideration may need to be given to the removal or cleaning of adjoining materials and belongings.

Encasing

- 004 Encasing is constructing an airtight barrier around the asbestos, and is suitable where the cost of removal would outweigh the benefit or risk posed.
- 005 An encasement can be constructed from wood, metal or sheetrock, all joints must be sealed completely and be air tight.

Encapsulation or sealing

- 006 Encapsulation is suitable for use when the asbestos present is in a hard to reach place(s).
- Encapsulation is the application of an impervious materials, which is secured over or around an ACM and is designed to prevent the release of fibres under foreseeable conditions, such as vibration, impact and age degradation.
- 007 For large areas the cost of encapsulation or sealing may approach the cost of removal. Any eventual removal may be more difficult and costly. Continuing assessment on a periodic basis will be defined by the asbestos survey risk assessment will also be required if the encapsulation or sealing option is taken. Not all paints and other surface coatings on the market are suitable. In particular, the sealant should not increase the fire hazard properties of the material being treated. If the asbestos is poorly bonded to the substrate, the application of a coating may result in large sections of the asbestos breaking away from the substrate. The surface to be encapsulated or sealed should be cleaned with an approved "H" type vacuum cleaner to remove all debris and dust particles ensuring good adhesion of the coating to be applied.

Removal and maintenance work

- 008 Where Asbestos Works is being performed, the Provider is required to notify the Health and Safety Executive or other enforcing authorities using Form FODASB5 14 days in advance of the works commencing, except in emergency situations where shorter notice with their agreement can be given.
- 009 Reasonable notice shall be given to any adjacent Client Party, Customers and Staff that Asbestos Works is to be carried out, and when it is to be carried out. The notification should also include an explanation of the general procedures and equipment involved and the precautions to be taken in accordance with CAR Regulations. Waste asbestos products shall be disposed of in accordance with the Hazardous Waste Regulations having given at least 3 days' notice to Environment Agency.

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Notifiable Non Licensed Work

- 010 Notifiable non licensed Works (NNLW) is the removal of asbestos materials that would not normally require the Provider to give notification prior to commencement of Works, an example would be the removal of damaged or broken asbestos cement products, when the condition or the quantity of the material may give rise to significant quantities of dust and debris. This would mean this Work would be notifiable but not subject to full requirements of licensable Asbestos Works. In such instances it is advisable for the Provider to consider if the quantity of Work being carried out to asbestos containing materials would mean the Works are notifiable, in such scenarios use of an Asbestos Licensed Contractor may be necessary subject to the results of risk assessments.
- 011 Where NNLW is being performed, the Provider is required to notify the relevant enforcing authority using Form ASB NNLW1, with additional requirements and obligations being placed upon the Provider in respect of medical surveillance and maintenance of health records for each employee exposed to asbestos.

The Provider should contact www.hse.gov.uk for further information and guidance on NNLW.

In considering whether the works will require notification of non-licensed Works consideration needs to be given as to whether the Works are:

- **Maintenance** e.g. drilling holes to attach fittings or pass cables through, painting, cleaning etc. Maintenance includes some removal where it is incidental to the main task, e.g. removing an asbestos ceiling tile to allow inspection.
- **Removal** e.g. as part of a refurbishment or redesign project.
- **Encapsulation** e.g. work to enclose or seal asbestos materials in good condition.

And whether Air monitoring and control, and the collection and analysis of samples will be required.

Consideration will need to be given to the asbestos type

Is it friable? Friable means easily crumbled or reduced to powder. The more friable a material is, the more likely it will release asbestos fibres when worked on and the greater the risk of exposure. Work which disturbs more friable materials, e.g. asbestos pipe insulation, will tend to be notifiable non-licensed work and work which disturbs the least friable materials, e.g. asbestos cement, can normally be treated as non-licensed work.

How firmly is the asbestos bonded in a matrix? (For removal work only). Bonded in a matrix means the asbestos is coated, covered or contained within another material, such as cement, paint or plastic. ACMs of this type in good condition can usually be treated as non-licensed work. If the ACM's are significantly damaged, and so more likely to release fibres, they will need to be treated as notifiable non-licensed work.

Consideration will need to be given to the Asbestos material's condition

Has the material been damaged or is it in poor condition? Removal of ACMs in poor condition e.g. due to flood or fire damage, will normally need to be treated as notifiable non-licensed work.

Will the materials' matrix be destroyed when worked on? e.g, using gel or steam to remove deteriorating textured decorative coatings such as 'Artex' will normally need to be treated as notifiable non-licensed work.

Examples of notifiable non-licensed work (NNLW) with asbestos

- Using steaming or gelling methods large-scale removal of textured decorative coatings (e.g. beyond that required for maintenance activities such as installation/replacement of smoke alarms and fittings);
- Minor short duration work to remove asbestos insulating board as part of a refurbishment project;

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- Minor short duration involving asbestos insulation (e.g. repairing minor damage to a small section of pipe insulation where the exterior coating has been broken or damaged);
- Removal of asbestos cement products (e.g. roof sheeting) where the material has been substantially damaged or broken up (e.g. as a result of fire or flood damage);
- Removal of asbestos cement products (e.g. roof sheeting) where the removal activity will mean that the material will be substantially broken up, creating significant quantities of dust and debris (e.g. 'dropping' an asbestos cement roof); and
- Removal of asbestos paper and cardboard products if not firmly bonded in a matrix

All non-licensed and notifiable non-licensed work with asbestos needs to be carried out with the **appropriate controls** required by the Health and Safety Executive or other enforcing authorities in place, and those carrying out the work must have had the correct level of **information, instruction and training**, to protect themselves (and others in the area) from the risks to health that exposure to asbestos causes.

If the Provider determines that the Works, they are about to do is notifiable non-licensed work (NNLW), the section below on notification explains how the Provider is comply with the additional requirements.

Notification

The Provider will need to notify the relevant enforcing authority of any NNLW with asbestos:

- Notification is to be use of the **online notifications form** (via either a computer or Smartphone);
- all three possible regulators can be notified via this database - the Health and Safety Executive, Local Authorities and the Office of Rail and Road (see table below);
- notice is required before the work starts - there is no minimum notice period;
- the Provider does not need to wait for permission from the enforcing authority – the database will provide a PDF copy of the notification;
- if the Provider is are doing a project or contract with multiple NNLW jobs you can notify once for the whole project or contract;
- if the Provider is a licensed asbestos contractor carrying out NNLW work, a notification will still have to be submitted; and
- the **online notifications form** is the only method of notification accepted.

Type of premises/activity	Enforcing Authority
Shops, offices, separate catering services, launderettes, sport, entertainment and recreational activities, exhibitions, church or religious meetings, hotels, camping and caravan sites, wholesale and retail storage	LA (Local Authority)
Factories and factory offices, civil engineering, construction and demolition sites, hospitals, research and development establishments, local government services and educational establishments, fairgrounds, radio, television and film broadcasting, sea going ships, docks, transport undertakings, domestic premises, quarries, farms (and associated activities), horticultural premises and forestry's, mines or quarries and offshore installations, licensed nuclear sites	HSE (Health & Safety Executive)
Railways, railway lines, signal boxes	ORR (Office of Rail and Road)

Designating areas

All areas where there is NNLW taking place must be designated and marked with a suitable warning notice. These areas must be restricted to those carrying out the work.

Food and drink must never be consumed in designated areas.

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Medical surveillance

All the Provider's operatives carrying out NNLW will need to have had a medical examination **at least every 3 years**, as long as the operative continues to do NNLW. Any Provider's operatives carrying out NNLW for the first time will have to have an examination before they can start such work:

- medical examinations must include an examination of the chest and a lung function test;
- they need to be carried out by a licensed medical practitioner, e.g. a GP;
- those operatives already under surveillance via a licensed asbestos contractor and in possession of a valid certificate do not need to have the NNLW medical;
- medical examinations should be carried out in work time at the Provider's expense; and
- the GP must issue a certificate to confirm the examination has taken place and on what date - the Provider needs to keep this certificate for 4 years.

Record keeping

The Provider need to keep a register (health record) of NNLW with asbestos for each operative exposed to asbestos:

This must include:

- the nature and duration of work with asbestos and estimated exposure for each individual operative; and
- dates of the operative's medical examinations.

Registers of work (health records) must be kept for 40 years (and offered to the Health and Safety Executive or other enforcing authorities or the individual concerned should the business cease trading).

The need to record exposure does not mean that every non licensed task must have air sampling. There will often be published exposure figures or knowledge within the industry about exposures found at similar lower risk work done in the past. If a task is unusual, then sampling may be required.

Non Notifiable Non Licensed Work

012 Removal of non-licensable asbestos containing materials is deemed to be included within the rates contained in the Schedule of Rates (**with the exception of the rates in the Asbestos Works section of the Schedule of Rates which are only for the removal and/or encapsulation of licensed asbestos or non-licensed asbestos that may have been contaminated by adjoining licensed asbestos**) together with the Provider's tendered percentage adjustment.

013 Non licensed asbestos works are deemed to be:

Sporadic and of low intensity – to be considered sporadic and of low density the concentration of asbestos fibres in the air should not exceed 0.6f/cubic centimeter measured over 10 minutes;

Carried out in such a way that the exposure of workers to asbestos will not exceed the legal control of 0.1 asbestos fibres per cubic centimeter of air (0.1f/cm³) (averaged over a four (4) hour period);

Meet at least one of the four following conditions:

1. It is a short non-continuous maintenance task, with only non-friable materials (friability describes how likely a ACM is to release asbestos fibres when worked on, so non-friable materials will only release a small number of fibres during work);
2. It is a removal task, where the ACMs are in reasonable condition and are not being deliberately broken up, and the asbestos fibres are firmly contained in a matrix e.g. the asbestos is coated, covered or contained within another material, such as cement, paint or plastic;
3. It is a task where the ACMs are in good condition and are being sealed or encapsulated to ensure that they are not easily damaged in the future: and
4. It is an air monitoring and control task to check fibre concentrations in the air, or its condition and analysis of asbestos samples to confirm the presence of asbestos in a material.

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Examples of non-licensed asbestos work:

- Cleaning of small quantities of loose/fine debris containing ACM dust (where the work is sporadic and of low intensity, the control limit will not be exceeded and it is short duration work);
- Drilling of textured decorative coatings for installation of fixtures/fittings;
- Encapsulation and sealing –in work on asbestos containing materials (ACMs) that are in good condition;

Maintenance Works involving:

- Asbestos cement products (e.g. on roof sheeting, tiles and rainwater goods);
- Asbestos in ropes, yarns and woven cloth;
- Asbestos gaskets or asbestos rope cord (including removal as part of the repair and upkeep of equipment) if this can be done without substantial breakage;
- Asbestos containing thermoplastic and vinyl floor tiles, bitumen roof felt, shingles, damp-proofing coatings and mastics;
- Asbestos-containing felt and paper;
- Plastic paint coatings, PVC floors, panels and sealing compounds;
- Asbestos-containing conveyor belts/drive belts, bonded rubber, electric cables;
- Resin-based ACMs such as friction products (e.g. brake linings)
- Painting/repainting Asbestos Insulating Board (AIB) that is in good condition;

Removal of:

- Asbestos cement products (e.g. roof sheeting and rainwater goods) providing the material is carefully handled/removed without breaking up, this includes work with asbestos cement which is weathered but not otherwise substantially damaged;
- Small areas of textured decorative coatings using suitable dust-reducing methods, to support other activities such as installation/replacement of smoke alarms and light fittings;
- Textured decorative coatings provide that this can be done without deterioration of the material (e.g. if the backing board is carefully cut around to achieve virtually intact removal);
- Loosely fixed (e.g. screwed) asbestos insulating board (AIB) panels in order to gain access to areas for other Maintenance activities (e.g. under a bath to carry out pipework maintenance, or for access to a ceiling void for repair of lighting) This also includes re-attaching the panels after the work is done;
- An AIB door with asbestos fire proofing;
- Asbestos cement products (e.g. roof sheeting) where the material will be substantially damaged or broken up (e.g. as a result of fire or flood damage);
- Asbestos cement products (e.g. roof sheeting) where the material will be substantially broken up, creating significant quantities of dust and debris (e.g. dropping an asbestos cement roof);
- Asbestos paper and cardboard products if not firmly bonded in a matrix)

Short duration work:

- To repair minor damage to AIB;
- Involving drilling holes in AIB (e.g. installing shelving);
- To remove asbestos insulating board as part of a refurbishment project;
- Involving asbestos insulation e.g. repairing minor damage to a small section of pipe insulation where the exterior coating has been broken or damaged;

Other work on:

- On other materials containing asbestos (such as paints, bitumen, resins, rubber etc.,) where the fibres are bound in a matrix which prevents most of them being released (this includes, typically, aged/weathered AC);

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- Associated with collecting and analyzing samples to identify the presence of asbestos;
- Large scale removal of textured decorative coatings using steaming or gelling methods (e.g. beyond that required for maintenance activities such as installation/replacement of smoke alarms and fittings)

014 Certain of the operations listed in 013, dependent upon the circumstances in which the Works will be undertaken, will also be notifiable to the Health and Safety Executive or other enforcing authorities on form ASB>NNLW1, with additional requirements and obligations being placed upon the Provider in respect of medical surveillance and maintenance of health records for Staff exposed to asbestos.

Demolition and structural alterations involving restricted work

015 Demolition and structural alteration of buildings or other structures containing asbestos material should be in accordance with the Regulations. All asbestos products, including asbestos cement sheeting, must be removed before demolition is commenced. In some circumstances, partial removal, followed by partial demolition to allow access to previously obstructed asbestos material, may be necessary. In such cases, the partial demolition operation should be conducted under conditions appropriate to the removal Work. The techniques for handling and removal of non-friable asbestos-cement products are detailed later in this Specification.

REMOVAL OF ASBESTOS

016 This section provides guidelines for undertaking the planned and safe removal of asbestos-based materials from buildings, equipment/plant and structures, and outlines the equipment that could be used, removal techniques and general safety and hygiene requirements.

017 This section applies to the removal or work on:

- Friable asbestos, including sprayed asbestos coatings used for thermal and acoustic insulation in buildings.
- Decorative coatings in buildings;
- Asbestos-based lagging on boilers and other industrial plant;
- Asbestos cement products;
- Roof coverings;
- Asbestos Insulation Panels;
- Ropes, felts, papers and the like; and
- Other non-asbestos materials that have been contaminated with asbestos.

018 Working with asbestos and asbestos-based products is hazardous. It is the Provider's duty under the Health and Safety at Work Act to provide a healthy and safe place of work. To achieve this it will be necessary to plan the work and adopt good work practices.

019 In any activity involving the removal of asbestos-containing materials the procedures adopted must allow for the containment of asbestos. All practicable steps must be taken to ensure that Staff and any Client Party in the area are not exposed to asbestos fibres.

NOTE: Removal of friable asbestos that has been used for thermal or acoustic insulation and other stated applications may only be carried out by a competent person(s) with a valid asbestos removal license from the Health and Safety Executive using appropriate guidance, restricted work must be at all times be under direct supervision.

SAFE REMOVAL OF FRIABLE ASBESTOS

020 This section applies to the removal or work on:

- Friable asbestos, including sprayed asbestos coatings used for thermal and acoustic insulation in buildings.
- Decorative coatings in buildings;
- Asbestos-based lagging on boilers and other industrial plant.

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Information to be provided by the Client

- 021 The Client will provide the Provider with access to the Client's electronic asbestos register where they can obtain (if available) a copy of the asbestos survey (or suitable representative survey) giving details of the ACM identified to the Provider prior to commencement of any work.

It is recognised that in some cases the full extent of the asbestos material is not known until removal is under way.

In the preparation of job specifications by the Provider's Asbestos Licensed Contractor the following considerations should be addressed:

Location and Status of ACM:

- Internal;
- External but protected.
- External exposed to weather;
- Enclosed in ducts; "Confined Spaces Considerations"
- Difficult or unusual site conditions, which will influence the selection or application of removal methods, particularly in regard to transport, scaffolding or weather protection.
- Removal from roof space areas or areas or Working at Heights, confined spaces, or areas with other constraints within a property.

Technical description of the material to be removed with details of the type of asbestos present and any special or unusual materials or circumstances.

- 022 The extent of the removal Work should be adequately detailed on the Order (subject to Clause 020 above), to indicate areas for removal, otherwise, information of the following nature should be provided where available. If necessary, the Provider should contact the Client's Representative where his risk assessment states a sample is required, requesting that additional sampling and testing of potential ACM's is necessary.
- Surface dimensions of flat or large curved areas, thickness of insulation, external diameters of pipes, length of each size pipe, and number and type of pipefittings, e.g. flanged joints, valves, tees, expansion bends. Particular detail is to be provided if asbestos is to be removed from any part of the building's air-conditioning system;
 - Details of any pipe work sections that are steam or electrically heated and the arrangement of its insulation;
 - Details of any section or materials to be left in place;
 - Confirmation and details of residual heat that will remain in pipe work, boilers, etc.;
 - Any unusual or specific hazards associated with the removal Works;
 - Temperature considerations — normal working temperature for each portion of the plant concerned, ambient temperature at the removal area;
 - Conditions of substrate surfaces — special requirements, such as the removal or otherwise of protective paint or lacquer from pipe work or for the application of paint or other protective coatings to the substrate from which the asbestos-based material has been removed;
 - Types of fittings and supports and whether or not these may be removed or disposed of with the waste;
 - Type of finish required or specification for re-insulation;
 - Special service requirements, for example, where there is any potential hazard from contact with live electrical equipment in use in the removal area; attention should be drawn to this fact;
 - Where electrical switchgear or panels are to be sealed, consideration should be given to the provision of supplementary ventilation to dispose of potential heat build-up and consequent fire risk;
 - Site occupancy restrictions and conditions;
 - Adjacent area cleaning (adjacent areas which are to be cleaned or are to be protected from airborne dust and are to be cleaned on completion);
 - Safety practices to be followed under relevant legislation; and
 - Location of any relevant electrical cables;

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Information to be supplied by the Provider

- 023 Restricted Work involving asbestos must be notified to the Health and Safety Executive 14 days prior to abatement activities commencing.
- 024 The Provider (or his appointed Asbestos Licensed Contractor) should provide a detailed plan of Work and all method statements with specifications or drawings showing details as require under CAR regulations as follows:
- Type, quantity and extent of isolation required at the asbestos removal area and location of restricted access borders;
 - Particular methods to be adopted when removing material, including detail of the contamination control programme, for example, provision of negative air pressure and the location of the exhaust unit;
 - This should include specifications of size, capacity and type of filter, location of decontamination unit and where it is to be discharged;
 - Detailed risk assessment for both asbestos and all other perceived risks;
 - Waste disposal programme including;
 - On-site storage system;
 - Method of removal from the building;
 - Detailed risk assessment; and
 - Waste disposal site to comply with Hazardous Waste Regulations 2005
 - Any other information required to ensure compliance with CAR Regulations and Health and Safety Executive guidance
 - Where the risk assessment requires that removal operations be undertaken under controlled conditions the Provider will request the Client to appoint a Health and Safety approved analyst to provide assurance that his operations have been completed in accordance with the Provider's plan of Work and other management duties including air testing, 4 stage clearances and issue certificate of reoccupation.

This information is to be uploaded to the Client's electronic asbestos register by the Provider on completion of the Works.

Guidelines for Providers for planning and programming:

- 025 Consideration should be given to the removal of all asbestos from a Property at the same time. Decanting (if necessary) and/or other management issues to be agreed with the Client prior to commencement of Works.
- 026 Conversely, the work of other Client Parties should be scheduled to preclude them working near to, or accidentally breaking into the asbestos removal area. The Provider is given access to the Client's Electronic Asbestos Register so he can download survey data if available, in a situation where no relevant sample or survey data exists and his risk assessment requires that samples should be taken, the Provider should bring this to the attention of the Client's Representative who will either, issue an Order with the Provider or through the Client's own analyst, get a sample or survey completed and uploaded to Client's electronic asbestos register.
- 027 The following are the major points to which early consideration should be given:
- Safety and Health of personnel;
 - Safety and Health of Customers;
 - Most appropriate work methods for the work;
 - Identification of types of asbestos involved;
 - Programme of commencement and completion dates. However, it should be recognised that unforeseen problems with removal or the extent of the asbestos cannot always be ascertained prior to removal Work commencing;
 - Responsibility for the supply and application of isolating materials, e.g., ropes, barriers, plastic screens, waste containers and warning signs;
 - Preparation of surfaces (pre-removal) cleaning;
 - Precise information on extent of the work covered by the Contract;
 - Limitations of access to the removal area;

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- Conditions of employment on the site, including the labour and supervision required and agreed working hours;
- Transport facilities;
- Protected storage area pending the removal of asbestos-based materials;
- Availability of water, power, heat, light and drainage;
- Accommodation, decontamination and canteen facilities;
- Provision of access equipment, such as scaffolding or ladders;
- Protection of adjacent areas, plant and machinery;
- Waste disposal methods and responsibilities and cleanup requirements;
- Temporary sealing of asbestos where necessary;
- Notification to the Health and Safety Executive;
- Responsibility for air monitoring, including clearance monitoring;
- Customers furniture store;
- Decanting arrangements;
- Analyst work area
- Transit routes waste disposal facilities

Training

- 028 All asbestos removal Staff must be instructed in the relevant aspects of working with or on asbestos to ensure compliance with CAR Regulation 9 and associated Approved Codes of Practice: the health hazards associated with asbestos, safe working procedures, and the wearing and maintenance of protective clothing and equipment. The level of training may vary according to the requirements of a job but all Staff should be given detailed information on the reasons for safety and health precautions.

The Provider is to provide evidence that his Staff have received training for task specific removal of non-notifiable, non-licensed, and notifiable non-licensed asbestos containing materials including use of special PPE, cleaning materials, disposal procedures etc.,

Supervisory personnel

- 029 The Provider shall ensure that supervisory personnel have a detailed knowledge of the precautions and procedures outlined in the CAR Regulations, ACOP HSG 247 and in this model Specification. With this knowledge and personal experience, they should assume the following responsibilities:
- To plan the total removal procedure;
 - To select the most appropriate technique for removal of asbestos;
 - The pre-removal setting up;
 - Reassurance Air Tests
 - The actual removal and final cleaning operation, 4 stage clearances and certificate of reoccupation as applicable;
 - To ensure that all necessary measures are taken to reduce the airborne concentration of asbestos dust to the lowest practicable level;
 - To ensure that asbestos fibres and asbestos-containing material do not contaminate adjacent areas;
 - To ensure that all Staff under their supervision are adequately trained in the safe working practices outlined in HSWO and in CAR Regulations;
 - To ensure that the removal is continually supervised by Staff and that the operation is carried out in a safe and proper manner, in accordance with the precautions listed in the CAR Regulations;
 - To ensure that personal protective equipment is used and maintained in good condition;
 - To ensure that the removal site is maintained in a clean condition, that waste is quickly and properly disposed of in accordance with process detailed in Provider's Plan of Work
 - To ensure personal hygiene procedures are continually observed;
 - To maintain copies of all records and a site log detailing all site operations on a daily basis and can be signed off by all parties on site; and
 - To supply all information to the Client's Representative (electronically uploading to Client's electronic asbestos register) on completion of the Works.

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Site preparation for the removal of friable asbestos from buildings and other structures

- 030 The plan of Work issued to the Health and Safety Executive or other enforcing authorities will set out the procedures adopted for the removal of friable asbestos must be designed to contain the asbestos and minimise airborne exposure. The steps required will vary from job to job but in all cases will include the following:
- Access to the asbestos removal area must be restricted to those involved in the removal work. A thorough pre clean must be undertaken prior to work area preparation and commencement of abatement activities;
 - Contamination of flooring and furnishings with asbestos containing dust must be avoided;
 - The drift of airborne fibres must be restricted by ensuring that the removal area is effectively screened off from adjacent areas. This is usually achieved by extracting air from the removal area to ensure that it remains at negative pressure with respect to surrounding areas;
 - The precautions taken must be sufficient to ensure that any asbestos contamination in the air or surrounding areas is maintained below 0.01 fibres/ml (for a sample volume of at least 480 litres passed through a filter with an effective diameter greater than 20mm) at all stages during and after the asbestos removal work. The steps to be taken will be determined the likelihood of asbestos fibre release and the size of the job in terms of the time taken to complete it and the area involved. In the following sections, the site preparation that is considered appropriate for three commonly performed removal tasks are specified;
 - The removal of fireproofing, thermal or acoustic insulation applied to structural steel or ceilings, or other similar major asbestos removal jobs;
 - The removal of decorative coating containing relatively low percentages of asbestos; and
 - Small-scale jobs such as the removal of minor amounts of asbestos pipe lagging.

Preparation of a site for a major removal programme.

- 031 Where total enclosure of the removal area is required, isolation of the area can be achieved by the installation of low-density polyethylene sheeting (not less than 1000 gauge) on the floor and walls of the structure. It may be necessary to erect a temporary timber or metal frame to which the plastic barrier can be attached. All joints should be overlapped and taped to ensure that the area is completely sealed off. In some circumstances the use of adhesives may supplement the use of tape.
- 032 Existing floor coverings should be removed where practicable. A double layer of plastic sheeting (suitably fixed by double-sided tape or adhesive to prevent movement between layers) should be used on the floor of the containment area, and a turn-up should be used where the floor joins the sidewalls. Plywood 6mm should be used between layers to prevent accidental penetration of sheeting.
- 033 Vertical shafts should be properly sealed off to prevent the thermos-syphon effect spreading asbestos fibres throughout the building.
- 034 Where asbestos is removed from an entire floor of a multi-storey building, all passenger and goods lifts should be prevented from stopping at the floor from which asbestos is being removed. Asbestos removal Staff may gain access to the floor via the fire stairs or from an elevator dedicated for this purpose. Where a lift is used for access, all exit doors to other floors should be sealed. It is important that emergency escape exits are available when blocking off such areas
- 035 All movable furniture, plant and fittings shall be removed from the asbestos removal area. The immovable items should be fully wrapped and sealed in suitable plastic sheeting and stored in lockable container on site to facilitate involvement of the Client's loss adjuster; an inventory (including photographs) of all items removed should be taken and where possible their condition agreed with the Customer (signed copy) so that they are effectively isolated from the removal area. In regions of heavy traffic or high wear, additional masking or barricading may be necessary.
- 036 Where masking operations may liberate asbestos fibres, all Staff in the removal area should wear respiratory protective devices approved for asbestos. This precaution is particularly applicable when removing existing barriers or partitions such as false ceiling tiles. Where asbestos materials may have fallen on to a false ceiling, the ceiling should only be removed under full controlled removal conditions. Any utility or service pipework, which penetrates into the ceiling space, is to be sealed.

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- 037 Except for the Negative Pressure Units ("NPU") all ventilation and air-conditioning networks servicing the removal area should be closed down for the duration of the removal job. All vents should be thoroughly masked to prevent the ingress of asbestos fibres into the duct network. Upon completion and after final cleaning of the removal area, all mechanical ventilation filters for re circulated air should be replaced.
- 038 Additional care must be taken to ensure that asbestos fibres cannot escape at points where pipes and conduits pass out of the removal area. Greater attention to masking and re-assurance testing should be given in these regions, particularly if service riser-shafts pass through the removal area.
- 039 To prevent the escape of airborne asbestos fibres from the removal area enclosure, an exhaust extraction fan should be installed in a position so as to create a negative air pressure of approximately 5 Pascal's (water gauge) within the removal area. While accepting that the measurement of this pressure is not always possible, a good guide to the effectiveness of the system can be gauged from the inwards effect on the plastic tenting. It is a requirement that clear viewing panels be installed at strategic locations throughout the enclosure to allow inspection from outside the enclosure, if clear viewing panels cannot be provided, then the Provider is to install a close circuit TV system with external monitors. If there is a visible bellowing inward, there is a good negative pressure. In this arrangement, the major and usually only route of air into the removal area would be through the three-stage unit. The correct flow of air should be verified using the smoke testing method.
- 040 The air extracted by this system should pass through an appropriate High Efficiency Particulate Air ("HEPA") filter to remove any asbestos fibres. Ideally, air extraction units should be so situated that access to the filters can be gained from the removal area. This expedites the otherwise difficult decontamination of these units and allows another unit to be brought into service in the event of a breakdown. Where it is not possible to change the filter within the removal area, a temporary enclosure should be constructed around the unit to allow for filter replacement.
- 041 The HEPA filter should comply with the minimum 99.997 percent efficiency requirement detailed in the British Standards. A coarse pre-filter should be installed prior to the HEPA filter to prolong the useful life of the high efficiency filter. Where practicable, the discharge point for this extraction unit should be to the outside air, distant from other working areas, air-conditioning inlets or breathing air compressors. Where this is not possible, testing of the exhaust air should be carried out.
- 042 Extraction equipment should be operated continuously whilst the removal enclosure is in place. Such equipment should be DOP tested every six months.
- 043 When installing the asbestos removal area containment, extra consideration should be given to the alteration of the fire rating of the building and to the provision of the fire-fighting facilities, emergency exits and emergency lighting.
- 044 Warning notices stating "Asbestos Hazard Area, Keep Out" shall be placed at entrances to the removal area. These signs are to be placed so they are clearly visible. Other more general signs may be used elsewhere in the Properties to indicate that Works are in progress.

Compliance testing of removal area containment prior to commencement of work.

- 045 Before any asbestos removal begins in an enclosure, a visual inspection to check the integrity of the structure must be carried out. Smoke testing should also be used to detect leaks and observed by the asbestos analyst.
- 046 Attention should be given to the bellowing inward of the plastic sheeting. At the beginning of each working period the inspection should be repeated and any defects remedied immediately.

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Decontamination facilities.

- 047 To prevent the escape of asbestos as Staff enter and leave the removal area a specially constructed transit route and mobile or on-site decontamination unit will be required. In all cases where it is deemed necessary to totally enclose the removal area, a decontamination unit consisting of at least three compartments should be used. It is recommended that a 4:1 shower to the Staff member ratio be used for calculating the appropriate size of decontamination unit to be used on any particular project. Where a friable asbestos removal programme is being undertaken, a decontamination unit must be provided that incorporates the following elements or achieves the same or better protection:
- .1 A dirty area having provision for:
 - Removal of contamination from protective clothing, footwear and respirator;
 - Washing footwear in footbath;
 - Storage of contaminated clothing and footwear; and
 - Airflow towards the removal area;
 - .2 A Shower Area with hot water adjustable at the source. Body soap liquid and shampoo, nail brushes, mirror, and clean disposable towels.
 - .3 A clean area having provision for:
 - Storage of individual respirators in containers or lockers;
 - Storage of clean clothing; and
 - Airflow towards dirty area;
- 048 Spring-loaded doors between the areas should be used to ensure that an airlock is maintained as the person passes through the unit.
- 049 The decontamination unit should be sited immediately adjacent to, or joined to the enclosed asbestos removal area where possible. Where it is not physically possible to locate the decontamination unit adjacent to, and joined to, the removal enclosure transit procedures to minimise asbestos contamination should be implemented, such procedures are outlined in the Health and Safety Executive guidance HSG 247.
- 050 Decontamination procedures should be followed whenever the Staff member leaves the enclosure. While the protocol to be followed will vary with the design of the decontamination unit, it is recommended that:
- The respirator should be worn and operating until the person has removed all contamination from outer garments and equipment;
 - Personnel should not smoke, eat or drink in any part of the decontamination facility;
 - The decontamination unit should be regularly cleaned by persons wearing protective clothing
 - Standard entry and decontamination procedure to be adopted as part of this Specification.
 - The decontamination unit must have a copy of certificate of reoccupation when it arrives at the Property and a 4 stage clearance completed at the end of operations before it leaves the Property which will be completed by the asbestos analyst.

Entry to the Work Enclosure

- 051 Staff shall enter the clean room of the decontamination unit in groups of no more than two. Staff shall remove all street clothing and store it safely in their assigned locker. The Staff member will remove his or her respirator from its protective sealed bag and fit it. Battery packs will be held by hand until the The Staff member has suited up.
- 052 When the Staff member has properly fitted and tested his or her respirator a clean stripping suit will be donned or carried through the shower room into the dirty end of the decontamination unit. At this time with the respirator on, the Staff member will don work clothes and the clean stripping suit. When these items of clothing have been put on, a transit suit shall be put on over all other clothing for transit to the work area. Work clothes that are worn into a contaminated area must be bagged up at the end of each project. Clothing may be laundered utilizing a washing machine equipped with a 5-micron water filter. This washing machine must be a dedicated unit, no other clothing to be laundered in this unit.

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- 053 Transit to the work area shall be by the shortest possible route. Staff will be familiar with the transit route prior to participating in any transit procedure. When the Staff member arrives at the three-stage air lock he/she will enter the clean or exterior chamber and remove the blue transit suit. The Staff member will then pass into the interior or dirty stage of the airlock where boots and gloves will be collected and put on.
- 054 The Staff member is ready to begin tasks that have been assigned to him/her by the site supervisor.
- 055 When the Staff member is ready to leave the work area, the Staff member will adhere to the following.
- .1 Staff will wait inside the work area until permission to exit is given by the site supervisor. When permission to exit is given Staff will inspect each other while still inside the work area. Any visible debris found shall be removed prior to commencing transit procedure. Boots will be thoroughly inspected at this time and washed.
 - .2 When the inside visual examination is complete the first Staff member may enter the dirty end of the three-stage unit to begin transit out. When the Staff member is completely inside the dirty stage he/she must inspect their Personal Protective Equipment ("PPE") and Respiratory Protective Equipment ("RPE") and wipe it down or vacuum where necessary, boots and gloves will be removed and stored safely to one side of the unit. The stripping suit shall then be removed and disposed of in a labelled red asbestos bag provided.
 - .3 When the Staff member has completed these steps he is free to step into the clean end of the three stage and don a transit suit. After transit suit has been donned the Staff member may proceed to the decontamination unit via the transit route.
 - .4 After arriving at the decontamination unit the Staff member will enter the dirty end making sure to close the door behind them. The transit suit shall be removed first followed by any other clothing. RPE must not be removed or stored in the dirty end of the decontamination unit at any time.
 - .5 The Staff member is now ready to enter the shower unit of the decontamination unit. With his or her RPE- respirator still fitted the Staff member shall enter the shower unit. Water shall be turned on and temperature adjusted to a comfortable level. Before the Staff member steps under the water stream the battery pack must be turned off and the filter covered. When these steps have been completed the Staff member may step under the water stream allowing water to soak the head and the exterior of their RPE. The Staff member may then remove the RPE and thoroughly clean it making sure not to get water into the motor or battery connections. When the respirator "RPE" is clean it may be hung on a hook while the Staff member thoroughly showers and cleans his/her body.
 - .6 When the Staff member has finished showering he may then enter the clean room remembering to bring RPE with him. RPE shall be bagged prior to the Staff member drying off and getting dressed back into street clothes.

Equipment

- 056 All tools and electrical equipment, such as H type vacuum cleaners and power tools, should be left in the removal area until the completion of the removal job. When the equipment is removed it should be vacuumed thoroughly and all accessible surfaces wiped over with a damp cloth. When decontamination is not possible, the item should be wrapped in plastic and sealed and only opened in another removal area.
- 057 Any asbestos contained in the H type Vacuum cleaner should be disposed of as asbestos waste.
- 058 The H type Vacuum should be cleaned, tested and calibrated at least every month.

Removal techniques for buildings and structures

- 059 The removal of asbestos-based materials from buildings and other structures should be carried out by methods, which will minimise the release of asbestos fibres into the atmosphere both during and after removal operation. The choice of method is determined by the nature of the asbestos material, the quantity of insulation and its location.

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- 060 Breaking through the finishing compound and cutting the reinforcing wire in the lagging are operations, which can liberate considerable quantities of dust. Care should therefore be taken in the selection of tools and in keeping the insulation wet. Tools should allow cutting of the insulation into small sections while keeping asbestos fibre levels in the removal area to a minimum.
- 061 Power cables, telephone cables and fire alarms may lie beneath asbestos insulation. These cables must be clearly identified prior to the commencement of any cutting as severe damage and/or hazard to the Staff member could result.
- 062 As the techniques used for the removal of sprayed thermal insulation from buildings are not dissimilar from those used for removal from steam pipes and boilers, the following removal methods may equally be adapted to the removal of asbestos from industrial plant and machinery.

Protective clothing and equipment

- 063 Respiratory devices "RPE" and protective clothing "PPE" are required during all abatement activities, adequate rest breaks should be provided for Staff during removal to take into account the physical strain caused by the use of such equipment.
- 064 The degree of respiratory protection required is determined by the nature of the removal job, the type of asbestos and the potential for exposure to asbestos fibres.
- 065 A guide to the selection of appropriate respiratory protection for various operations involving asbestos is presented in paragraph's 99 to 115 inclusive later in this Specification.
- 066 Face masks are to be checked and tested at least every 6 months.

Dismantling of asbestos removal area

- 067 The asbestos removal Work ordered should only be considered to have been completed when the Provider and/or the Asbestos Licensed Contractor has complied fully with the clearance criteria.
- 068 On completion of the asbestos removal job, all tools and equipment not used for cleaning should be removed from the removal area so that efficient vacuuming of the inside of the removal area enclosure can be undertaken. In taking these tools and equipment from the removal area, appropriate decontamination procedures should be observed.
- 069 After clearance has been given, any sealing plastic used should then be dismantled, folded inwards and placed in appropriate disposal bags and sealed. The sealing plastic should not be reused, but must be treated as asbestos waste. Safety barricades and warning signs should not be removed until the complete area has been thoroughly cleaned.

HANDLING OF NON-FRIABLE ASBESTOS -FRIABLE ASBESTOS

- 070 Works of removal and disposal of non-notifiable non licensed, and notifiable non licensed materials in accordance with this Specification are deemed to be included in the rates in the Schedule of Rates and in the Provider's Tendered Rates and as defined in the NHF Schedule of Rates Measurement Preambles – Generally as stated below;
- .3 The removal of all non-licensable asbestos containing materials such as but not limited to artex, vinyl floor tiling, disposal off site of all non-licensable asbestos containing material is to undertaken by a licensed asbestos waste carrier.
- .4 Working in conjunction with all non-licensable asbestos containing materials such as but not limited to artex, vinyl floor tiling.

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General

- 071 Non-friable asbestos products have been compounded from asbestos mixed with cement or other hard bonding materials “asbestos is firmly bound in the matrix of the material”. This section recommends precautions to be observed when working with non-friable asbestos products.
- 072 These products include, but are not limited to:
- Flat or corrugated, compressed asbestos-cement sheeting;
 - Asbestos-cement pipes for water, drainage and flue gases;
 - Roofing slates;
 - Floor or wall coverings;
 - Asbestos gaskets;
 - Pump and valve packings;
 - Asbestos bonded into bituminous products;
 - Reinforced plastic products;
 - Thermoplastic products and backings;
 - PVC floor tiles and backings;
 - Asbestos-cement ducts and the like; and
 - Asbestos-cement drip trays and tank covers.
- 073 So long as these products are maintained in good order and are not worked on with abrasive cutting or grinding tools they are not likely to present a health risk.
- 074 New building materials incorporated since 1999 should not contain asbestos.
- 075 The Provider shall ensure that precautions are observed during structural alteration or demolition involving asbestos-cement materials and removal of floor and wall coverings containing asbestos.

General precautions to be observed for non-friable asbestos products can be found in the Health and Safety Executive guidance “Asbestos Essentials Task Manual”

- 076 Work procedures must be designed to minimise the generation of dust. Action should be taken to avoid the spread of asbestos fibres. In particular, the following principles should be adopted:
- Abrasive cutting or sanding power tools should not be used on asbestos-containing products. These may generate large amounts of dust containing asbestos;
 - Non-powered hand tools such as handsaws should be used;
 - Wetting down the material further reduces the release of asbestos fibres when cutting;
 - High pressure water jets/guns shall not be used because of the potential to spread asbestos waste over the surrounding environment;
 - Work with asbestos-containing products in well ventilated areas and, where possible, in the open air;
 - Good work hygiene principles shall be observed. This may entail the use of plastic drop sheets to collect off-cuts and coarse dust or the use of appropriate vacuum cleaning equipment when necessary;
 - Suitable respiratory protection should be used when airborne asbestos fibres is likely to be present; and
 - All off-cuts and collected dust should be disposed of as asbestos waste. (See section 116-126 of this Specification.)

Removal and disposal of asbestos cement sheeting (Hazardous Waste Regulations)

- 077 The Provider should ensure that the following precautions are observed when removing asbestos-cement roofing, wall sheeting or other asbestos cement products from buildings or other structures:
- The asbestos-cement sheets should be sprayed with a sealing solution or wetted with water, but not with high-pressure water jets. Roofing sheets should not be wetted during freezing weather if it is anticipated that this could create a risk of slipping or falling from the roof;
 - Power tools should not be used during removal with the exception of a low RPM drill to remove roofing screws; this method should be used in conjunction with shadow vacuum techniques. Fixings may vary from job to job but in most cases a modified bolt cutter can be used to detach roofing material from substrates. Concrete saws including all electrical grinding equipment must not be used to detach asbestos cement products from substrates;

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- Damaged asbestos-cement should be kept wet to reduce levels of dust;
- Asbestos-cement sheets should be removed whole where possible and should be lowered to the ground, not dropped;
- The removed sheets should be stacked on a plastic sheet and not allowed to lie about the site where they may be further broken or crushed by machinery or site traffic;
- All asbestos-containing waste should be wrapped in plastic or otherwise sealed and removed from the site as soon as possible, using covered skips or on a covered lorry;
- The asbestos-containing waste should be disposed of in a manner, and at a site licensed for the storage, labelling and disposal of asbestos waste;
- Asbestos-cement sheets must not be reused or offered for sale;
- Any asbestos-cement residues remaining in the roof space or around the removal area should be cleaned up, using a "H" type vacuum cleaner or suitable wipes if necessary;
- Customers should be decanted or relocated (where appropriate);
- As far as practicable there should be no spread of contamination beyond the work area;
- All windows and doors in the building should be closed or in buildings where there is no ceiling the area below or adjacent to the work should be barriered off; and
- Staff should wear disposable overalls and either a disposable suitable RPE respirator or half-face mask fitted with appropriate dust filters.

Working on brittle roofs

- 078 Asbestos-cement sheeting is liable to shatter without warning under a person's weight and for this reason roofs that are sheathed in asbestos cement sheeting are included in those roofs known as "brittle roofs".
- 079 Persons who have the knowledge, experience and resources necessary to allow them to work at heights safely should only undertake the removal of asbestos-cement sheeting from a roof.
- 080 The Provider should consider what hazards are involved and how they can be overcome. In the planning and execution of the Work, a system of Work should be established, taking into consideration the Work to be done, relevant statutory requirements, the type of equipment necessary, the training and experience of the Staff involved, and the instruction and supervision required. The system of Work should allow for not only those directly involved in the Work, but also other persons who could be affected.

Removal of vinyl floor and wall coverings containing asbestos

NOTE: Dry sanding of vinyl asbestos floor coverings is **prohibited**.

- 081 Vinyl-asbestos coverings (usually asbestos-backed floor coverings) may still be encountered. They do not usually present a risk on site but breaking up to prepare the surface for replacement, or removal operations, may create a hazard.
- 082 The Provider in working with products that may contain asbestos should ensure that all practicable steps are taken to confirm whether or not asbestos is present. If there is any doubt about the product being asbestos free after the Provider has completed a risk assessment he should inform the Client requesting an Order for the asbestos analyst to have samples taken and laboratory tested to ISO/ICE 17025 undertaken. The product is more likely to contain asbestos if it was installed between 1960 and 1999.
- 083 Where the vinyl-asbestos coverings are found (or assumed) to contain asbestos the provisions set out in 059 to 062 above should be followed.
- 084 Significant release of asbestos fibres can result when vinyl-asbestos products are abraded by sanding. The work methods and control procedures used when working with vinyl-asbestos products must be designed to limit Staff' exposure to asbestos and the spread of asbestos into the surrounding environment.
- 085 In deciding the approach that is to be taken in replacing asbestos-backed vinyl products, the following option may be considered:
- Removing the product with a spade or other flat instrument in accordance with the Health and Safety Executive guidance.

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MONITORING ASBESTOS IN AIR LEVELS AND CLEARANCE PROCEDURES

General

- 086 The analytical service in monitoring asbestos in air levels and clearance procedures will be undertaken by Asbestos Consultants and Analysts (Specialist Subcontractors) appointed directly by the Provider whose fees and expenses are deemed to be included in the rates in the Schedule of Rates and in the Provider's Tendered Rates.
- 087 The measurement of airborne asbestos fibre levels may be required to verify that asbestos exposure standards have not been exceeded and to check that practices set out in the Health and Safety Executive guidance and these guidelines have been met. The main objective of sampling should be to ensure that the potential for personal exposure has been minimised. Air sampling should always be undertaken by competent laboratory as set out in second edition of the Health and Safety Executive guidance HSG 248 (May 2021).
- 088 The type of monitoring that is applicable will depend on the exposure circumstances and removal methods employed. Advice should always be sought from a competent laboratory that conforms with HSG 248.
- 089 The determination of airborne asbestos fibre concentrations in air must be carried out in accordance with HSG 248.

Selection of laboratories

- 090 As set out in the Health and Safety Executive guidance all involved in asbestos must be competent and the Client's Representative must satisfy himself that those employed in asbestos management or removal are competent to standards laid down in CAR Regulations. To demonstrate such competence the laboratory should demonstrate the meet requirements of International Standards Organisation "ISO/ICE 17025" that covers the whole organization in terms of quality systems, control of records, training, test calibration methods etc.

Air sampling

- 091 The Provider will be issued with an Order to appoint a Health and Safety Executive approved analyst to witness and sign off all test and clearance operations and issue of certificate of reoccupation.
- 092 Air sampling forming part of the overall asbestos management will include some/all of the following:
- Background sampling to establish the conditions that exist before work is commenced;
 - Leak testing to check the integrity of the enclosure deployed in removal or encapsulation activities;
 - Personal monitoring to verify that action level predictions are accurate and to facilitate internal risk assessments and control;
 - Clearance air monitoring to verify that the area is safe for normal occupation following the removal of asbestos materials;
 - Reassurance sampling — sampling after the working enclosure has been removed or other works in the vicinity of asbestos have been completed;

Visual inspections

- 093 The appointed analyst will examine the Provider's appointed Asbestos Licensed Contractor's plan of work (method statements) to familiarise themselves with the scope of Works. The first stage in the 4-stage clearance process is for the asbestos analyst to ensure the Works ordered have been completed, what was removed; is there any asbestos remaining in the Work area and the actual asbestos materials that were removed.

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- 094 The visual inspection second stage of 4 stage clearance is conducted after the removal area has been meticulously cleaned and prior to clearance air monitoring. Inspections, prior to clearance monitoring, will be the responsibility of the Provider, but the asbestos analyst must duplicate this function. The asbestos analyst may request that the Asbestos Licensed Contractor's supervisor accompany him during this exercise. Any asbestos remaining (i.e. that not visible to the naked eye) will be removed rapidly in the normal cleaning process. In some circumstances sealant may be applied to work surfaces and plastic sheeting after the visual inspection and initial monitoring (see Guideline for the Removal of Enclosure Area Sheeting). Any dust present in the removal area must be treated as if it contains asbestos. If asbestos is not completely stripped from an area because of access difficulties, then it should be sealed, and the location noted.

Clearance indicator air sampling Stage three of 4 stage clearance

- 095 Following a satisfactory visual inspection, clearance monitoring will be required. The area must be dry, and the negative air switched off and the inlet capped before sampling is started. As far as is practicable the decontamination unit must be isolated from the area being cleared. Clearance air monitoring should be carried out to HSG 248 and a written report issued by the laboratory.
- 096 Guideline for the removal of enclosure area sheeting
- Clean all internal surfaces including plant cover. Run exhaust air fan to clear area. Switch off fan and cap exit;
 - Visual inspection. Carry out clearance monitoring. Is result 0.01 fibres/ml or below? Strike tenting. Dispose of waste;
 - Reoccupation is this the first clean? Seal all inner surfaces with spray on sealant. Carry out clearance monitoring;
 - Is result 0.01 fibres/ml or below? Assess where fibre contamination is coming from and take appropriate action; and
 - Before tenting is struck, a result below 0.01 fibres/ml is required or confirmation that fibre contamination has not come from the asbestos removal job.

Final Assessment post enclosure/ work area dismantling stage four of 4 stage clearance

- 097 On satisfactory completion of all previous stages the final stage of the clearance process can commence, the analyst can be present during this process and all PPE, RPE should be worn. All polythene sheeting used in enclosure is disposed of as asbestos waste. In some situations, the asbestos analyst may take a further air test as an additional safety precaution or reassurance air test" after work area is fully cleared.
- 098 When all stages are completed satisfactorily the certificate of reoccupation is issued for the Work area and before removal from site at the end of the project but after use the decontamination unit is tested and certificate of reoccupation is issued. On completion of removals the Provider shall upload all details of removals on the Client's electronic asbestos register on a Property by Property; room by room basis including inventory of customer's items, waste documentation and copy of certificate of reoccupation and waste notices.

RESPIRATORY AND PERSONAL PROTECTION FOR ASBESTOS WORK

General

- 099 Providers and others involved in work involving asbestos or abatement procedures must be fully conversant with the appropriate control measures necessary to protect against exposure to asbestos fibres. There is a legal requirement placed on Providers to ensure that their Staff and others in the vicinity are adequately protected from the effects of asbestos.
- 100 Good occupational hygiene practice requires that all practicable efforts be made to prevent asbestos fibres from entering the air of the workplace. In circumstances where it is impracticable to prevent asbestos from entering the atmosphere, suitable respiratory protective equipment should be worn.
- 101 An information sheet on approved types of respiratory protection devices is available from the local office of the Health and Safety Executive.

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Standard respirator programme

- 102 It is essential for all contractors required to use respirators in their work to develop and run a comprehensive respiratory protection programme. There are seven elements to a successful programme, which include:
- The administrative system;
 - Knowledge and assessment of the risks involved;
 - Control processes;
 - Correct selection of respiratory protection Equipment (RPEs);
 - Staff training and supervision
 - Medical assessment in compliance with CAR Regulations; and
 - Inspection, fit tests and maintenance and storage of RPEs.

Administrative system

- 103 Written standard operating instructions must be available. These should provide information on the Provider's policy in respect of the issue and use of RPEs. One person should be responsible for the coordination and direction of this policy. Each RPE programme will vary according to the peculiarities of the work being carried out.

Knowledge and assessment of risks involved.

- 104 The degree of respiratory protection required for asbestos work is determined by:
- The nature of the work;
 - The type of asbestos;
 - The work methods; and
 - Potential for exposure to asbestos.
- 105 It is essential that a full appraisal of the Work using the above criteria be carried out to assess the likely risk factors and to identify the appropriate safety measures. It may be necessary to undertake environmental background or personnel monitoring to assist with the assessment and this is a responsibility of the provider and the Asbestos Licensed Contractor (removal contractor).
- 106 Air contaminated with asbestos fibres will be the major hazard to Staff and the most appropriate control methods will need to be considered in the assessment process. Because the greatest risk is from the inhalation of asbestos fibres, stringent protection measures must be used. Therefore, all Staff likely to be exposed to asbestos must wear approved RPEs for the whole period exposed.

Correct selection of respiratory protection Equipment (RPEs)

- 107 To determine the correct selection of the most appropriate RPE for asbestos work, the following issues must be addressed:
- Fit to the wearer: If a proper fit cannot be achieved with one type, model or size of respirator, another, which does fit, must be provided;
 - Face seal: The presence of facial hair (beard, stubble growth, or sideburns), wearing of spectacles, or facial characteristics may affect the face seal adversely. Positive pressure powered equipment with full-face piece copes better with these problems than non-powered devices;
 - Freedom of movement: The need for a Staff member to move freely about a job will influence the type of RPE. While airline respirators offer higher protection the restrictions imposed by the airline may be prohibitive;
 - Physical and thermal stress: The wearing of RPE can cause severe problems during asbestos removal because of the physical activity required. In addition, this type of work is often carried out in hot environments. The cooling effect of air-supplied respirators will make them more acceptable and condensation on the visor will not be a problem; and
 - Other factors: These could include:
 - The need to communicate;
 - Ease of cleaning; and
 - Availability of replacement parts.

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Staff training

- 108 The correct and proper use of RPE must be taught to all users. No person should be required to use respirators without first being given training in correct use, operation, care and maintenance, emergency procedures, cleaning and storage requirements.

Medical assessment

- 109 Any type of respirator may impose undue stress on some users. Persons required to routinely wear respirators should be given the opportunity of a medical assessment to determine if they are able to safely wear them.

Inspection, maintenance and storage of RPE

- 110 Proper inspection, maintenance and repair of RPDs are an essential part of the respirator protection programme. Face-pieces should be cleaned, dried and stored properly after each use. Regular checks of the diaphragms, valves and face-piece parts will reveal any defect, which should be repaired. The batteries for powered air RPE will require recharging.

Protective clothing - General

- 111 Appropriate protective clothing will afford protection to asbestos Staff and prevent spreading contamination or health risk to others. All protective clothing used to carry out restricted work must be disposed of as asbestos waste. During other work involving asbestos protective clothing may be reused but appropriate measures must be taken to ensure cleanliness (see section on laundering).

Types of protective clothing

- 112 Persons involved in working with asbestos should always wear protective clothing which:
- Is made of material that resists penetration by asbestos fibres, such as nylon or treated synthetic material;
 - Covers the body and fits snugly at the neck, wrists and ankles. It should also cover the head by having an attached hood; and
 - Is maintained in good condition and if torn or damaged, immediately repaired or replaced.
- NOTE: Because of the impervious nature of this type of clothing the wearer may become affected by heat stress. The Provider should ensure that Staff are knowledgeable on the signs and symptoms of heat disorders and the means to prevent illness caused by heat. There are three types of overalls in general use for asbestos work. Each type of overall has its advantages and disadvantages. The use of disposable or single-use overalls for all asbestos work is advisable because laundering is not required. Where the use of alternative types is necessary the full implications of how they will be cleaned or laundered need to be considered.
- Disposable or single-use protective clothing which is generally used for one job and discarded as asbestos waste. These are particularly suitable for all types of asbestos work;
 - Overalls made from lightweight synthetic material such as nylon, which is also waterproof, or PVC waterproof clothing should be chosen as an option for the removal of non-friable materials only. The light nylon overall is particularly suitable for large ongoing jobs because they can be washed under a shower when leaving the contaminated area. Laundering is necessary primarily for hygiene. The PVC type overalls can be used in a similar way; however, they are heavy, cumbersome and too hot for longer jobs;

Laundering of asbestos-contaminated clothing

- 113 The laundering of contaminated overalls presents some difficulties to comply with CAR Regulations Regulation 14
- The transfer and handling of contaminated overalls may put other people at risk from asbestos. For this reason contaminated overalls should never be washed in a home laundry and Staff in a laundry handling asbestos-contaminated clothing must take special precautions;

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- While the washing process removes asbestos fibres, the spin-drying cycle deposits the fibres on to the garment again; and
- During the mechanical drying process asbestos fibres are released into the air. International standards require that clothing which has been used in asbestos work be "... laundered in accordance with the following requirements;
 - The clothing is, wherever practicable, laundered at the place at which the work involving asbestos has been carried out; and
 - If it is not practicable to launder the clothing at that place, the clothing is, before being taken to the place where it is to be laundered, damped and placed in a closed container impermeable to asbestos dust and conspicuously marked with the words "ASBESTOS CONTAMINATED CLOTHING"; and
 - Wherever the clothing is laundered, it is laundered in such a manner as to clean the clothing and to suppress the release of asbestos dust into the air; and
 - Every employee to whom the clothing is given for laundering receives, before being given the clothing, instructions on the precautions to be taken to ensure that the clothing is laundered and handled in such a manner as to protect the safety of every employee coming into contact with it during the laundering process; and
 - The clothing is not laundered by an employee at an employee's home."

Footwear

- 114 Footwear should be adequate for the type of work being undertaken and where possible have no laces.

Gloves

- 115 If gloves are provided they should be made of impervious material for ease of cleaning. To assist with manual dexterity disposable type gloves may be more acceptable. On health grounds, there are few reasons to require people handling asbestos casually to wear gloves, however, extended contact with asbestos can lead to asbestos corns or "warts".

STORAGE, LABELLING AND DISPOSAL OF ASBESTOS

General

- 116 This section outlines the steps necessary for the Provider to ensure, as far as is practicable, the prevention of contamination by asbestos from any workplace or property; to ensure that asbestos-containing materials are stored, labelled where agreed with the Client's Representative and disposed of correctly.

Storage and disposal of asbestos

- 117 The Provider should take all practicable steps to ensure that asbestos waste products are not received into, stored, distributed or dispatched from any place of work unless in suitably sealed and labelled receptacles. The receptacles should be designed, constructed, maintained and closed so as to prevent any of the contents escaping when subjected to the stresses and strains of normal handling.
- 118 It is the Provider's duty to ensure all dangerous substances are properly packaged and labelled and all asbestos waste shall be sealed in plastic bags (500 gauge thick) and labelled "Asbestos hazard — Wear respirator and protective clothing while handling contents".

In addition bags shall be transported for disposal in UN approved and labelled double layered (red bag on inside clear bag) and have a specified means of closure (PVC tape and swan neck and tape) and are to be placed in a sealed skip when on site and subsequently disposed of in accordance with Hazardous Waste Regulations.

- 119 Sealed Asbestos skips are only to remain on site for the duration of the Works, and once the Works are complete and 4 stage clearance achieved are to be immediately removed. Sealed Asbestos skips remaining more than 24 hours after achievement of 4 stage clearance will be removed by a Client Party and all costs incurred by the Client will be set-off against the valuation of the Asbestos Works including an administrative fee of 100% of the cost of the skip removal.

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- 120 The Provider shall update the Client's electronic asbestos register system after removal of asbestos, putting information against specific locations where asbestos has been removed in each room in each specific property, including uploading details of any pertinent certificates and waste documentation within 10 days of completion of the Order.

Handling

- 121 The Provider should ensure that asbestos waste received into or dispatched from any workplace is packed in sealed plastic bags and FIBC's, the following practices applied:
- Pallet loads should be securely fastened by banding (in order to not cut the bags) and covered;
 - Pallet loads should be securely mounted on suitable pallets, which can be moved by hoist, forklift truck or other mechanical handling means without damage. Hooks or other sharp equipment should not be used for handling the bags; and
 - A supply of suitable adhesive tape should be made available by the Provider to repair any damaged bags. Where the damage cannot be repaired to prevent the release of asbestos during handling, the damaged bag should be placed inside another receptacle, which can be effectively sealed;
- 122 Asbestos cement sheets and pipes or insulating board should not be broken or cut for disposal in plastic bags. The Provider should ensure that these materials are suitably sealed in plastic and transferred to a labelled truck or skip for safe storage prior to being transported to an approved disposal site. The vehicle transporting the waste should be appropriately identified in accordance with the Regulations.
- 123 The skip or other container should be cleaned thoroughly after use.
- 124 Manufactured goods containing asbestos, such as boilers, should be sealed or suitably packaged (e.g. by shrink wrapping) to prevent asbestos fibres arising from abrasion during transport.

Disposal at designated landfill of transfer station

- 125 Asbestos waste may only be deposited at a suitably licensed landfill facility or received by a suitably licensed transfer station prior to onward shipment to a licensed landfill. 3 days' notice must be given to the Environment agency before moving waste and consignment note process as defined in Hazardous Waste Regulations must be followed. Producers /Licensed Waste carriers of asbestos waste should ensure they receive written confirmation of a facilities status to accept such material to ensure compliance with their responsibilities under the Hazardous Waste Regulations.

Reuse of abated asbestos containing products

- 126 The reuse of abated asbestos containing products, such as corrugated roofing and slates is not permitted.

INSTRUCTION AND TRAINING

General

- 127 This section applies to all Staff who are exposed to and required to work with asbestos including supervisory and maintenance personnel.

Type and scope of instruction and training required

- 128 The Provider must provide instruction and training to all such Staff (including those with supervisory functions) on the hazards, risks and controls as assessed for their particular work, and satisfy himself that any Asbestos Licensed Contractor appointed by the Provider meets the requirements of Regulation 10 CAR Regulations in terms of competence. the Health and Safety Executive guidance L143 and HSG 247 provides a list of requirements for persons who work with asbestos.

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- 129 The Provider must as a minimum provide all such Staff, including such temporary Staff with:
- Training and assessment in line with the CAR ACOP L143 AND HSG 247 for the Training of Asbestos Removal Operatives.
 - Safe Pass Training: Where Staff or supervisors are required to operate plant or equipment covered by specific training requirements of Regulations, ACOPS or guidelines then such training should also be provided. The Provider must maintain, on site, proof that training has been provided in accordance with the above.

Training in maintenance of control equipment

- 130 The Provider must ensure that any person carrying out any maintenance or servicing of exhaust ventilation equipment or other control equipment is competent to carry out the task.

Training in the use of respiratory protective equipment

- 131 All employees shall be provided with training on the correct use and maintenance of respiratory protective equipment.

MEDICAL MONITORING

General

- 132 Health and Safety Executive regulations require among other things that Providers monitor the health of their employees in relation to significant hazards and it requires medical examination of employees exposed to significant hazards. The Provider shall assure themselves that their Staff have where applicable had medical examinations in compliance with CAR Regulations (every 3 years for>NNLW) and (every 2 years for licensed asbestos removal workers).

Initial medical CAR Regulations (Regulation 22)

- 133 Any Staff directing employees to undertake Asbestos Works must ensure that the employee has:
- A full work history;
 - A medical examination, relevant to persons who work with asbestos including specific examination of the chest and other tests that may be appropriate prior to starting employment in restricted work;
 - The Provider should ensure that the employee has this asbestos medical thereafter bi annually; and
 - The cost of the medical examinations shall be the responsibility of the Provider.
- 134 Notwithstanding the above provision, the Health and Safety Executive may direct any person undertaking work involving asbestos to have a medical examination.
- 135 While the employee remains in the employment of the Provider:
- The Provider shall ensure that the employee has a medical examination in accordance with the Regulations.
 - The cost of the medical examination shall be met by the Provider.

Personal medical information

- 136 The personal medical information, of the employee remains the property of that employee. The Provider will receive certification from the medical practitioner stating whether the employee is fit or otherwise for the restricted asbestos work. The employee should be encouraged to share their medical information, where appropriate, with the Provider.
- 137 Where an employee leaves the company, the Provider should ensure that the employee is aware of the need to continue with bi annual medical examinations.
- 138 The Provider should retain all medical records relating to asbestos for a period of 40 years.

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Medical examinations

- 139 The asbestos medical examinations shall be performed by qualified medical practitioners with specialist qualifications in occupational or respiratory medicine it is essential that all practitioners have experience in asbestos-related diseases and conditions.

Asbestos Exposure Register

- 140 Staff who may have been exposed to asbestos should ensure that their names and appropriate details are entered in the Asbestos Exposure Register administered by the Health and Safety Executive.

SPECIALIST EQUIPMENT

Controlled Wetting Equipment

- 141 Equipment for the controlled wetting of asbestos containing materials is to be in accordance with British Standard, it should effectively wet asbestos –containing materials and suppress asbestos fibres both during and after the asbestos removal process, by multi-point injection of sprayed coatings, insulating board, thermal insulation and coatings on pipes, tanks and vessels, or spraying with low-pressure spray heads of liquid on to insulating boards and other material less than 10mm thick to suppress the release of airborne asbestos.

Negative Pressure Units (“NPU”)

- 142 Portable and/or transportable negative pressure units are to be in accordance with British Standard, they are to incorporate HEPA filters to British Standard for use in the controlled removal of asbestos containing materials. This requirement also applies to negative pressure units designed to create negative pressure within a portable contamination unit facility or working enclosure and two part negative pressure units.

Class H Vacuum Cleaners

- 143 The operation, cleaning and maintenance of Class H (high hazard) vacuum cleaners is to be in accordance with British Standard, they are to incorporate a filter conforming to British Standard in the controlled removal of asbestos containing materials.

Guarantees, Warranties etc.,

- 144 The Provider is required to supply to the Client’s Representative a copy of all relevant guarantees, warranties, service and maintenance manuals applicable to the products installed when requested by the Client or the Client’s Representative, the cost of the provision of such guarantees, warranties etc is deemed to be included in the rates within the Schedule of Rates, other Tendered rates, and the Provider’s tendered percentage adjustments.

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Client's current manufacturers/suppliers/products

- 145 Ensure all Materials are compatible with and standardised to the Client's current products specified in the table below (listed by manufacturers, suppliers and/or brand names).

Product	Brand name	Manufacturer's details

[complete table as appropriate]