



ROTORUA MUSEUM
Te Whare Taonga o Te Arawa

ASBESTOS MANAGEMENT PLAN

Attention: Stewart Brown
Rotorua Lakes Council

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Asbestos Management Plan

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1.1 Document / Version Control

1.2 Authorisation

Rotorua Museum Workplace/s In Scope	
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Asbestos Management Plan Issued Date	12 June 2020
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Next review due (unless triggered earlier)	12 June 2025

1.3 Introduction

Rotorua Museum has a legal obligation and responsibility to protect the health and safety of its staff, contractors, and visitors from possible exposure to respirable asbestos fibres, as exposure to respirable asbestos fibres has been linked with multiple illnesses, including varying respiratory diseases.

Asbestos was widely used as a construction and insulation material in New Zealand buildings until the late 1980s when bans on its manufacture were put in place. However, the stockpiles of already manufactured asbestos-containing materials continued to be used until these materials ran out. This occurred in the late 1990s. As such asbestos-containing materials were used up until this point in the construction of New Zealand buildings.

The identification of the risks posed by asbestos-containing materials presumed present in Rotorua Museum's workplace, and the strategies to control these risks are outlined in this Asbestos

Management Plan. It identifies the objectives, scope, management, practices and procedures required to ensure that the legal obligations are carried out effectively.

This document also serves to address the statutory obligations in managing asbestos, to provide a single point of reference for all asbestos related issues pertaining to the workplace of the Rotorua Museum, located at Oruawhata Drive, Government Gardens, Rotorua, New Zealand.

Further, this document provides staff, contractors, and visitors to the address/es above with an outline of responsibilities and management procedures for appropriately dealing with asbestos products and materials.

This Asbestos Management Plan and its associated plans, instructions, registers, forms, and procedures are designed to integrate and operate under the overarching health and safety management system utilised by Rotorua Museum.

Management of asbestos in Rotorua Museum is structured around 4 main levels:

1. Asbestos Management Plan: Provides the high-level commitment and functions required to manage asbestos by providing directions for sites to follow and utilise for managing asbestos containing materials in-situ
2. Asbestos Register: Provides site specific data regarding location, condition, risk-levels and recommended controls of any in-situ asbestos-containing materials.
3. Procedures: relate to the processes required for working on or near asbestos/asbestos-containing material
4. Forms: provide a process to gather evidence or information regarding the management of asbestos/asbestos-containing material at workplaces of Rotorua Museum.

The high-level asbestos management process is below:

1. Identify asbestos or ACMs present at the workplace
2. Assess risks from asbestos or ACMs present, and identify ways to control these risks
3. Develop an asbestos management plan
4. Processes for accidents, incidents, or emergencies
5. Review asbestos management plan's effectiveness

A glossary containing asbestos specific terminology and abbreviations used is located in Appendix A

2.0 Scope

This Asbestos Management Plan is to be applied to all relevant Rotorua Museum owned facilities and leased premises, where the lease deems Rotorua Museum to be responsible for compliance with the Approved Code of Practice: Management and Removal of Asbestos (Nov 2016, amended Dec 2016).

Whilst it is known that most buildings built post-2000 are unlikely to contain asbestos, the ban on the import or export of asbestos containing materials was not absolute until 01 October 2016. The regulations prohibited the recycling or reuse of asbestos containing materials on 04 April 2016. As such, it is possible that asbestos may be present in buildings that were constructed after 2000, depending on where the building materials came from.

Rotorua Museum will undertake asbestos surveys (using competent persons) of all facilities to determine the presence of asbestos-containing materials (ACM) as maintenance, or refurbishment is completed on these areas, or any further building work completed, and will be provided with site-specific asbestos registers for the sites surveyed before the work commences.

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These registers are kept electronically on the Rotorua Museum network by Susan Skellern, Rotorua Museum, Exhibition Lead, Rotorua Lakes Council, and contains information about all identified structures that have been noted to contain asbestos in situ.

This document identifies and defines how Rotorua Museum will manage the asbestos containing material present at the various sites, and the management systems in place to eliminate or minimise the potential risks from asbestos in these workplaces. It is specifically designed to effectively manage and minimise any asbestos – related health risks to personnel working on or visiting Rotorua Museum owned/leased sites, as well as any other person who may be affected as a result of work undertaken by Rotorua Museum on these sites.

This is a working document which addresses the legal obligation of Rotorua Museum under the Health and Safety at Work Act 2015 and subsequent regulations (such as the Health and Safety at Work (Asbestos) Regulations 2016), as they relate specifically to the presence of asbestos or asbestos containing material on Rotorua Museum's owned or leased properties.

Furthermore, this Asbestos Management Plan meets the requirements of regulation 13 of the Health and Safety at Work (Asbestos) Regulations 2016 in that the scope of the document includes:

1. The identification of asbestos or ACM present in the building (as found in the overarching register in appendix G and the site-specific registers provided to Rotorua Museum under the responsibility of Susan Skellern, Rotorua Museum, Exhibition Lead, Rotorua Lakes Council
2. Decisions, and reasons for the decisions, about the management of the risk arising from asbestos at the workplace (as found in section 5)
3. Procedures for detailing incidents or emergencies involving asbestos or ACM at the workplace (as found in section 10)
4. Information and training that has been and will be provided to the workers if these workers will carry out work involving asbestos (as seen in the training section 11)
5. Roles and responsibilities of the workers if completing asbestos related work (as seen in section 7)
6. Health monitoring requirements of the workers completing asbestos related work, and details of when this has been taken and will be retaken. (refer to section 8)

2.1 Plan Review

This Asbestos Management Plan will be reviewed based on statutory requirements, or when either new information needs to be included or existing information needs to be modified.

Statutory requirements are stipulated in regulation 14 of the Health and Safety at Work (Asbestos) Regulations 2016, which state that the Asbestos Management Plan must be reviewed if:

1. There is a review of a control measure
2. Asbestos is removed from, or disturbed, sealed, or enclosed at, the workplace
3. The plan is no longer adequate for managing the risk arising from asbestos or ACM at the workplace
4. A representative for workers at the workplace requests a review because they reasonably believe that:
 - a. One of the aspects in 1 – 3 may affect the health and safety of a member of the workgroup represented by the representative in a certain circumstance, and
 - b. The Rotorua Museum have not adequately reviewed the Asbestos Management Plan in response to the circumstance concerning the representative.
5. 5 years have passed since the plan was last reviewed.

The review of the asbestos management plan needs to critically assess all asbestos management processes and safe work methods, including their effectiveness in:

1. Preventing exposure to airborne asbestos fibres;
2. Controlling of maintenance workers and contractors;
3. Highlighting the need for action to maintain or remove ACM;
4. Raising awareness and the provision of training among all workers;
5. Maintaining the accuracy of the asbestos database and associated registers.

Changes to this asbestos management plan can only be made by a qualified asbestos assessor or other such competent person with approval by Rotorua Lakes Council and in consultation with the Health and Safety Committee or Representation of Rotorua Lakes Council. These changes are to be done in accordance with all consultative or document control requirements in place at Rotorua Museum.

3.0 Responsibilities

Rotorua Museum has an overall responsibility to:

- Develop and implement, and maintain, an asbestos management plan
- Assess all premises owned¹ or leased by Rotorua Museum for the potential presence of asbestos-containing materials².
- Develop and maintain a register of the identified or suspected ACM, including details on its location, accessibility, condition, risk assessments, and control measures.
- Assess the condition of the ACM that are identified and the associated risks.
- Develop measures to remove or manage the ACM to minimise the risks and prevent exposure to respirable asbestos fibres.
- Ensure the control measures are implemented and are maintained for the duration that the ACM is in situ.

3.1 Owner / Council

The Director/s or Person/s with overall responsibility of the Rotorua Museum (such as the Council) have the particular responsibilities to:

- Ensure that the Rotorua Museum complies with this Asbestos Management plan, and any legislative requirements relating to ACM.
- Review a summary of any asbestos survey results and any asbestos related incidents annually
- Ensure sufficient resources are allocated to allow management to successfully implement and manage compliance with legislation relating to ACM
- Ensure senior management instigates and implements systems that allow for the asbestos management plan to be implemented, monitored, maintained, and updated.

3.2 Rotorua Museum Senior Management

The Senior Management team of Rotorua Museum have the particular responsibilities to:

- Assist in ensuring that the Rotorua Museum complies with the Asbestos Management Plan and any legislative requirements relating to ACM
- Ensure the Asbestos Management Plan requirements are implemented within the appropriate property management/facilities department/s internally

¹ Before any building work, maintenance or refurbishment works are done on the building

² Also referred to as 'ACM' when used in construction

- Ensure the appropriate departments maintain the site-specific asbestos register/s

3.3 WSP New Zealand – Project Management (WSP)

The representatives of WSP have the responsibility for:

- Maintaining this Asbestos Management Plan, and informing Hawkins Construction and Rotorua Lakes Council/ Rotorua Museum Senior Management as to changes when they occur.
- Ensure that the Asbestos Registers are maintained for all known sites where ACM has been identified, and the information is kept up to date.
- Ensure site-specific Asbestos Registers can be obtained for all facilities when required.
- Ensure this Asbestos Management Plan is available to all personnel, including contractors, and undertake reviews of the Asbestos Management Plan as required
- Audit relevant sites for the management of asbestos and the adequacy of the control measures in the asbestos management plan
- Report to executive/senior management any survey results and any asbestos-related incidents annually.
- Facilitate for competent persons³ to conduct regular⁴ surveys of ACM locations to report on the condition of ACM and update the register accordingly

3.4 Hawkins Construction

Hawkins Construction has the responsibility to work jointly with all other parties:

- Ensuring that the site-specific Asbestos Registers are documented and maintained at each site, and updated with new information as conditions on the site change
- Ensuring risk assessments are conducted when working around/in areas containing ACM
- Ensuring that all requires notices and labels are in place for ACM identified on the site as per the site-specific Asbestos Register
- Ensuring that all personnel (including contractors, suppliers, visitors and members of the public) are reasonably informed and/or made aware of ACM at specific sites that they may come into contact with.
- Ensuring all personnel who work on or near ACM's have been trained on the relevant asbestos procedures.⁵
- Implement the controls identified from the surveys
- Implement and maintain appropriate controls for the removal or control of exposure to respirable asbestos fibres.
- Notify the Health and Safety Representative of any asbestos-related incidents, and anyone potentially exposed to asbestos fibres from these incidents.

3.5 Workers

Workers have the responsibility to:

- Comply with the requirements of this asbestos management plan
- Follow Safe Work Method Statements (SWMS) and procedural requirements, and wear the identified PPE/RPE when working with ACM, or as directed.

³ A minimum qualification of IP402 with 6 months training under a more experienced asbestos surveyor, as per the recommendations of the Good Practice Guide for Conducting an Asbestos Survey.

⁴ It is recommended that these are at least biennial, but annual is preferred.

⁵ For those workers who are required to work on the ACM material carrying out asbestos related work, the training given is required to meet the requirements of Regulation 17 of the Health and Safety at Work (Asbestos) Regulations 2016. Asbestos Awareness Training normally meets this requirement.

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- Not put themselves or any other person at risk of harm to their health and safety by the use of inappropriate behaviour or work practices.
- Notify the Health and Safety Representative and direct Manager of any incidents associated with ACM that may expose persons to the risk of exposure to respirable asbestos fibres.
- Notify their direct Manager of any damage noted to ACM
- Notify direct Manager and/or project management personnel of any suspected ACM materials that are found during the course of any work that are not already noted on the site-specific register.

3.6 Contractors and Suppliers

Contractors and Suppliers have the below responsibilities:

- To not interfere with ACM without appropriate written approval from Rotorua Museum or WSP
- Compliance with this asbestos management plan
- Not interfere with any structure, surface, fixtures, or fittings either internally or externally of the buildings without the appropriate written approval from Rotorua Museum
- When working with ACM have developed the appropriate Safe Work Method Statement and risk assessment
- Notify the site co-ordinator of any incidents associated with ACM that may expose persons to the risk of exposure to respirable asbestos fibres, or any noted damage to ACM.
- Ensuring the appropriate Class of asbestos removal licence⁶ is held
- Compliance with all laws of the land, and appropriate guidance with regards to the handling of ACM.

3.7 Visitors

Visitors have the below responsibilities:

- To follow instructions given by Rotorua Museum staff in relation to ACM
- Wear any required PPE/RPE when requested to do so
- Report any asbestos-related incidents to the Rotorua Museum as soon as reasonably practicable.

4.0 Process

The following section provides an overview of how the Rotorua Museum manages the identified ACM at its facilities, with the flowcharts providing a summary of the Asbestos Management Plan. These flowcharts should be used as a checklist for processes that manage ACM at the Rotorua Museum facilities.

4.1 Risk Overview

Asbestos within the built environment represents a health risk to persons when the asbestos fibres are airborne and subsequently inhaled. There is a positive correlation between the health risk and the number of fibres inhaled, so the risk to health increases as the number of fibres inhaled also increases. As such, the health risk is related to the level of exposure to airborne asbestos fibres.

⁶ For removal of >10 square meters of non-friable asbestos a Class B or A license must be held. For any amount of friable asbestos, a Class A license is required. In both cases, a Supervisor as per the Asbestos License Register is responsible for the works. For Class A, this supervisor must be onsite whilst the removal is occurring.

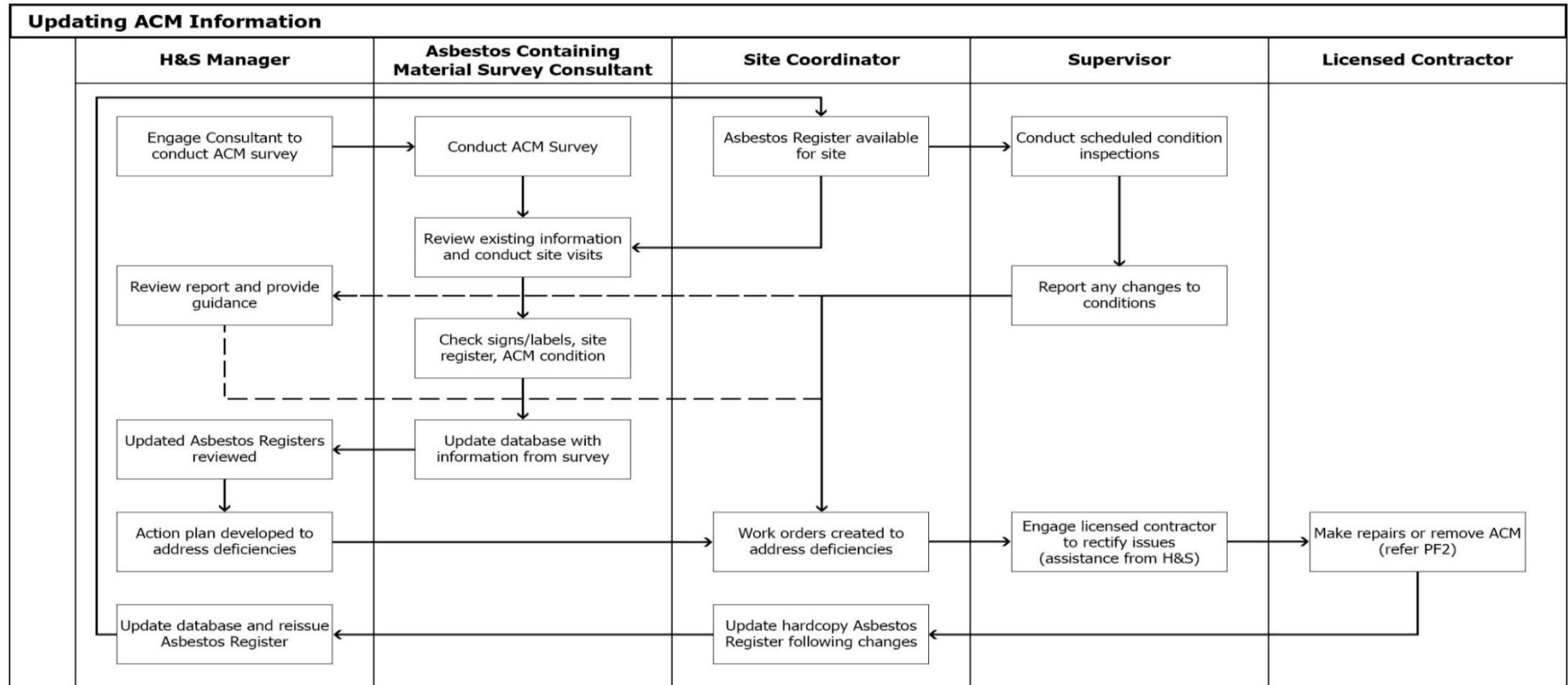
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Asbestos that is in a stable matrix, or effectively encapsulated or sealed, and remains in a sound condition whilst being left undisturbed, represents a negligible asbestos-related health risk.

It is necessary to differentiate between 'asbestos hazard' and 'asbestos risk'. The term 'hazard' indicates the potential for harm, whilst 'risk' refers to the probability of that harm becoming realised. It is widely accepted that the presence of asbestos in a building is a hazard. However, while that asbestos remains in a sound condition and does not release fibres into the air, the risk is negligible.

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4.2 Process Flowchart (PF) 1 – Updating ACM Information



4.3 Asbestos Surveys

As documented in the flowchart above (PF1 – Updating ACM Information), Rotorua Museum has already undertaken asbestos surveys of all facilities and identified via presumption those sites where ACM is present⁷. This information about the ACM has been extracted and incorporated into the site-specific Asbestos Registers.

A qualitative asbestos risk assessment is required to be undertaken each time a formal detailed asbestos survey of the Rotorua Museum structures is conducted. This risk assessment must take into account the following information:

1. The condition of the ACM (e.g. friable vs bonded, and whether liable to damage or deterioration)
2. The likelihood of exposure (including amount of access, condition of ACM from time, weathering etc.)
3. Whether the nature or location of any work to be carried out is likely to disturb the ACM
4. Results from any monitoring and /or samples taken

Each asbestos situation is allocated one of the below risk ratings, as per the definitions.

Immediate	ACM is in a poor, or significantly deteriorate condition and elevated levels of respirable airborne fibre are probable with minimal disturbance. The ACM is readily accessible, prone to further disturbance and poses an immediate health risk to personnel. The area should be isolated immediately and abatement (removal or repair) required as soon as practicable.
High	ACM shows moderate signs of deterioration and/or unsealed. A low level of respirable asbestos fibres is possible, and further disturbance due to routine building activity and/or maintenance is likely. This includes unsealed friable ACM in air conditioning systems.
Medium	ACM shows moderate signs of deterioration and/or unsealed. A low level of respirable asbestos fibres is possible, and further disturbance due to routine building activity and/or maintenance is likely. This includes accessible damaged ACM's and asbestos cement debris.
Low	ACM shows no or very minor signs of damage/deterioration. Routine accessibility is unlikely to cause significant deterioration, or the material is adequately sealed.

Should ACM of unknown composition, or materials that are suspected of containing asbestos, be encountered on any of the premises leased or owned by Rotorua Museum, and these are not documented in the existing site-specific asbestos register, such materials should be treated as if they were asbestos until sampling and analysis confirms otherwise.

In the event that additional asbestos is identified, a risk assessment shall then be conducted by a suitably qualified and competent person. For example, in the event that maintenance, building, demolition or refurbishment works are to be carried out in areas previously not inspected for the presence of asbestos, such as areas where asbestos has presumed to be present, an inspection and

⁷ This will be updated with more detailed surveys and results as work such as building, maintenance, or refurbishment work is done at the site

risk assessment should be performed by a suitably qualified person⁸ prior to the commencement of the planned demolition/refurbishment works.

4.4 Asbestos Registers

A register is required for all sites where ACM exists, or is suspected to exist. The register contains information that is relevant to managing ACM and is essential to all people that work at the site, including contractors and others.

The register contains information on:

- The date(s) on which the inspection/identification of ACM was made and details on the competent person(s) who carried out the inspection/identification;
- Details on the locations, types (i.e. friable or non-friable) and condition (i.e. damaged or intact) of any ACM identified on the premises, including ACM in items of plant and equipment, and the type of asbestos involved (i.e. blue, brown or white);
- Details on any material presumed to contain asbestos;
- Any inaccessible areas that are likely to contain ACM;
- The results of any analysis to confirm a material is or is not an ACM;
- The results of any air monitoring for airborne asbestos fibres and an assessment of these results
- Risk assessments of the ACM;
- The controls recommended for the ACM;
- Any work carried out on the ACM including; the company or persons involved, the date and scope of the work undertaken and details on clearance certificates.

4.4.1 Developing Registers

Registers will need to be developed (or redeveloped) where sites/structures do not have a register. This may be via acquisition or a merger of sites.

Where a site does not have a register, an ACM survey will be undertaken by a competent person to determine what ACM is present at the premises, and the Asbestos Database will be updated to incorporate the information from the survey for the premises.

4.4.2 Register changes and maintenance

Changes that occur, such as reviews or removal of ACM from an area, will affect the site-specific Asbestos Register. To keep the registers up to date, these changes will need to be included into the register. See Process Flowchart 1 regarding updating ACM information.

Other types of changes that may affect the site-specific register, and therefore require it to be updated include:

- Damage, removal and reviews, and the dates these were done
- Changes in risk ratings due to damage occurring or removal happening
- Changes in controls from management decision
- New samples taken, and their outcomes
- New areas accessed, where ACM is suspected to exist
- New structures within a site that have been found or purchased.

These changes need to be included in the site's hard copy of the register and sent to the Councils authorised representative to update the electronic Asbestos Database. They will then issue a new Asbestos Register for that site.

⁸ A minimum qualification of IP402 with 6 months training under a more experienced asbestos surveyor, as per the recommendations of the Good Practice Guide for Conducting an Asbestos Survey.

4.4.3 Asbestos Register Reviews

All site-specific asbestos registers are to be reviewed regularly. This can be completed via either an asbestos re-survey or following a scheduled inspection by the appropriate internal teams. Details of the re-inspections are set out in the Re-inspection History table located in Appendix B.

Reviews will also be required when any of the legislative requirements are met as per section 2.1. This includes:

- When there is evidence that the risk assessment is no longer valid
- When there is evidence that any control measures are not effective any more
- When a significant change is proposed for the workplace or for work practices or procedures relevant to the risk assessment
- There is a change in the condition of the ACM
- The ACM has been changed (i.e. removed, enclosed, sealed)

The review process needs to be undertaken via a visual inspection of the identified ACM. As a minimum, the review needs to assess:

1. Removals that have been recorded vs those that have not (e.g. removal occurred after the last register was issued)
2. Any change of risk levels due to deterioration, damage, or access to the area (e.g. there is further deterioration or damage, old switchboards are requiring to be opened)
3. Recommendations or controls need to be altered (e.g. may need to remove, dispose, remove on next service, signs are needed etc.)

4.5 Communication and Consultation

It is important that internal personnel are involved in the implementation and review of the Asbestos Management Plan, the associated procedures, and the sites' Asbestos Registers.

To achieve this, the Asbestos Management Plan is to be reviewed by the Rotorua Lakes Council Representative/s, Rotorua Museum Senior Management, WSP Project Management Representative/s, Hawkins Construction Representative/s, and Health and Safety Committees/Representatives, or other such party deemed competent authorised. This allows for all relevant personnel to be involved in the review of the Asbestos Management Plan during the 2020 seismic strengthening project and post construction.

The reviewed Asbestos Management Plan is to be tabled at the next available meeting for distribution and further comment.

The following avenues of communication will also be made available for information regarding ACM:

- Corporate and Contractors attendance at health and safety inductions, which will provide an overview of the Asbestos Management Plan and requirements regarding ACM overall
- Site specific inductions will highlight the presence of an Asbestos Register, its location, and any specific conditions regarding the ACM
- When conditions of the ACM change, personnel working on the site will be notified through toolbox and pre-start meetings, including any specific conditions/control measures in force
- When ACM is being removed, personnel will be notified of the timing and conditions, and required to remain outside of the barriered area/off the site to minimise exposure to asbestos fibres.
- Where property is to be leased, the updated Asbestos Register must be made available to the leasee.

5.0 Management Options and Controls for ACM

Where identification of asbestos in structures has been completed, and asbestos was identified to be in-situ, the preferred management option by Rotorua Museum is in accordance with the actions recommended in the site-specific register.

These recommendations by the competent person conducting the survey were made in accordance with their expertise, and in line with the hierarchy of control as per the Health and Safety at Work Act 2015.

This hierarchy requires that when managing ACM that is releasing respirable fibres, control of this risk is based on the below order of controls:

1. Elimination Controls
2. Isolation Controls
3. Engineering Controls
4. Administrative Controls
5. Minimisation controls

For ACM releasing respirable fibres, this would equate to:

1. Removal of the ACM
2. Encapsulation or sealing of the ACM
3. Covering the ACM with another substance (i.e. false ceiling)
4. Safe Work Practices
5. Personal Protective Equipment / Respiratory Protective Equipment

5.1 Asbestos Management Options

The control of asbestos hazards must consider the nature and condition of the material and the potential for exposure. After this is determined the following four control options/strategies may be applied as per the table on the following page.

5.1.1 Management Control Options Table

Method of Control	Description	Appropriate When:	Not Appropriate When:	Advantages:	Disadvantages:
Removal	Removal of asbestos must be performed under certain controlled conditions, depending on the type of ACM to be removed. Where demolition or refurbishment works are to occur, and this work is likely to impact on ACM, the ACM must be removed under controlled conditions prior to the commencement of any site	Surface friable or asbestos poorly bonded to substrata. Asbestos is severely damaged or liable to further damage or deterioration. Located in A/C duct. Airborne asbestos monitoring results exceed recommended exposure standard. Other control techniques inappropriate.	Located on complex or inaccessible areas. Removal extremely difficult & other techniques offer satisfactory alternative.	Hazard removed, and no further action required. Cost-effective long-term option.	Increases immediate risk of exposure especially to removal workers. Creates major disturbance in building. Highest cost, most complex & time-consuming method. Removal may increase fire risk within building; substitute required. Possible contamination of structure and increase in airborne fibre levels in adjacent occupied areas if the removal
Encapsulate or Seal	Coating of the outer surface of the ACM by the application of some form of sealant compound that usually penetrates to the substrate and hardens the material making it impermeable to asbestos. Helps protect the ACM from mechanical damage and is designed to reduce the risk of exposure by inhibiting the release of asbestos fibres into the airborne environment	Removal difficult or not feasible. Firm bond to substrata. Damage unlikely. Short life structure. Readily visible for regular assessment.	Asbestos deteriorating. Application of sealant may cause damage to material. Water damage likely. Large areas of damaged asbestos.	Quick and economical for repairs to damaged areas. May be adequate technique to control release of asbestos dust.	Hazard remains. Cost for large areas may be near removal cost. Eventual removal may be more difficult and costlier.

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Method of Control	Description	Appropriate When:	Not Appropriate When:	Advantages:	Disadvantages:
Enclosure	Enclosure involves installing a barrier between the ACM and adjacent areas where it is effective in inhibiting further mechanical damage to the asbestos. The type of barrier installed may include plywood or sheet metal products, constructed as a boxing	Removal extremely difficult. Fibres can be completely contained within enclosure. Most of surface already inaccessible. Disturbance to or entry into enclosed area not likely.	Enclosure itself liable to damage. Water damage likely. Asbestos material cannot be fully enclosed.	May minimize disturbance to occupants. Provides an adequate method of control for some situations.	Hazard remains. Maintenance of enclosure. Need to remove enclosure before removal of ACM. Precautions for entry into enclosure.
Defer	The identification of ACM in a building does not automatically necessitate its immediate removal. Asbestos in a stable condition and not prone to mechanical damage can generally remain in situ. The ACM will need to be inspected on a regular basis (as part of monthly Supervisor inspections and at 12 months to update the register) to ensure its	No risk of exposure. Asbestos inaccessible and fully contained. Asbestos stable and not liable to damage.	Possibility of deterioration or damage. Airborne asbestos monitoring results exceed recommended exposure standard.	No initial cost. Cost of removal deferred.	Hazard remains. Need for continuing assessment and management.

5.2 Management of in-situ Asbestos

In-situ asbestos refers to asbestos being left as it is, encapsulated or enclosed. The management of in-situ asbestos is important to ensure ACM is not damaged or deteriorates to such an extent that the Rotorua Museum staff, external contractors, visitors or members of the public are exposed to airborne asbestos fibres.

The requirements above of the contractor site induction, and the permit to work system, will aid in the management of in-situ ACM.

It is standard policy to incorporate asbestos issues into building works contracts, which are designed to ensure that any asbestos in or on Rotorua Museum sites are dealt with in the appropriate manner using appropriate controls.

5.2.1 Resurvey and Inspections of in-situ ACM

A re-survey of ACM that remains on site is required to be conducted by a competent person⁹. These re-surveys will comprise a visual assessment of the condition of the materials to determine whether the material remains in a satisfactory condition, or if deterioration has occurred since the previous survey. They will also determine if any remedial action, such as encapsulation, isolation or removal, is required.

The re-surveys will be performed on a regular basis for in-situ ACM, with the Rotorua Museum having this performed at least every 5 years, or as required in the higher risk areas from the Asbestos Management Plan.

More regular assessments of ACM will be undertaken by the appropriate internal teams during scheduled workplace inspections to determine if the conditions have changed. This inspection will assess whether damage or deterioration has occurred since the previous inspection, and whether labels or signs have been removed/need replacing.

Normally, resampling of materials would not be required during re-surveys. However, if previously unidentified or undocumented materials that are suspected of containing asbestos are encountered during the resurvey process, sampling and analysis will need to be performed.

The Asbestos Register will need to be updated and reissued at the completion of the resurvey work.

Following a scheduled inspection, if the condition of the ACM has changed, the person conducting the inspection must amend the hardcopy of the register on-site and provide a copy of the changes to the person in charge of the electronic Asbestos registers (as per section 3.3). A new copy of the register will be re-issued to the site and the table at Appendix B will be updated.

5.2.2 Labelling

The use of warning signs and labels is one of many recognised methods of asbestos risk control, and also meets the requirements of Regulation 12 of the Health and Safety at Work (Asbestos) Regulations 2016.

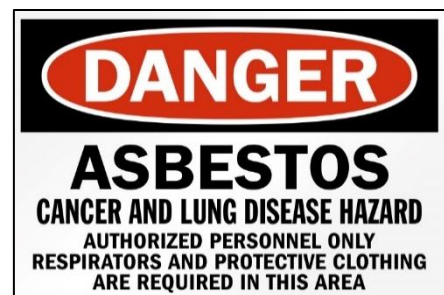
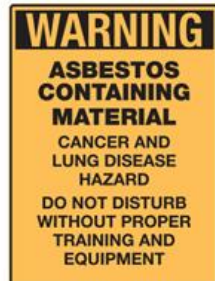
Such systems are designed to alert personnel to the presence of asbestos, which in turn reduces the risk of inadvertent damage to the ACM by the actions of personnel.

⁹ A minimum qualification of IP402 with 6 months training under a more experienced asbestos surveyor, as per the recommendations of the Good Practice Guide for Conducting an Asbestos Survey.

The Rotorua Museum will place signs and labels similar to the ones below at all of the main entrances to work areas where asbestos is present. The notice shall be made of durable materials and be weatherproof for outdoor applications.

In the interests of prudence, Rotorua Museum will include generic titles on the signs to allow for changes in personnel responsible for administering the Asbestos Register.

Specific asbestos locations will be labelled for identification where reasonably practicable.



5.2.3 Encapsulation or Sealing

Encapsulation refers to the coating of the outer surface of the ACM by applying some form of sealant compound that penetrates to the substrate and hardens the product.

Sealing is the process of covering the surface of the ACM with a protective coating impermeable to asbestos.

Encapsulation or dealing helps protect the ACM from mechanical damage and is designed to reduce the risk of exposure by preventing the release of asbestos fibres into the airborne environment.

This method also increases the length of serviceability of the material.

The use of encapsulation or sealing may be of limited application. It is not considered to be an acceptable alternative to repairing or removing severely damaged ACM.

5.2.4 Enclosure

Enclosure involves installing a barrier between the ACM and adjacent areas. This is effective in preventing further mechanical damage to the ACM and friable materials such as calcium silicate pipe lagging or sprayed asbestos, which may be appropriate for enclosure where removal is not an option.

The type of barrier installed may include plywood or sheet metal products, constructed as boxing around the ACM.

Further, enclosures made of glass are suitable for display products that contain or may contain ACM which Rotorua Museum may have for an exhibit.

5.2.5 Leave in-situ and defer action

The identification of ACM in a building, structure or equipment does not equate to automatic removal. ACM in a stable condition and not prone to mechanical damage can generally remain in-situ. The ACM will need to be inspected on a regular basis to verify its integrity.¹⁰

If, on inspection, the condition of the ACM has changed, the risk must be reassessed and the appropriate action taken.

On completion of every inspection, the electronic asbestos registers must be updated accordingly, and a new site-specific register provided with any alterations showing on it.

If demolition or refurbishment works will potentially disturb the asbestos, it must be removed under controlled conditions prior to the works being carried out.

6.0 Removal of ACM

Removal of ACM from the Rotorua Museum facilities will only be completed using licensed contractors. The contractor must be supplied with relevant information for the safe removal of the ACM, including the Asbestos and Risk Registers for the site.

When the removal has been completed, and the clearance certificate issued, the Asbestos Register will be updated to reflect the alterations.

The flowchart (PF2) provides an overview of the work requirements which must be met. However, removal of ACM must be performed under specified controlled conditions, which depend on the type of ACM to be removed.

Friable:	Materials that are in a powder form, or that can be crumbled, pulverised or reduced to a powder by hand pressure when dry. Includes materials such as sprayed insulation, lagging to pipe work, etc.
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¹⁰ See sections 5.2.1 and 4.4.3

Rotorua Museum
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Asbestos Management Plan

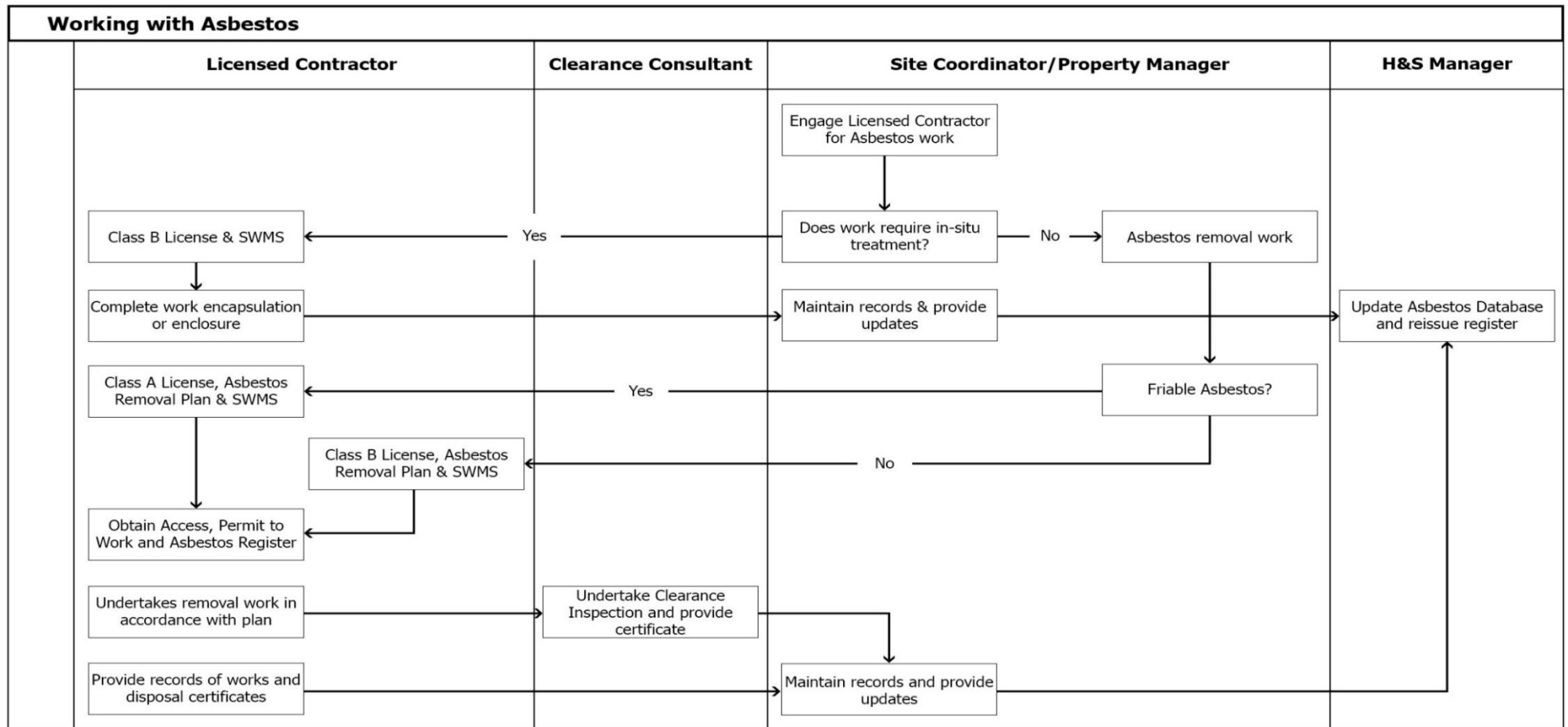
Non-Friable:	Materials such as asbestos cement sheeting, bituminous membranes etc. These are materials in which the asbestos fibres are firmly bound into a cementation or resinous matrix. These ACMs are usually considered a low-level risk as the firm matrix prevents the asbestos fibres from becoming detached and entering the airborne environment.
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Removal is considered preferable to other abatement options such as enclosure or encapsulation, as it eliminates the hazard from the workplace. The removal process does pose an increased risk to personnel engaged in the removal and may result in increased airborne fibre levels in adjacent occupied areas if the removal programme is not strictly controlled.

Asbestos removal is generally an expensive exercise and can cause major disruptions to building occupants.

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6.1 Process Flowchart 2 (PF2) – Working with Asbestos



6.2 Asbestos Removal Control Plans

A site-specific Asbestos Removal Control Plan shall be developed by the licensed asbestos removal company that will be removing the asbestos. The plan is required by regulation 32(2) of the Health and Safety at Work (Asbestos) Regulations 2016 to contain:

1. Details of how the asbestos removal will be carried out, including the method to be used, and the tools, equipment and personal protective equipment to be used
2. Details of the asbestos to be removed, including the location, type, and condition of the asbestos
3. A detailed description of the asbestos removal area for the work and any air monitoring points
4. Details of the means of transport and disposal of the asbestos waste

Rotorua Museum require this plan to also contain:

1. Consultation details
2. Assigned responsibilities for the removal
3. Program of commencement and completion dates
4. Site plan which shows the following:
 - a. Boundaries (including the type and extent of isolation/containment required)
 - b. Location of signs and barriers
 - c. Location of waste storage
5. Control of electrical, lighting installations and other services
6. Control measures to be used to contain asbestos within the asbestos work area
7. Detailed procedures for decontamination, including decontamination of:
 - a. Workplace
 - b. Personnel
 - c. Tools and equipment
 - d. Non-disposable PPE/RPE
8. Emergency plans; including those for site-specific emergencies, evacuations, first aid and equipment failure.

6.3 Work Permits

Contractors will be required to obtain a permit to work that has been approved by the Project Manager acting on behalf of Rotorua Museum.

This will be in addition to other requirements dependent on the type of work, such as isolation of services.

Second tier permits may also be required, which include permits for activities such as confined space entry and work at heights.

6.4 Clearance Inspections

Before an asbestos work area is able to be reoccupied, a Clearance Inspection must be done.

For any Class A licensed asbestos removal work, the person conducting the clearance inspection must be a licensed assessor as found on the WorkSafe Licence holder register.¹¹ Air monitoring will also be required for any Class A site.

¹¹ <https://worksafe.govt.nz/topic-and-industry/asbestos/licensing/licence-holder-register/>

For any Class B asbestos removal work, this person must meet the requirements of regulation 41(3) of the Health and Safety at Work (Asbestos) Regulations 2016 with regards to 'competent person'¹². The clearance for Class B sites is primarily a visual inspection.

In both instances, the person conducting the clearance inspection is required to be independent from the contractors completing the removal work.

The clearance certificates provided following completion of the clearance inspection will be kept by Rotorua Museum, and appended to the back of the Asbestos Management Plan. The Asbestos Register will also be updated accordingly.

7.0 Asbestos-Related Work

Asbestos-related work is different to asbestos removal work, and does not require an asbestos removal licence. It can include aspects such as:

- Research and analysis
- Sampling and identification
- Transport and disposal
- Demonstrations, education or practical training
- Response to an emergency
- Demolition
- Firefighting
- Maintenance and Servicing Work
- Rectifying work
- Work carried out in accordance with an approved method¹³
- Naturally occurring asbestos

However, the persons completing this type of work must follow appropriate methodology and implement appropriate controls.

7.1 Maintenance or Servicing work involving ACM

Rotorua Museum have processes in place to ensure that prior to any work being conducted on sites that involve penetration methods into any part of the building structure, the site-specific Asbestos Register will be reviewed first. It will provide guidance as to whether the location of the work is to be in contact with, or near, ACM.

Any work by Rotorua Museum staff or contractors that may damage or interfere with the condition of the ACM must:

1. Have a detailed Safe Work Method Statement providing details of how any invasive work into the ACM will minimise airborne particles, and what controls will be used
2. Have a permit to work form completed for approval of the activity
3. Follow the relevant Rotorua Museum procedures when undertaking the work¹⁴.
4. Include an update in the site-specific Asbestos Register for any changes that took place.

¹² Information on what qualifications are required to meet these requirements is found at <https://worksafe.govt.nz/topic-and-industry/asbestos/licensing/overview/>

¹³ WorkSafe New Zealand approves these in accordance with regulation 8 of the Health and Safety at Work (Asbestos) Regulations 2016

¹⁴ The contractor may have more detailed procedures to follow if they are a licensed asbestos removal contractor.

7.1.1 Internal Staff completing work on ACM

Where Rotorua Museum staff are to work with ACM in any maintenance or servicing work capacity, they will be engaged in the development of the specific Safe Work Method Statement for the task, and be trained in the specific procedures that apply. These procedures will be recorded on the Safe Work Method Statement.

7.1.2 Contractors completing work on ACM

Contractors who will be working with ACM for aspects such as removal, cleaning, sealing etc. on Rotorua Museum sites must be trained in their own procedures and able to show evidence of the training. Where licenses are required, evidence of these licences shall be provided.

7.2 Safe Work Method Statement (SWMS)

A Safe Work Method Statement must be developed for any works involving asbestos, including sealing, encapsulating, working on, or removal.

The SWMS provides the details of the hazards, risks and controls identified for each task undertaken, and must include the following as a minimum:

1. The name, address and asbestos removal licence number if removing asbestos
2. The specific control measures proposed to be used to undertake the task
3. The way the contractor proposes to perform the activity, including how the control measures are to be implemented
4. How the effectiveness of the control measures will be monitored and reviewed
5. Provisions for training of workers with regards to the Safe Work Method proposed
6. Communication of the activity to Rotorua Museum personnel
7. Where friable asbestos is to be removed, provisions for supervision by a competent person for asbestos removal
8. Be signed and dated
9. Be reviewed for effectiveness at least annually.

7.2.1 Rotorua Basement Soil Works

All personnel whom enter the basement to complete works on the soil (e.g. digging, placing foundations etc.) should wear appropriate PPE and RPE including, but not limited to; coveralls, steel capped gumboots, and appropriate respiratory protective equipment (at least a P2 half face mask).

Assessments should be done on PPE and RPE required, and all personnel should abide by this.

8.0 Health Surveillance

Asbestos-related diseases take many years to develop, but there are tests that medical professionals can conduct to monitor a worker continuing health.

8.1 Informing workers about health monitoring

Rotorua Museum will inform its staff of any asbestos-related health requirements before they commence work with asbestos.

It will also inform the staff affected that:

- As a PCBU it has a duty to carry out health monitoring
- What health hazard triggered the requirement for health monitoring (in this case, asbestos)
- What the examination will involve
- The information that has to be given to the occupational health practitioner
- That the report will be provided back to the Rotorua Museum

- How the reports will be kept, stored, and shared, including keeping confidentiality
- The purpose of the health monitoring (to help with treating and protecting workers exposed to health hazards)
- That the Rotorua Museum will inform WorkSafe NZ if the reports indicate a worker may have a disease, illness or injury as a result of carrying out work that triggered the requirement for health monitoring.

8.2 Requirement for health monitoring

Should a worker of Rotorua Museum be carrying out asbestos-related work, and is at a risk of exposure to asbestos when carrying out the work, regulation 15 of the Health and Safety at Work (Asbestos) Regulations 2016 requires this person to have health monitoring provided.

Rotorua Museum shall also arrange for health monitoring of personnel that have been potentially exposed to airborne asbestos fibres such as through changes to ACM condition.

8.3 Contents of Health Monitoring

Unless a medical practitioner recommends another type of health monitoring, the health monitoring completed by the medical practitioner must include consideration of the worker's demographic, medical, and occupational history, and consideration of the worker's personal potential exposure to asbestos. The latter will include the review of relevant risk assessment reports, air monitoring results, and investigation reports should the airborne contamination standard for asbestos be exceeded. It will include a physical examination that emphasizes the respiratory system, including a lung function test (FEV1 and FEC)¹⁵.

The health monitoring reports are required to be kept as confidential records for at least 40 years after the record is made and identified as a formal record for the particular worker. These reports and results shall not be disclosed to another person without the workers written consent.

However, Rotorua Museum will not rely on the results of asbestos-related health monitoring to evaluate the effectiveness of their controls. This will be completed via air monitoring.

8.4 How often will health monitoring be completed?

As per section 16 of the Approved Code of Practice for the Management and Removal of Asbestos, and the Revised View on Health Monitoring from WorkSafe New Zealand¹⁶, this asbestos medical for health monitoring will be provided every two years from when the work with asbestos commences.

9.0 Air Monitoring

Air monitoring is an effective way of assessing the effectiveness of controls in place to manage the risk of airborne asbestos fibres.

All air monitoring shall be conducted utilising the membrane filter method in accordance with the *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos*,¹⁷.

¹⁵ This deliberately excludes the requirement of a Chest X-ray (PA and Lateral) as per WorkSafe NZ's *revised view on health monitoring* found at <https://worksafe.govt.nz/topic-and-industry/asbestos/management-and-removal-of-asbestos/revised-view-on-health-monitoring/>

¹⁶ <https://worksafe.govt.nz/topic-and-industry/asbestos/management-and-removal-of-asbestos/revised-view-on-health-monitoring/>

¹⁷ *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos*, 2nd Edition [NOHSC: 3003 (2005)]

9.1 Timing and Frequency of Air Monitoring

There are varying times where air monitoring is mandatory, versus times where it is optional. There are also varying types of air monitoring, such as reassurance monitoring and exposure monitoring. The former is used external to the enclosure, to reassure that no respirable fibres are breaching the enclosure, whilst the latter is based on the worker's personal exposure and therefore located on the workers person inside the enclosure. Exposure monitoring can also be completed whilst there is no asbestos removal work occurring, to advise of the latent respirable asbestos fibres in the air, and therefore provide an indication as to whether the control measures are suitable.

Friable Asbestos Removal	Air monitoring is mandatory for all friable asbestos removal. This includes throughout the removal occurring, as well as for the purposes of a clearance inspection. The person responsible for the works from Bay of Plenty District Council will ensure that an independent licensed asbestos assessor undertakes air monitoring of the asbestos removal area at the workplace where asbestos removal work that requires the use of a Class A licence is being performed.
>10sqm of non-friable asbestos removal	Air monitoring is not mandatory in this scenario. However, Rotorua Museum will consider whether this will be carried out by an independent licensed asbestos assessor or competent person to ensure compliance with the duty to eliminate or minimise exposure to airborne asbestos, but also ensure the workplace contamination standard is not exceeded.
Public location	Rotorua Museum will consider the use of air monitoring in any situation where asbestos removal work is being undertaken in or next to a public location
Exposure monitoring	Rotorua Museum may carry out air monitoring at other times to determine its workers exposure to respirable asbestos fibres, if based on reasonable grounds, there is uncertainty as to whether the contamination standard may be exceeded, or a risk assessment by a competent person indicates it is necessary. Since most uses of asbestos are prohibited, it is noted that exposure monitoring should not be required frequently.

Other times where air monitoring may be required includes:

- If it is not clear whether new or existing control measures are effective
- If there is evidence (e.g. dust deposits outside an enclosed area) the control measures have deteriorated as a result of poor maintenance
- If modifications or changes in Safe Work Method Statements have occurred that may adversely affect worker exposure
- If there has been an uncontrolled disturbance of asbestos at the workplace.
- If a display presumed or known to contain asbestos is to have the glass enclosure removed for cleaning or modification or removal of the exhibit.

9.1.1 Rotorua Museum Basement Air Monitoring Programme

Air monitoring will be undertaken at least once per week in the basement of Rotorua Museum. This will continue until Hawkins Construction has taken over possession of the site, including that of the basement.

Following Hawkins Construction being in possession of the site, the air monitoring will be undertaken twice a week on varying days, until work ceases in the basement area.

Alternatively, should the results of air monitoring remain under trace level ($<0.01\text{f/ml}$) whilst work is occurring in the basement area, in consultation with WSP and Hawkins Construction, air monitoring may be dropped back to once a week.

If at any stage any suspect materials are uncovered or located in the basement works, work is to cease in this area, a sample is to be taken (if deemed necessary), decontamination is to occur of all personnel in the area, and air monitoring is to be completed prior to re-entering the basement area.

9.2 Persons able to provide air monitoring whilst removal is occurring

The Health and Safety at Work (Asbestos) Regulations 2016 require certain qualifications/licences to be held by persons completing the air monitoring, when asbestos removal work is occurring.

When friable asbestos removal is occurring, an independent licensed asbestos assessor will be engaged by Rotorua Museum to complete the air monitoring as per the requirements of regulation 43. This person will be able to show their licence card, and also be able to be located on the WorkSafe Licence Holder Register.

When non-friable asbestos removal is occurring Rotorua Museum will consider whether air monitoring is required¹⁸ and should this be required either an independent licensed asbestos assessor or an independent competent person¹⁹ will complete the air monitoring.

Should air monitoring be required under regulation 51 of the Health and Safety at Work (Asbestos) Regulations 2016, as the Rotorua Museum is uncertain as to whether the airborne contamination standard for asbestos is likely to be exceeded whilst asbestos-related work is being carried out; Rotorua Museum will utilise either an independent licensed asbestos assessor or an independent competent person to carry out the required air monitoring. However, Rotorua Museum notes that if the asbestos-related work is carried out on or near friable asbestos, only an independent licensed asbestos assessor will be used to complete the air monitoring.

9.3 Results of Air Monitoring

Results from air monitoring will only be accepted by the Rotorua Museum, when they are provided on the appropriate laboratories letterheaded report, and signed by two persons of the laboratory.

Rotorua Museum will provide these results without delay to:

- The licensed asbestos removalists
- The assessor/independent competent person
- The workers of the workplace
- Representatives of any workers at the workplace
- Any other PCBU's at the workplace

¹⁸ As per section 8.1 of this Asbestos Management Plan

¹⁹ Who meets the requirements of regulation 41(3) of the Health and Safety at Work (Asbestos) Regulations 2016

- So far as are reasonably practicable, other persons living or working in the vicinity of the workplace if it is likely they may be affected by any contamination should it occur.

They may be provided by being printed and put in a common area that all parties can access, or via electronic methods. The distribution method will be discussed and agreed by affected parties prior to the air monitoring/asbestos removal commencing.

9.3.1 Action Levels for Air Monitoring Results

Once the results of the air monitoring are received by the Assessor and Licensed asbestos removalist, action/s will be taken depending on the respirable asbestos fibre level. These actions are outlined in the below table.

Results	Action
<0.01 fibres per millilitre of air (f/ml)	Continue with current control measures
=0.01 f/ml	1. Review control measures 2. Investigate the cause for the reading being above trace level 3. Implement controls to eliminate or minimise exposure and prevent further release
=0.02 f/ml or higher	1. Stop removal work immediately 2. Notify the regulator by phone followed by written statement that work has ceased and the results of the air monitoring received 3. Conduct a thorough visual inspection of the enclosure (if used) and associated equipment, in consultation with all workers involved in the asbestos removal work. 4. Extend the isolated/barricaded area around the removal area/enclosure as far as reasonably practicable. Until fibre levels are <0.01 f/ml, wet wipe and HEPA vacuum the surrounding area, seal any identified leaks and smoke test the enclosure until satisfactorily sealed. 5. Do not recommence further asbestos removal work until the air monitoring shows fibre levels at <0.01f/ml

10.0 Emergency Procedures

There are various aspects that can trigger emergency procedures being used, including:

1. Evacuation event whilst asbestos-related or removal work is occurring
2. Uncontrolled release of asbestos fibres resulting in personal exposure

These events are known as 'Asbestos Incidents' and require reporting to the Health and Safety Representative, and any other persons as required by the incident reporting procedure of Rotorua Museum.

10.1 Evacuation Event whilst Asbestos-related or Removal work is occurring

Rotorua Museum will ensure that during the site induction process, the site procedures for an evacuation will be conveyed to contractors and employees. This allows for the contingencies and evacuation information provided by the contractors/employees to be updated should it be required.

As per section 6.2 the Asbestos Removal Control Plan should include emergency procedures. These procedures should also include contingencies that mitigate the potential for exposure to airborne asbestos fibres in the case of an evacuation event or emergency occurring.

Should an event occur that requires evacuation during work being completed on or near asbestos (such as fire or earthquake evacuation, chemical spill, gas leak, or contaminated atmosphere), consideration must be given to:

- Temporarily waiving decontamination procedures
- Ensuring persons involved in asbestos removal, or those potentially exposed to asbestos, evacuate to an appropriate location downwind to ensure any fibres remaining on clothes as a result of not decontaminating properly, do not enter the breathing space of others.

10.2 Uncontrolled release of asbestos fibres, resulting in personal exposure

Rotorua Museum will ensure that processes are put into place to manage incidents that involve the uncontrolled release of asbestos fibres, from either identified or suspected ACMs, as these have the potential to result in exposure to respirable asbestos fibres.

Mitigations to ensure that personal exposure does not occur include the below. However, it is noted that this is not an exhaustive list, and Rotorua Museum may add in further steps to utilise the appropriate mitigation process for the situation.

1. Barriers/barricading to prevent further entry into the contaminated area
2. Implementation of controls to prevent exposure of anyone else to asbestos
3. Implementation of controls to prevent further release of respirable asbestos fibres
4. Communication Instructions to key stakeholders, including the site emergency response team and site manager
5. Instructions for decontamination of the exposed person/s
6. Instructions for the removal and containment of exposed clothing
7. Processes that ensure the protection of the health of any emergency services/first aid personnel, including the provision of any appropriate PPE, and decontamination facilities
8. Arrangements for swab sampling of exposed person's clothing
9. Arrangements for airborne sampling of the contaminated area

10.2.1 Incidents involving asbestos fibre levels of 0.02 fibres per millilitre of air, or higher

If a licensed removalist is carrying out friable asbestos removal work, and therefore is completing this under a Class A removal licence, and the air monitoring results show asbestos fibre levels at 0.02 fibres per millilitre of air, or higher, the removalists shall immediately:

1. Order the asbestos removal work to cease
2. Notify Rotorua Museum, the Assessor, and WorkSafe New Zealand
3. Investigate the cause of the respirable fibre level
4. Implement controls to prevent the exposure of anyone else to asbestos
5. Prevent the further release of respirable asbestos fibres.

10.3 Incident Management and Reporting

The person responsible for the site shall ensure that all incidents involving asbestos are reported in accordance with Rotorua Museum's Health and Safety Incident Reporting procedure, utilising the appropriate form.

All asbestos-related incidents are to be investigated to determine the cause of the incident and recommend and implement the appropriate corrective action. These corrective actions and learnings are to be communicated to all relevant stakeholders within an appropriate timeframe.

Further, as all health and safety incidents involving exposure to asbestos fibres is classed as a notifiable incident, all incidents must be also reported to WorkSafe NZ via their webpage.²⁰

10.3.1 Non-friable asbestos incident

Where ACM has been severely damaged, to the level where a person potentially has been exposed to respirable asbestos fibres without protection, WorkSafe NZ shall be contacted by Rotorua Museum following their notification procedure.

Rotorua Museum personnel working on the affected site will also be notified as soon as possible.

Controls will be put into place to minimise exposure immediately.

10.4 Communication during an Asbestos Incident

The site management team shall be notified as soon as practicable by the person responsible for the site when any of the below occurs.

- Any uncontrolled release of asbestos/suspected to be asbestos materials
- Any spills, dislodged, damaged or exposed materials

The site management team of Rotorua Museum will be responsible for communications to site personnel and contractors during any asbestos incident.

These communications should include the nature of the incident, the incident location/s, and the corrective and preventative actions that are being implemented.

Regular updates on the progress of corrective and preventative actions will be provided to site personnel and contractors.

11.0 Training

Rotorua Museum has its own training register for internal staff, which is monitored and updated by Stewart Brown. This includes those staff whom have undertaken training on Asbestos Awareness to meet the requirements of regulation 17 of the Health and Safety at Work (Asbestos) Regulations 2016.

It is noted any staff or personnel whom are to enter the Basement Area of Rotorua Museum for any purposes are to have training that meets the requirements of regulation 17 of the Health and Safety at Work (Asbestos) Regulations 2016 prior to entry.

11.1 Induction

All personnel and contractors are required to be inducted before accessing any Rotorua Museum facility.

This induction will address the requirements of the Asbestos Management Plan, site-specific asbestos registers, and specific procedures that exist for working with the ACM that is present at the specific site.

²⁰ <https://worksafe.govt.nz/notify-worksafe/> is the webpage to notify WorkSafe NZ of a notifiable incident

11.2 Asbestos Awareness Training

Any personnel whom need to enter the basement of Rotorua Museum and further selected staff of Rotorua Museum will be provided with Asbestos Awareness training to meet the requirements of regulation 17 of the Health and Safety at Work (Asbestos) Regulations 2016. As staff leave, further staff will be trained in their stead to ensure that the number of trained staffs remains static.

It is noted that it may be prudent to also offer training to further employees, should it become apparent that their job roles require it. Training may also be provided to tenants and long term / regular contractors to increase their awareness of asbestos issues at Rotorua Museum sites.

The information provided to these persons should cover the following aspects:

- Background information on asbestos
- Asbestos-related health effects
- When the risk of asbestos is more prevalent (i.e. when disturbed, when asbestos fibres are released into the airborne environment and subsequently inhaled)
- Asbestos-related legislation
- Sources and general locations of ACM within a building
- An overview of the structure and function of the asbestos management plan (summary of how the asbestos issues are managed within the buildings)
- Responsibilities of the building owner, management, tenants, staff and contractors.

The training should be designed to serve a number of purposes, including:

- To increase the awareness and knowledge of building management personnel with respect to their statutory obligations in respect of the management of asbestos hazards within the building;
- To provide valuable introductory information to staff/contractors who may have a requirement to handle asbestos, or enter areas where asbestos is present; and
- To assist the employer in addressing their statutory duties with regards to the provision of information, instruction and training to those potentially exposed to the risk.

12.0 Synthetic Mineral Fibres

Synthetic Mineral Fibre (SMF) is a man-made insulation material used extensively in industrial, commercial, and residential sites, in much the same way as asbestos has been utilised; as fire retardant, reinforcement in construction materials, and as acoustic and thermal insulators.

There are other similarities between SMF and asbestos, including that there are the same forms – bonded and un-bonded.

Bonded	Where adhesives, binders, or cements have been applied to the SMF before delivery and the SMF product has a specific shape.
Unbonded	The SMF is loose material packed into a package; no adhesives, binders or cements have been used.

Types of SMF materials can contain fibreglass, ceiling insulation, rockwool, ceramic fibres, and continuous glass filaments.

Exposure to SMF can result in short-term skin, nose, eye, and respiratory tract irritation. The extent to which health is affected will depend on the type, size, concentration and period of exposure to SMF.

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Should damage occur, these should be removed in accordance with the Health and Safety Guidelines for the Selection and Safe Handling of Synthetic Mineral Fibres (Department of Labour, 1994).

Appendix A: Glossary

Word/Acronym	Definition
Accredited Laboratory	A testing laboratory accredited by the International Accreditation New Zealand, (IANZ) or a similar accreditation authority, or otherwise granted recognition by IANZ, either solely or in conjunction with one or more other persons.
Air Monitoring	Airborne asbestos fibre sampling to assist in assessing exposures and the effectiveness of control measures. Air monitoring includes exposure monitoring, control monitoring and clearance monitoring.
Airborne Asbestos Fibres	Means any fibres of asbestos small enough to be made airborne. For the purposes of monitoring airborne asbestos fibres, only respirable asbestos fibres (those fibres less than 3 µm wide, more than 5 µm long and with a length to width ratio of more than 3 to 1) are counted.
ACM	Asbestos Containing Material meaning any material, object, product or debris that contains asbestos.
AM	Asset Management/Manager
AMP	Asbestos Management Plan
Asbestos	Means the fibrous form of mineral silicates belonging to the serpentine and amphibole groups of rock-forming minerals, including actinolite, amosite (brown asbestos), Anthophyllite, chrysotile (white asbestos), crocidolite (blue asbestos), tremolite, or any mixture containing one or more of the mineral silicates belonging to the serpentine and amphibole groups.
Asbestos Removalist	Means a competent person who performs asbestos removal work.
Asbestos Removal Control Plan	Means a document which identifies the control measures which will be implemented to ensure workers and other persons are not at risk when asbestos removal work is being conducted.
Asbestos Removal Work	Means the removal of ACM.
Asbestos Waste	Means all removed ACM and disposable items used during the asbestos work, such as plastic sheeting used to cover surfaces in the asbestos work area, disposable coveralls, disposable respirators, rags used for cleaning.
Asbestos Work Area	Means the immediate area in which work on ACM is taking place. The boundaries of the work area must be determined by a risk assessment.
AS/NZS	Australian Standard/New Zealand Standard
Bonded Asbestos	Means ACM containing a bonding compound reinforced with asbestos fibres, e.g. Asbestos cement pipes and flat or corrugated asbestos cement sheets consist of sand and cement reinforced with asbestos fibres. For removal of bonded asbestos, the person must have a B Class license or work under the supervision of a business that has an A Class license and has a supervisor on site that is deemed a competent person for asbestos removal work. All persons will need to follow a SWMS for removal.

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Clearance Inspection	Means an inspection, carried out by a competent person, to verify that an asbestos work area is safe to be returned to normal use after work involving the disturbance of ACM has taken place. A clearance inspection must include a visual inspection, and may also include clearance monitoring and/or settled dust swab sampling.
Clearance Monitoring	Means air monitoring using static or positional samples to measure the level of airborne asbestos fibres in an area following work on ACM. An area is 'cleared' when the level of airborne asbestos fibres is measured as being below 0.01 fibres/ml.
Competent Person for Friable asbestos removal	A person who is competent under the regulations 2016 (Requirements for a competent person to supervise work to remove friable asbestos containing material)
Competent Person for Clearance Inspections	Means a person possessing adequate qualifications, such as suitable training and sufficient knowledge, experience and skill, for the safe performance of the specific work.
Control Monitoring	Means air monitoring, using static or positional to measure the level of airborne asbestos fibres in an area during work on ACM. Control monitoring is designed to assist in assessing the effectiveness of control measures. Its results are not representative of actual occupational exposures, and should not be used for that purpose. Note: Static or positional samples is taken at fixed locations which are usually between one and two metres above floor level.
COP	Code of Practice
Friable Asbestos	Means asbestos-containing material which, when dry, is or may become crumbled, pulverised or reduced to powder by hand pressure. The removal of friable asbestos can only be done by a business that has an A Class license and has a supervisor on site that is deemed a competent person for asbestos removal work. All persons will need to follow a WMS for removal.
Health Monitoring	Means monitoring the person to identify changes in the person's health status because of exposure to particular substances. Health monitoring includes biological monitoring and medical assessments but does not include atmospheric monitoring.
HEPA Vacuum Cleaner	Means a vacuum cleaner that is fitted with a High Efficiency Particulate Air (HEPA) Filter which complies with AS4260-1997 High efficiency particulate air (HEPA) filters – Classification, construction and performance. A domestic vacuum cleaner is not suitable for use with asbestos.
IMS	Integrated Management System

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Word/Acronym	Definition
In situ	Means fixed or installed in its original position, not having been moved.
Inaccessible area	Means areas which are difficult to access, such as wall cavities and the interiors of plant and equipment.
P.C.	Principal Contractor
PCBU	Person conducting a business or undertaking.
Permit to Work	A formal written authority to operate a planned procedure, which is designed to protect personnel working in hazardous areas or activities. Authority for a safe system of work.
Personal Protective Equipment (PPE):	Means equipment and clothing that is used or worn by an individual person to protect them against, or minimise their exposure to, workplace risks. It includes items such as facemasks and respirators, coveralls, goggles, helmets, gloves and footwear.
Person with control	Means, in relation to premises, a person who has control of premises used as a workplace. The person with control may be a) The owner of the premises b) A person who has, under any control or lease, an obligation to maintain or repair the premises c) A person who is occupying the premises d) A person who is able to make decisions about work undertaken at the premises; or e) An employer at the premises
Risk	Means the likelihood of a hazard causing harm to a person. Note: In this Asbestos Management Plan, risk relates to illness or disease arising from exposure to Airborne Asbestos Fibres.
Site Structure	Includes the associated buildings, workplaces, facilities, plant etc. within a business address or property e.g. 11 Quay Street Whakatane, Regional Council Headquarters, New Zealand Includes but not limited to: a) a building, construction, wall, mast, tower, pylon, structural cable or telecommunications structure; or b) underground works (including shafts and tunnels), pipe, pipeline, river works, earthworks or earth retaining construction or other construction designed to preserve or alter a natural feature; or line, dock or harbour, water storage or supply system (including a constructed lagoon), sewerage or drainage system, electricity or gas generation facility, transmission or distribution facility, d) gasholder, park or recreation ground (including, for example, a playing field or swimming pool); or

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Word/Acronym	Definition
Synthetic Mineral Fibre (SMF)	Is a general term used to describe a number of fibrous materials made from glass, rock, alumina and silica (also known as Man Made Mineral Fibres – MMMFs). SMFs have been widely used as alternative to asbestos in insulation and fire-rating products and as reinforcement in cement, plaster and plastic materials. SMF products are used extensively in commercial and residential buildings for insulation from temperature and sound. Short-term exposure can cause skin and eye irritation to humans. Upper respiratory tract irritation is likely during exposure to very high concentrations of SMF in the air.
SWMS	Safe Work Method Statement
Workplace	Is any place where work is, or is to be, performed by a worker; or a person conducting a business or undertaking.
Workplace Asbestos Coordinator	A person in a position of responsibility such as a Project Manager appointed by the Rotorua Museum to act as the main contact for asbestos-related issues. This person is responsible for the safe management of asbestos within the workplace and reports to the Health and Safety Representative on asbestos-related issues.

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Appendix B: Re-Inspection Table

Date of Inspection	Party completing inspection	Notes / Alterations made

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B1: Form for Routine visual inspection of facilities containing Asbestos

(Refer Asbestos Register Dated)

Name and address of Workplace: Inspected by: Inspection date:

Updated Register signed off by: (Property Portfolio Representative) and Health and Safety Representative

Building/Site Location	Priority	Room Location /description	Room Number	Surface (e.g. ceilings, walls)	Asbestos Containing Materials (ACM) Description	Condition of ACM at Audit	Current Condition of ACM	Current Condition of Asbestos Label	Further Action /Comment	Date of Removal of Asbestos Item/s	Re-inspect Date

Note: Visual inspection needs to refer to all asbestos identified in the current *Asbestos Register*.

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Asbestos Surveying Solutions Limited
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Email: fenella@asbestosnz.co.nz

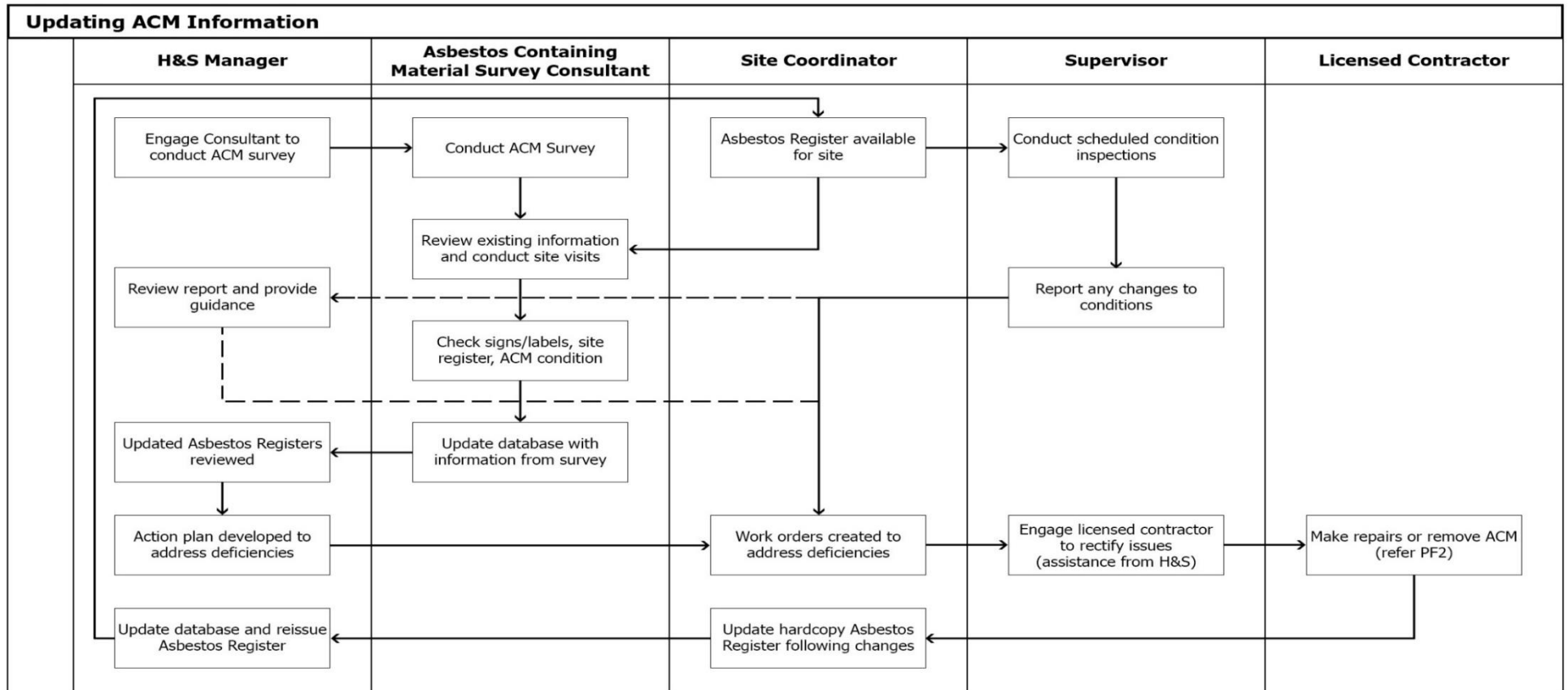
Version: 1.3
Version Date: 12 June 2020



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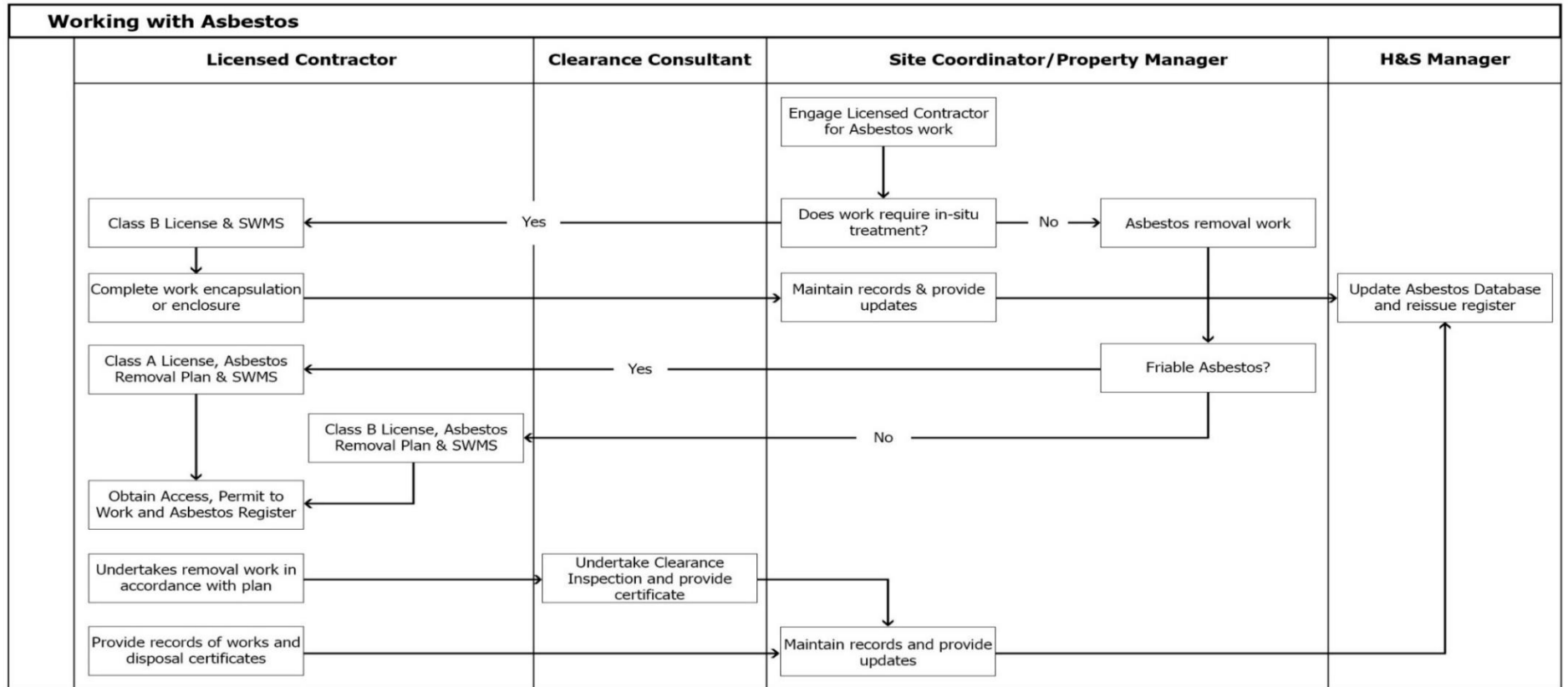
Appendix C: Process Flow Charts

C1: Process Flowchart 1 – Updating ACM information



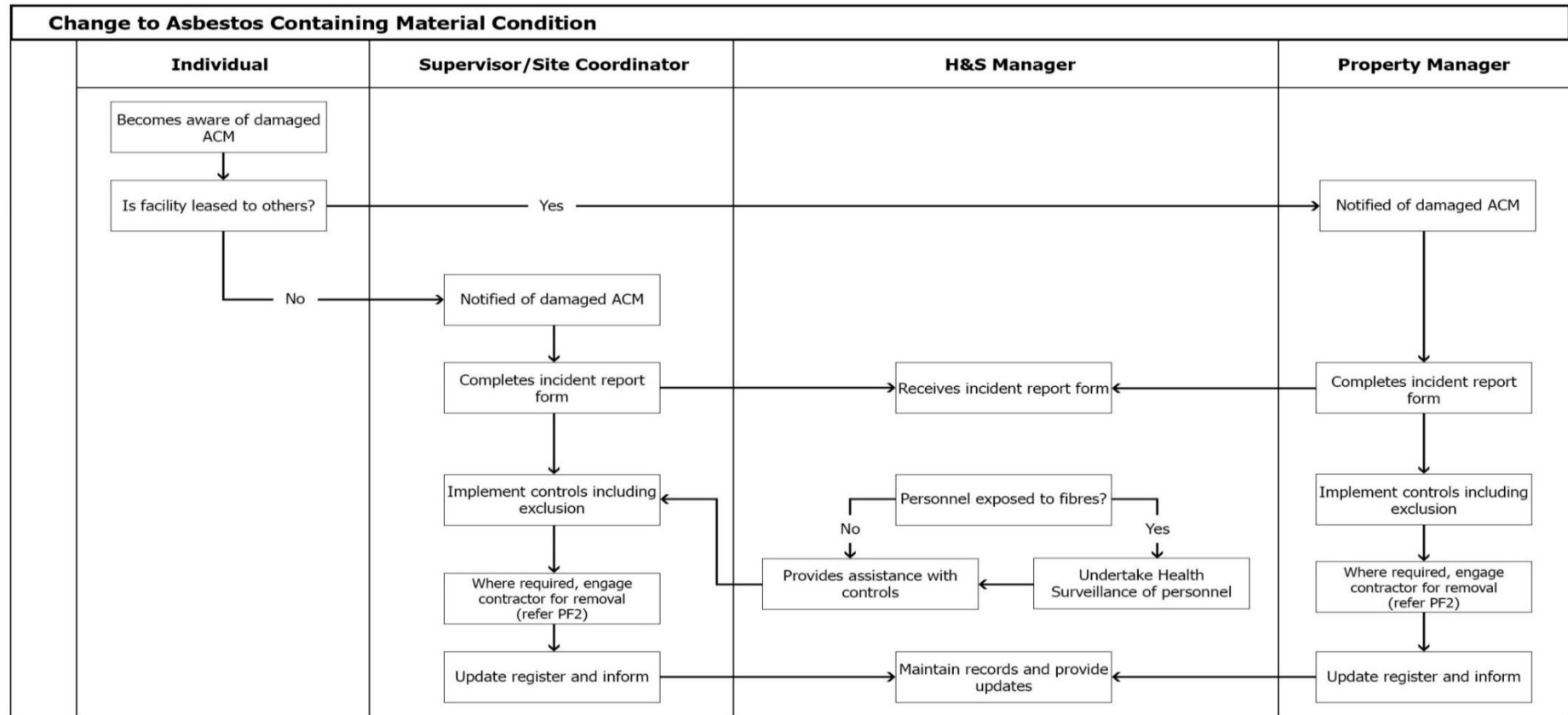
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C2: Process Flowchart 2 – Working with Asbestos



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C3: Process Flowchart 3 – Change to ACM condition



Appendix D: Forms

D1: ASF1 - Work Permit Form

The *Asbestos Assessor* is to complete this form in conjunction with the Workplace Asbestos Co-ordinator

ASF1 – Work Permit Form

Part A – Work Permit Details

Rotorua Museum work number Date of request /..... /.....

Name of Workplace

Address

Workplace Asbestos Co-ordinator

Telephone () Fax ()

Emergency and after-hours contact name (e.g. Workplace Manager)

Telephone () Fax ()

Location and description of asbestos containing materials

A copy of the completed Asbestos Register must be attached to this form

Head Contractor's Company Name (If applicable).....

Company Representative

Telephone () Fax ()

Where the Asbestos Register indicates the presence of asbestos which will need to be removed, the following details must also be completed:

Program Manager or Consultant Company Name

Company Representative

Telephone () Fax ()

Asbestos Removalist Company Name

Company Representative

Telephone () Fax ()

Occupational/Industrial Hygienist Company Name

Company Representative

Telephone () Fax ()

Has the Head Contractor (If applicable) and the Asbestos Removalist provided a copy of their Safe Work Method Statement (SWMS)/Job Safety Analysis (JSA), Control Plans and the WorkSafe NZ Notification of Asbestos Removal?

Workplace Asbestos Co-ordinator's name Signature

PART B - Acceptance of Work Permit

I/We have read and understood the permit requirements and will undertake the work in accordance with the *Health and Safety at Work (Asbestos) Regulations 2016*

Head Contractor's name (If applicable) Signature

Asbestos Removalist's name Signature

Workplaces are required to retain this completed form and associated documentation in a safe and secure location for an indefinite period.

ASF2 – COMPLETION FORM

The Workplace Asbestos Co-ordinator is to complete this form in conjunction with the *Asbestos Assessor* whenever asbestos is removed or disturbed

PART A – Asbestos Consultant's Certification

Rotorua Museum Work Number (As per ASF1 Form)

Date of request / / Name of Workplace

Address

Building/site location

Room location/description

Workplace Asbestos Co-ordinator

Telephone () Fax ()

Date(s) and times of removal works

Program Manager or Consultant Company Name

Company Representative

Telephone () Fax ()

Asbestos Removalist Company Name

Company Representative

Telephone () Fax ()

Environmental Hygienist Company Name

Company Representative

Telephone () Fax ()

Evaluation of work

I have checked the location where work has been carried out and i am satisfied that these works have been completed in accordance with the work permit

Head Contractor's (If applicable) signature Date...../..... /.....

Workplace Asbestos Co-ordinator signature Date/..... /.....

PART B – Asbestos Assessor's Certification

Has a copy of the visual inspection and clearance been attached? Yes / No / Not applicable

Have asbestos fibre monitoring reports been attached? Yes / No / Not applicable

Append the asbestos fibre atmospheric monitoring report, the visual clearance inspection letter by assessor:

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I am satisfied that the works have been completed in accordance with the work permit and that the area has been cleaned to the required standard. The clearance results confirm that the area can be safely re-occupied

Occupational/Industrial Hygienist's signature

Date/..... /.....

Workplaces are required to retain this completed form and associated documentation in a safe and secure location for an indefinite period.

Appendix E: Information about Asbestos

E1: What is asbestos?

A rock known as a hydrated silicate mineral whose main characteristic feature is to crystallize in a fibrous form.

There are 6 types of these rocks:



The first three are the most common in NZ's built environment and often known by their colours:

Chrysotile	White
Amosite	Brown
Crocidolite	Blue

Chrysotile is the most common form of asbestos used in NZ, followed by Amosite and then a small amount of Crocidolite.

E2: Fibres

All types of these rocks tend to break into very tiny fibres, which are incredibly small.

A 'respirable fibre' is an asbestos fibre that is:

- 5 microns or smaller in length; and
- Under 3 microns in diameter; and
- The length is at least 3 times the diameter

Because they are so small, they can stay suspended in air for hours or even days.

Asbestos fibres are also virtually indestructible. They are resistant to chemicals, heat, do not evaporate into air, do not dissolve in water, and are not broken down over time.

E3: Naturally occurring asbestos – Serpentine and Amphibole

The rocks are split into two categories – Serpentine and Amphibole. This is based on the way the fibres look under a microscope.

Serpentine	Amphibole	
Chrysotile	Amosite	Crocidolite
Silky texture and curly fibres	Straight needle-like fibres	
Can be eliminated by immune system (6 years)	Bio-resistant, and remain indefinitely in the lung. Thin fibres easy to lodge in persons lung	
99% of asbestos products today, 90% of which are building products	Rarer in NZ built environment	

Very few cases of cancer attributed

Majority of asbestos related diseases attributed

E4: Health Impacts

The inhalation of asbestos fibres in their smallest forms can affect the lungs, with exposure potentially leading to respiratory disease and cancers, as asbestos is a known carcinogen. The best controls are to either eliminate the hazard from the workplace, or maintain the asbestos in such a way that the fibre exposure is reduced to as low as reasonably achievable.

E5: Types of Asbestos

Within the built environment, asbestos can be classified into two main groups – friable and non-friable. It is noted that some types of non-friable material can become friable under certain circumstances (e.g. weathering, chemical damage etc.)

Friable ACMs are considered to be higher risk materials as they are more readily damaged and release more fibres into the air.

Friable: Materials that are in a powder form, or that can be crumbled, pulverised or reduced to a powder by hand pressure when dry.

Includes materials such as sprayed insulation, lagging to pipe work, etc.

Non-Friable: Materials such as asbestos cement sheeting, bituminous membranes etc. These are materials in which the asbestos fibres are firmly bound into a cementation or resinous matrix.

These ACMs are usually considered a low-level risk as the firm matrix prevents the asbestos fibres from becoming detached and entering the airborne environment.

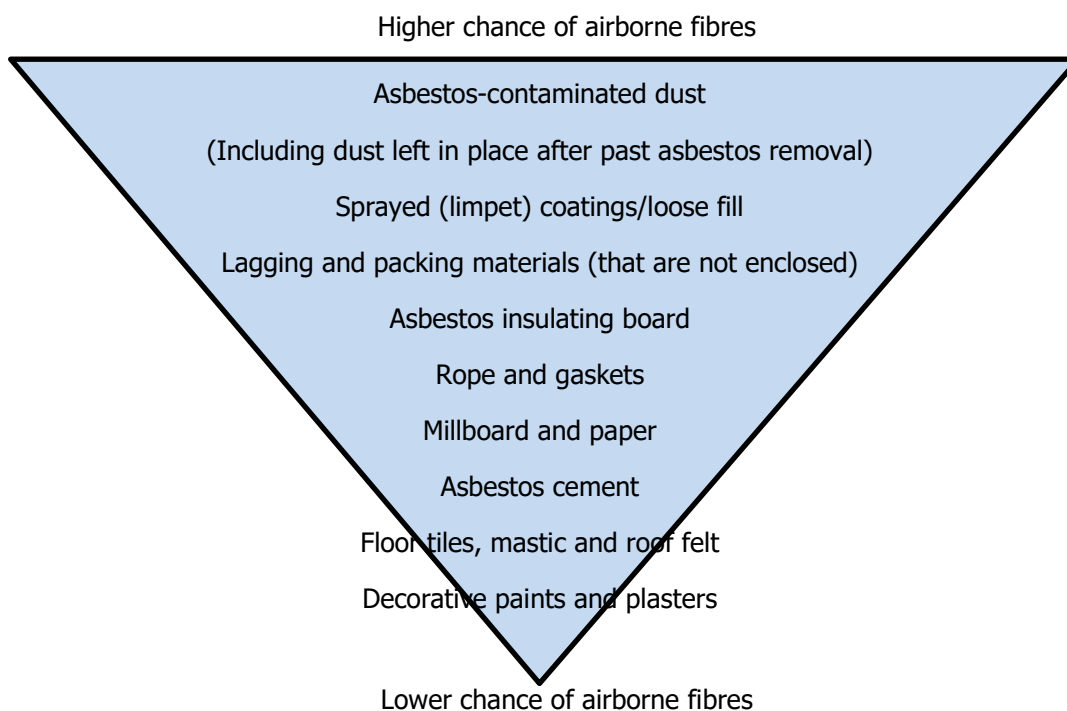
Appendix F: Ranks of Asbestos and Controls

F1: Ranks of different types of asbestos

If asbestos or ACM is in a good condition and left undisturbed, it is unlikely that respirable asbestos fibres will be released into the air and the risk to health is negligible. As such it is usually safer to leave the ACM in place and review its condition over time. However, if the asbestos or ACM has deteriorated, has been disturbed, or if asbestos-contaminated dust is present, the likelihood of airborne respirable asbestos fibres also increases.

The type of material that binds asbestos fibres will influence the potential for asbestos fibres to become airborne. For example, loosely bound sprayed coating is more likely to release fibres when disturbed than asbestos cement in which the fibres are firmly bound.

The following list ranks different types of asbestos according to the likelihood that airborne asbestos could be generated upon deterioration or disturbance. The potential health risk is higher for the items further to the top, but any of the materials listed can produce airborne asbestos fibres if disturbed.



F2: Control Measures

The control of asbestos hazards should utilise the most appropriate method applicable to the particular circumstances. Based upon the assessment of the condition of the asbestos, its potential to suffer damage or mechanically degrade, and the likelihood of exposing people to airborne asbestos, the following control strategies are relevant

- Leave in-situ: The identification of asbestos in a building does not automatically necessitate its immediate removal. Asbestos in a stable condition and not prone to mechanical damage can generally remain in situ. The asbestos will need to be inspected on a regular basis (every 12 months where a risk assessment indicates the need for reassessment) to ensure its integrity is maintained. Asbestos must be removed

under controlled conditions prior to demolition or refurbishment works that may disturb the asbestos

Removal: Removal of asbestos must be performed under certain controlled conditions, depending on the type of asbestos product to be removed. Removal is considered preferable to the other abatement options such as enclosure or encapsulation, as it eliminates the hazard. The removal process, however, does pose an increased risk to personnel engaged in the removal, and may result in increased airborne fibre levels in adjacent occupied areas if the removal program is not strictly controlled. Asbestos removal is generally an expensive exercise and can cause major disruptions to building occupants.

The removal of asbestos is considered appropriate when the asbestos product is deteriorated, has reached an unserviceable condition, or is at risk of being disturbed, and the other control options are not feasible.

Where asbestos is friable and not in a stable condition, and there is a risk to health from exposure, the asbestos should be removed as soon as practicable.

Where demolition or refurbishment works are to occur, the asbestos must be identified via an intrusive refurbishment/demolition survey, with samples taken, and any asbestos disturbed by the planned refurbishment/demolition works is required to be removed before the works can commence.

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Appendix G: Site Specific Asbestos Registers for all sites owned or leased by Rotorua Museum

Appendix G1: Oruawhata Drive, Government Gardens, Rotorua Asbestos Register

Photo	Sample Number	Site Address	Building	Risk Rating	Location & Comments	Hazardous Material	Recommendations	Material	Application	Condition	Friability	Sealed	Inspected Date	Laboratory Date or Method ID
	003-S	Rotorua Lakes Museum	Basement	N/A	Basement	NAD		Soil	Soil 1				12/02/2019	ProLabs
	004-S	Rotorua Lakes Museum	Basement	N/A	Basement	NAD		Soil	Soil 2				12/02/2019	ProLabs
	005-S	Rotorua Lakes Museum	Basement	N/A	Basement	NAD		Soil	Soil 3				12/02/2019	ProLabs
	006-S	Rotorua Lakes Museum	Basement	N/A	Basement	NAD		Soil	Soil 4				12/02/2019	ProLabs

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Photo	Sample Number	Site Address	Building	Risk Rating	Location & Comments	Hazardous Material	Recommendations	Material	Application	Condition	Friability	Sealed	Inspected Date	Laboratory Date or Method ID
	007-S	Rotorua Lakes Museum	Basement	Low	Basement	Chrysotile	Remove	Soil	Soil 5	1	Bonded	1	12/02/2019	ProLabs
	008-S	Rotorua Lakes Museum	Basement	N/A	Basement	NAD		Soil	Soil 6				12/02/2019	ProLabs
	009-S	Rotorua Lakes Museum	Basement	N/A	Basement	NAD		Soil	Soil 7				12/02/2019	ProLabs
	010-S	Rotorua Lakes Museum	Basement	N/A	Basement	NAD		Soil	Soil 8				12/02/2019	ProLabs
	011-S	Rotorua Lakes Museum	Basement	N/A	Basement	NAD		Soil	Soil 9				12/02/2019	ProLabs

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Photo	Sample Number	Site Address	Building	Risk Rating	Location & Comments	Hazardous Material	Recommendations	Material	Application	Condition	Friability	Sealed	Inspected Date	Laboratory Date or Method ID
	012-S	Rotorua Lakes Museum	Basement	N/A	Basement	NAD		Soil	Soil 10				12/02/2019	ProLabs
	013-S	Rotorua Lakes Museum	Basement	Medium	Basement	Crocidolite	Remove	Soil	Soil 11	1	Bonded	1	12/02/2019	ProLabs
	014-S	Rotorua Lakes Museum	Basement	N/A	Basement	NAD		Soil	Soil 12				12/02/2019	ProLabs
	15-S	Rotorua Lakes Museum	Basement	Medium	Basement by soil 3	Amosite, Chrysotile	Remove	Debris/Dust	Debris	1	Bonded	1	12/02/2019	ProLabs
	78-S	Rotorua Lakes Museum	Basement	Medium	Basement Basement	Chrysotile	Remove	Debris/Dust	Floor East Bay	2	Bonded	1	06/12/2018	ProLabs

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Photo	Sample Number	Site Address	Building	Risk Rating	Location & Comments	Hazardous Material	Recommendations	Material	Application	Condition	Friability	Sealed	Inspected Date	Laboratory Date or Method ID
	79-S	Rotorua Lakes Museum	Basement	N/A	Basement Basement	NAD, ORG, SMF		Debris/Dust	Floor Area 6				06/12/2018	ProLabs
	80-S	Rotorua Lakes Museum	Basement	N/A	Basement Basement	NAD, ORG		Rope	Ceiling Pipework				06/12/2018	ProLabs
	81-S	Rotorua Lakes Museum	Basement	N/A	Basement Basement	NAD, ORG, SMF		Dust	Area 8				06/12/2018	ProLabs
	82-S	Rotorua Lakes Museum	Basement	Low	Basement Basement	Chrysotile	Remove	Gaskets (compressed)	Pipe Gasket	0	Bonded	0	06/12/2018	ProLabs
	75-S	Rotorua Lakes Museum	Basement	N/A	Basement Basement	NAD, ORG, SMF		Cement Product	Ceiling				06/12/2018	ProLabs

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Photo	Sample Number	Site Address	Building	Risk Rating	Location & Comments	Hazardous Material	Recommendations	Material	Application	Condition	Friability	Sealed	Inspected Date	Laboratory Date or Method ID
	76-S	Rotorua Lakes Museum	Basement	N/A	Basement Basement	NAD, ORG		Cement Product	Floor Bay 9				06/12/2018	ProLabs
	77-S	Rotorua Lakes Museum	Basement	N/A	Basement Basement	NAD, ORG		Cement Product	Floor Bay 14				06/12/2018	ProLabs
	120-S	Rotorua Lakes Museum	Basement	N/A	Basement Basement	NAD, ORG, SMF		Dust	Floor 13-13				06/12/2018	ProLabs
	68-S	Rotorua Lakes Museum	Cafe Area	N/A	Ground Floor Mens Toilets	NAD, ORG		Cement Product	Wall Lining				05/12/2018	ProLabs
	68-X	Rotorua Lakes Museum	Cafe Area	N/A	Ground Floor Ladies Toilet	NAD, ORG		Cement Product	Walls				05/12/2018	ProLabs

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Photo	Sample Number	Site Address	Building	Risk Rating	Location & Comments	Hazardous Material	Recommendations	Material	Application	Condition	Friability	Sealed	Inspected Date	Laboratory Date or Method ID
	69-S	Rotorua Lakes Museum	Cafe Area	N/A	Ground Floor Cinema Theatre	NAD, ORG		Mastics	Floor				05/12/2018	ProLabs
	18-S	Rotorua Lakes Museum	Central Hall	N/A	External Exterior	NAD, ORG, SMF		Textured Coating	Wall				05/12/2018	ProLabs
	67-S	Rotorua Lakes Museum	East Wing	Medium	1st Floor Roof Cavity	Chrysotile	Remove	Debris/Dust	Ceiling Void	2	Friable	2	05/12/2018	ProLabs
	70-S	Rotorua Lakes Museum	North Wing	N/A	Ground Floor Bathroom Exhibit	NAD, ORG		Cement Product	Wall				05/12/2018	ProLabs
	71-S	Rotorua Lakes Museum	North Wing	N/A	Ground Floor Bathroom Exhibit	NAD, ORG		Cement Product	Wall Reder				05/12/2018	ProLabs

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Photo	Sample Number	Site Address	Building	Risk Rating	Location & Comments	Hazardous Material	Recommendations	Material	Application	Condition	Friability	Sealed	Inspected Date	Laboratory Date or Method ID
	72-S	Rotorua Lakes Museum	North Wing	N/A	1st Floor North Wing Attic	NAD, ORG		Dust	Swab				05/12/2018	ProLabs
	73-S	Rotorua Lakes Museum	North Wing	N/A	1st Floor North Wing Attic	NAD, ORG		Dust	Pipe Swab				05/12/2018	ProLabs
	74-S	Rotorua Lakes Museum	North Wing	N/A	1st Floor North Wing Attic	NAD, ORG		Cement Product	Wall Cladding				05/12/2018	ProLabs
	4-S	Rotorua Lakes Museum	North Wing	N/A	External North West Exterior	NAD, ORG		Putties	Window Putty				05/12/2018	ProLabs
	3-S	Rotorua Lakes Museum	North Wing	N/A	External North East Exterior	NAD, ORG		Putties	Window Putty				05/12/2018	ProLabs

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Photo	Sample Number	Site Address	Building	Risk Rating	Location & Comments	Hazardous Material	Recommendations	Material	Application	Condition	Friability	Sealed	Inspected Date	Laboratory Date or Method ID
	119-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	Basement North Extension Basement	NAD, ORG		Insulation	Electrical Wire				07/12/2018	ProLabs
	63-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	Basement Basement	NAD, ORG		Lagged Piping	Floor				04/12/2018	ProLabs
	83-S	Rotorua Lakes Museum	Rotorua Lakes Museum	Medium	Basement Basement	Chrysotile	Remove	Dust	Area 10	2	Friable	1	06/12/2018	ProLabs
	121-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	Basement Basement	NAD, ORG		Insulation	Area 11				06/12/2018	ProLabs
	84-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	Basement Basement	NAD, ORG		Dust	Area 12				06/12/2018	ProLabs

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Photo	Sample Number	Site Address	Building	Risk Rating	Location & Comments	Hazardous Material	Recommendations	Material	Application	Condition	Friability	Sealed	Inspected Date	Laboratory Date or Method ID
	85-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	Basement Basement	NAD, ORG		Cement Product	Wall Area 13				06/12/2018	ProLabs
	86-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	Basement Basement	NAD, ORG		Cement Product	Wall Area 14				06/12/2018	ProLabs
	87-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	Basement Basement	NAD, ORG, SMF		Dust	Wall and Floor Area 15				06/12/2018	ProLabs
	88-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	Basement Basement	NAD, ORG		Dust	Floor Area 16				06/12/2018	ProLabs
	89-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	Basement Basement	NAD, ORG		Bituminous Product	Packing Area 17				06/12/2018	ProLabs

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Photo	Sample Number	Site Address	Building	Risk Rating	Location & Comments	Hazardous Material	Recommendations	Material	Application	Condition	Friability	Sealed	Inspected Date	Laboratory Date or Method ID
	90-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	Basement Basement	NAD, ORG		Bituminous Product	Debris Area 18				06/12/2018	ProLabs
	91-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	Basement Basement	NAD, ORG		Dust	Floor Area 19				06/12/2018	ProLabs
	92-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	Basement Basement	NAD, ORG		Dust	Floor Area 20				06/12/2018	ProLabs
	93-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	Basement Basement	NAD, ORG		Dust	Floor Area 20				06/12/2018	ProLabs
	94-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	Basement Basement	NAD, ORG		Insulation	Pipework Area 22				06/12/2018	ProLabs

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	95-S	Rotorua Lakes Museum	Rotorua Lakes Museum	Medium	Basement Basement	Amosite, Chrysotile	Remove	Dust	Floor Area 23	2	Friable	1	06/12/2018	ProLabs
	96-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	Basement Basement	NAD, ORG		Dust	Floor Area 24				06/12/2018	ProLabs
	97-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	Basement Basement	NAD, ORG		Debris/Dust	Floor Area 25				06/12/2018	ProLabs
	98-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	Basement Basement	NAD, ORG		Insulation	Area 26 Pipework				06/12/2018	ProLabs
	99-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	Basement Basement	NAD, ORG, SMF		Cement Product	Debris Area 27				06/12/2018	ProLabs

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	100-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	Basement Basement	NAD, ORG		Dust	Floor Area 28				06/12/2018	ProLabs
	101-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	Basement Basement	NAD, ORG		Insulation	Pipework Area 29				06/12/2018	ProLabs
	102-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	Basement Basement	NAD, ORG		Dust	Floor Area 29				06/12/2018	ProLabs
	103-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	Basement Basement	NAD, ORG, SMF		Dust	Floor Area 30				06/12/2018	ProLabs
	104-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	Basement Basement	NAD, ORG, SMF		Dust	Floor Area 31				06/12/2018	ProLabs

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	105-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	Basement Basement	NAD, ORG, SMF		Dust	Floor Area 33				06/12/2018	ProLabs
	106-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	Basement Basement	NAD, ORG, SMF		Dust	Floor Area 34				06/12/2018	ProLabs
	107-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	Basement Basement	NAD, ORG, SMF		Dust	Floor Area 35				06/12/2018	ProLabs
	108-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	Basement Basement	NAD, ORG		Dust	Floor Area 36				06/12/2018	ProLabs
	109-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	Basement Basement	NAD, ORG		Dust	Floor Area 37				06/12/2018	ProLabs

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	110-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	Basement Basement	NAD, ORG		Dust	Floor Area 38				07/12/2018	ProLabs
	111-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	Basement Basement	NAD, ORG		Dust	Floor Area 39				07/12/2018	ProLabs
	112-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	Basement Basement	NAD, ORG		Dust	Floor Area 40				07/12/2018	ProLabs
	113-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	Basement Basement	NAD, ORG, SMF		Dust	Floor Area 41				07/12/2018	ProLabs
	114-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	Basement Basement	NAD, ORG		Dust	Floor Area 42				07/12/2018	ProLabs

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	115-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	Basement Basement	NAD, ORG		Dust	Floor Area 43				07/12/2018	ProLabs
	116-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	Basement Basement	NAD, ORG		Dust	Floor Area 44				07/12/2018	ProLabs
	117-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	Basement Basement	NAD, ORG, SMF		Dust	Floor Area 45				07/12/2018	ProLabs
	118-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	Basement Basement	NAD, ORG		Dust	Floor Area 46				07/12/2018	ProLabs
	65-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	Ground Floor Cafe West wall	NAD, ORG, SMF		Debris/Dust	Wall				04/12/2018	ProLabs

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	64-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	Ground Floor Kitchen	NAD, ORG		Vinyl tiled	Floor				04/12/2018	ProLabs
	66-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	Ground Floor Cafe stage storage	NAD, ORG		Bituminous Product	Stage storage				04/12/2018	ProLabs
	59-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	1st Floor Central hall	NAD, ORG		Cement Product	Debris				04/12/2018	ProLabs
	60-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	1st Floor Elevator shaft	NAD, ORG		Vinyl tiled	Wall				04/12/2018	ProLabs
	61-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	1st Floor Old kitchen	NAD, ORG		Vinyl tiled	Floor				04/12/2018	ProLabs

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	62-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	1st Floor Old kitchen	NAD, ORG		Bituminous Product	Secondary wall				04/12/2018	ProLabs
	56-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	3rd Floor Attic 1	NAD, ORG		Cement Product	Wall				04/12/2018	ProLabs
	57-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	3rd Floor Attic 1	NAD, ORG		Cement Product	South Wall				04/12/2018	ProLabs
	58-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	3rd Floor Attic 1	NAD, ORG		Bituminous Product	Pipe work				04/12/2018	ProLabs
	50-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	4th Floor Attic 1	NAD, ORG		Bituminous Product	Ceiling				04/12/2018	ProLabs

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	51-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	4th Floor Attic 1	NAD, ORG		Bituminous Product	Sump surround				04/12/2018	ProLabs
	53-S	Rotorua Lakes Museum	Rotorua Lakes Museum	Low	4th Floor West End Attic	Chrysotile	Remove	Cement Product	Debris	1	Bonded	1	04/12/2018	ProLabs
	54-S	Rotorua Lakes Museum	Rotorua Lakes Museum	Low	4th Floor West end attic	Chrysotile	Remove	Cement Product	Fascia	0	Bonded	1	04/12/2018	ProLabs
	S119-X	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	4th Floor Attic 2	NAD, ORG		Insulation	Cable				04/12/2018	ProLabs
	55-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	4th Floor Attic 2	NAD, ORG		Debris/Dust	Pipe work				04/12/2018	ProLabs

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	52-S	Rotorua Lakes Museum	Rotorua Lakes Museum	N/A	5th Floor Look out	NAD, ORG		Bituminous Product	Insulation				04/12/2018	ProLabs
	04-S	Rotorua Lakes Museum	South Wing	N/A	External Exterior South East	NAD, ORG		Cement Product	External Wall				05/12/2018	ProLabs
	17-S	Rotorua Lakes Museum	South Wing	N/A	External South West Exterior	NAD, ORG		Textured Coating	Wall				05/12/2018	ProLabs
	1-S	Rotorua Lakes Museum	South Wing	N/A	External South West Exterior	NAD, ORG		Putties	Window putty				05/12/2018	ProLabs
	2-S	Rotorua Lakes Museum	South Wing	N/A	External South East Exterior	NAD, ORG		Putties	Window Putty				05/12/2018	ProLabs