CRITICAL HAZARDS & ASSOCIATED RISK MANAGEMENT STANDARD FOR ASBESTOS

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Spark Asbestos Risk Management Standard

This standard outlines the methods by which Spark will manage the risks associated with exposure to asbestos on the Spark network. This document applies to all Spark worksite and covers Spark worker's clients, visitors, suppliers and third-party contractors.

Contents

1. Overview

1.1. Purpose

The purpose of this standard is to ensure that so far as is reasonably practicable, steps are taken to eliminate or minimise exposure of a person at the workplace to airborne asbestos fibres.
This document shall be reviewed on an annual basis.

1.2. Legal Overview

This Critical Hazard and Associated Risk Standard for Asbestos has been specifically developed to give the reader a comprehensive overview of how Asbestos is managed at Spark and meet with their obligations under current H&S legislation.

Recently, new asbestos regulations were introduced which describe the requirements for the removal and management of asbestos or asbestos containing materials (ACM), by applying a suitable Asbestos Management Process and where applicable, developing and introducing 'Asbestos Management Plans' across our worksites and worksite portfolio. Asbestos shall be managed within Spark in accordance with the documents listed below in section 1.3

1.3. Related Legislation and Best Practice

Health and Safety at Work Act 2015
Health and Safety at Work (Asbestos) Regulations 2016
Worksafe Approved Code of Practice, ACOP: Management and Removal of Asbestos 2016
Worksafe Good Practice Guide for Conducting Asbestos Surveys
Spark H&S Supplier Policy 2017

1.4. Scope

This standard document outlines the standard and framework that Spark will put in place to identify and manage any risks associated with Asbestos located on Spark worksites and that of its subsidiaries.
It applies to all Spark worksites and covers Spark people leaders and employees, suppliers, service providers, internal/ external project managers (PMs), delivery integrators, external consultants, designers, external visitors, clients, contractors and third-party contractors.

1.5. Definitions of Terms Used

Definition of terms - please see appendices at end of document.
Competent Person - See definition of: Section 6.2.4
Worksite - New term: Spark Assets and Property Portfolio are to be called worksite.
Existing Asbestos Register- will be combined into the Asbestos Management Plan.

2. Document Details

2.1. Document Ownership

Prepared by Paul Uttley Date: Sept 2017

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Approved by Mark Beder Date: Sept 2017

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2.2. Document Version History

VERSION	DATE	PAGES	DESCRIPTION	AUTHORISED
1	10 July 2017	New document written	Written by Group H&S Manager	Paul Uttley
1	15 Aug 2017	All pages	Review & feedback	Ron Brown
1	15 Aug 2017	All pages	Review & feedback	Joel Gibb
1	15 Aug 2017	All pages	Review & feedback	Rob Berrill
1	19 Aug 2017	All pages	Review & feedback	Marc O'Leary
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1.1	28 Aug 2017	Final	Published Final	Paul Uttley

2.3. Roles and Responsibilities

Refer to the table below for roles and responsibilities:

When more than one PCBU (entity) has the same health and safety duties in an asbestos matter (e.g. overlapping duties) Spark will make sure so far as is reasonably practicable that they consult, cooperate and coordinate with one another over the same matter. This will help avoid unnecessary duplication of effort, and help prevent gaps in managing Asbestos related risks. Further, this approach will help Spark stakeholders reach a common understanding and outline clear roles and responsibilities and actions and monitor one another to make sure everyone is doing what they agreed.

Role	Responsibility
Spark N.B Spark means all entities and people who also have responsibilities involved in the safe removal and management of asbestos (refer to sec 1.4 and roles below)	• Take reasonable steps to check records of any previous asbestos surveys and registers relating to the building/structure, original building plans (if available), relevant specifications and soil type and environmental reports to determine if there is any asbestos present at the Spark worksite • Develop suitable Asbestos Management Plans (where applicable) in consultation with a *competent asbestos consultant* to make sound risk assessment and conversant decisions on removal, enclosure, encapsulation, sealing or deferral of Asbestos, ACM or ACD • Make sure that any asbestos removal work is undertaken by a licensed asbestos removalist who is licensed for that type of work (class A or B) • Limit access to the asbestos removal area and make sure clearance inspections and air monitoring is conducted where work requiring class A licenses removal is being carried out • Make sure that people at a Spark worksite are informed about the asbestos removal and then provided with relevant information • And make sure that other people within the immediate vicinity are informed about the asbestos removal
Spark Health and Safety Team	• Ensure that the Health and Safety requirements of this standard and risk assessment are implemented and monitored through participation and consultation with Spark Management and recognised stakeholders • Assist Spark Management and *competent asbestos consultant* in the development of Asbestos Management Plans
Spark Procurement Team	• Ensure that a suitably registered, competent and reputable contractor and sub-contractor is selected and engaged through sound pre-qualification for any type asbestos related works • Liaise with the relevant Spark Business Unit, Project Manager and Independent Asbestos Consultant regarding the suitable competent selection of any Asbestos contractor prior to commencing works
Manager, managing asbestos work on a Spark site (including: Spark Property Asset Manager, Facilities Manager, Internal PMs, Delivery Integrators, External PMs engaged by property and service companies)	• Where the evaluation process and analysis of discovered materials has revealed a likelihood of exposure to asbestos fibres, then ensure that all reasonable steps are taken so that workers and others are protected. • Work closely with competent Asbestos Consultant and review any Asbestos Removalist, or third-party contractor involved in the encapsulation, removal, monitoring and disposal of Asbestos, ACM or ACD • Provide a point of escalation for unplanned asbestos identification or disturbance
Competent Asbestos Consultant (Competent Person Section 6.2.4)	• Provide Spark with records of their level of competency: acquired through training and experience, the knowledge and skills of relevant asbestos removal industry practice and whom hold a certificate in relation to training specified by Worksafe and tertiary qualification in occupational health and safety, occupational hygiene, science or environmental health to assist Spark management in the following: • Development and reviewing Asbestos Management Plans across the Spark worksite portfolio • Review Asbestos Removal Control Plan and risk assessments submitted by licensed asbestos removalist prior to the start on any type of asbestos removal works

Role	Responsibility
	• Ensure the control of asbestos hazards and risk is the most appropriate method for the circumstances • Ensure that any written asbestos management process includes all options such as removal, enclosure, encapsulation or sealing, and is based upon the assessment of the condition and location of the asbestos, the possibility of further damage or deterioration and the potential for further exposure to personnel from airborne asbestos fibres • Advise when air monitoring is required • Assist Spark in the management of asbestos related works as and when required. (e.g. demolition and refurbishment works)
Licensed Asbestos Removalist	Submit to Spark a suitable Asbestos Removal Control Plan and Risk Assessment process for review by Spark and Competent Asbestos Consultant - prior to undertaking any type of asbestos works at a Spark worksite. (refer to section 6.1.2: Content of Asbestos Removal Plan) Requirements for licensed asbestos removalist ○ Restrict access to the asbestos removal area ○ Make sure a supervisor is present or readily available ○ Provide appropriate training records and make sure the asbestos supervisor and removal workers have been trained to the relevant units of competencies associated with the class of asbestos removal ○ Make themselves aware of any Spark worksite Asbestos Management Plan and documentation ○ Notify Worksafe before work starts and if respirable fibres meet or exceed 0.02 fibres/ml during the work ○ Display suitable signage at the asbestos work area ○ Make sure barriers delineate the asbestos removal area ○ Make sure appropriate decontamination facilities, waste containment and disposal procedures are in place ○ Make sure air monitoring is conducted for class A removal ○ Make sure clearance inspections and certificates are conducted and issued ○ Make sure appropriate and adequately maintained equipment is used during asbestos removal e.g. negative air units ○ Work closely with, cooperate and carry out any reasonable request for any urgent rectification and/or remedial actions as requested by the Spark Project Manager, independent Project Manager & competent asbestos consultant

3. Asbestos Overview

This section provides a general introduction to asbestos at Spark.

3.1. Asbestos History

From 1984, it became illegal to import blue and brown asbestos into New Zealand in its raw form. However, asbestos containing products (also known as ACM) in the country at the time were used until supplies ran out. In summary, any New Zealand building which was built, altered, refurbished from the mid 1940 until mid-1980s are likely to contain ACM; and buildings built after 1 January 2000, are less likely to contain ACM, but some buildings built after this time may contain ACM.

While asbestos building materials and products have been largely replaced by alternatives, there remains the problem of the removal of existing asbestos, where encapsulating and sealing is not practicable, e.g. refurbishment and demolition work. The location of asbestos and its identification can be difficult since its appearance may be changed by surface coatings and heat. It may also be enclosed by or beneath other materials.

3.2. Asbestos Health Issues in New Zealand

In 2010, around 170 people died of asbestos-related diseases in New Zealand, our single biggest cause of work-related disease deaths. Breathing in airborne asbestos fibres is a serious risk to health. Once the fibres are breathed in, they can lodge in the lungs causing Pleural Plaques, Pleural Thickening, and may cause diseases like Asbestosis, Lung Cancer and Mesothelioma. Most asbestos-related diseases take around 20 years before their symptoms start to show.

3.3. Asbestos Types and Products

There are many different types of asbestos. The most common ones for ACM products are chrysotile (white), amosite (brown) and crocidolite (blue) etc. which contain varying degrees of risk to people in the workplace. As detailed above, until the mid-1980s asbestos was often use as a fire retardant and insulation. Good examples are:

• Insulating board	• Friction linings
• Fire doors	• Lagging around pipes
• Sprayed insulation	• Brake linings
• Floor covering (vinyl tiles)	• Decorative coating

Refer to appendices for photographic examples of types and locations of asbestos and ACM typically present or assumed to be present across the Spark worksite *portfolio.*

3.4. Asbestos States

Asbestos comes primarily in two states: Friable and Non-Friable. Friable asbestos has the highest risk associated with it and therefore has stricter controls governing it.

3.4.1. Friable Asbestos

Friable Asbestos is asbestos that under ordinary conditions can be easily crumbled (i.e. has the potential to release asbestos fibres). Work on friable asbestos is **class A licensed work** under law and **notifiable** to Worksafe NZ. Friable asbestos work shall only be completed by an appropriately Licensed Asbestos Removalist.

3.4.2. Non- friable Asbestos

Non-friable Asbestos presents a suitably controlled hazard, unless disturbed through the process of drilling, cutting, pulverising, or natural disaster, although sometimes non-friable Asbestos can become friable due to deterioration over time and classification of a material should be carried out by a competent person. (e.g. Independent Asbestos Consultant) Any work carried out on over 10sqm of non-friable asbestos for the duration of a project shall only be carried out by a PCBU that holds a **Class B license** for asbestos work.

4. Asbestos Risk Management

4.1. Overview: Plan Do Check Act (PCDA)

The following: PCDA system is a basic yet effective risk management system used for continual improvement for managing asbestos; and will be adopted by Spark to provide an easy to follow sequence and overview of their current list of Critical Hazards and Associated Risk Management Standards. For this PCDA – Asbestos Management Standard. The sequence and flow chart illustrated within section 1.2 will be used for its application at the following two levels:

1. The planning and risk assessment **(Plan)** of identified asbestos, asbestos containing material(ACM) or asbestos containing dust (ACD) at a Spark Worksite **(Plan)**
2. The removal, enclosure or encapsulation of Asbestos, ACM or ACD at a Spark Worksite **(Do, Check, Act)**

Planning

The purpose of planning in the PDCA system is to establish a risk profile of existing asbestos, ACM or ACD across Sparks worksites and types of remedial work to be applied; and then agree on the appropriate asbestos risk controls. This will require a Risk Assessment which is the Spark asbestos management process (refer to sec 5.1) to identify the nature and extent of the risks, and the possible options for control measure.

Standards (legal and other requirements)

Legal and other requirements (e.g. SWI, COP, Guidelines and Standards etc.) should be identified and applied, since agreed risk control measures are unlikely to be appropriate and effective if they do not satisfy the same requirements.

Do

This part of the PDCA approach consists of implementing the asbestos risk controls measures agreed in consultation during the planning stage of the same process. This would include documenting and applying processes such as task specific Risk Assessment and Safe Work Method Statements, Job Safety Analysis and daily pre-start meetings.

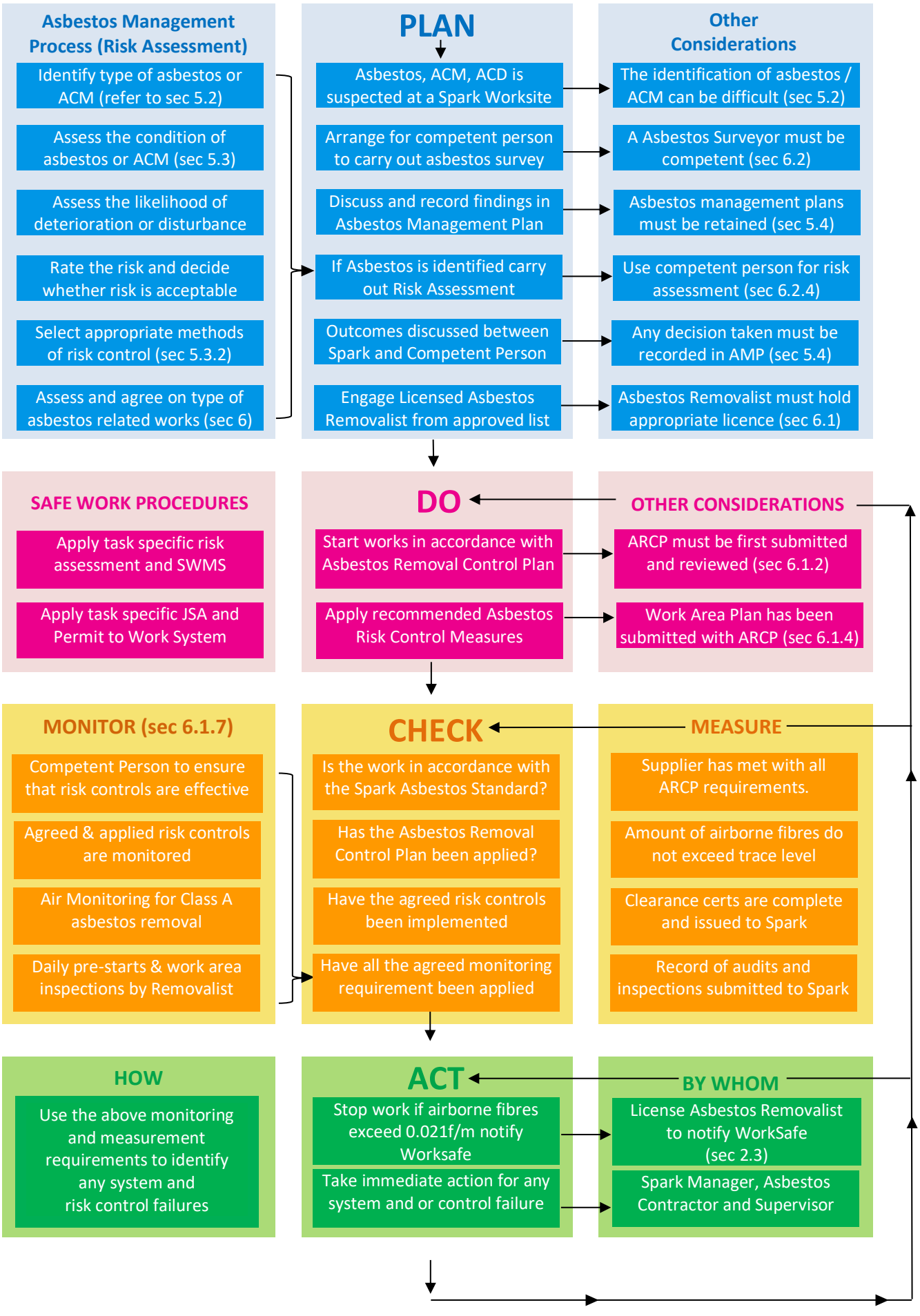
Check

The minimum requirement for checking is monitoring that the risk controls are effective, realistic and practical in their execution, and have met with the agreed task specific risk controls as detailed within the approved Asbestos Removal Control Plan submitted by the engaged competent Asbestos Contractor (e.g. licensed asbestos removalist)
However, other essential types of monitoring will include ongoing PDCA system audits by Spark (and assisted by competent Asbestos Consultant), Air Monitoring, Daily Pre-Start Meetings and Work Area Inspections by the engaged competent Asbestos Contractor.

Act

The Act element is achieved by regularly reviewing and acting on all issues raised within the Check (e.g. monitor and measure) element of the PDCA Sequence, and discussing with all those involved within the same process (e.g. Do and Check): *What is and what isn't working? Are current controls adequate to protect people from exposure and harm?*
Plan Do Check Act

4.2. Plan Do Check Act



5. Managing Asbestos

This section outlines how asbestos risks are managed on Spark's worksites. In general terms, Spark controls asbestos risks as per the management process and **Diagram 1** below:

5.1. Asbestos Management Process

The following Asbestos Management Process is to be applied in all cases where Spark has known, or assumes that Asbestos or ACM, ACD is present.

Diagram 1

5.2. Identify

Spark has a responsibility to ensure, so far as is reasonably practicable that asbestos and asbestos containing material (ACM) present at their worksites, that relate to the risk of exposure to respirable asbestos fibres is identified as the first step of the above process. This excludes and does not apply to soil in the workplace unless there is reasonable cause for Spark to suspect contaminated asbestos soil is present.

In most cases, ACM should not pose a health risk unless it is abraded or machined – such actions would release asbestos containing dust (ACD). The condition of any identified asbestos or ACM or assumed to be present on Spark worksites will be determined to be friable or non-friable by a competent Asbestos Consultant and recorded into the respective Asbestos Management Plan for each Spark worksite where applicable.

Spark will engage a competent person e.g. a *competent asbestos consultant or surveyor* (AKA *assessor* refers sections 2.3, 6.2.4) to assist management in the identification and condition of asbestos or ACM present across our worksites and to ensure and conduct a more in-depth identification process. Where practicable, Spark management will assist the same consultant by establishing when the building was built, if any refurbishment or additions were made to the building before 2000, what materials were used to build the building, visually inspect the worksite to identify asbestos, ACM and inaccessible areas. Any such person will have the knowledge and skills to identify the presence of asbestos or ACM through in house Spark Asbestos Training.

Where Spark cannot identify asbestos at their worksite, but it reasonably believes that material is asbestos or ACM, they will assume asbestos is present, by following the same requirements as above e.g. assessing its condition by sampling and recording information about its assumptions and controls.

Asbestos will be deemed as no further risk where Spark genuinely believes on reasonable grounds that asbestos is not present and where confirmation has been given that all asbestos was removed from the workplace by a Competent Person **and** clearance certification issued to Spark; **and** where a previous survey by a person suitably qualified and experienced in asbestos identification did not find any asbestos or ACM.

5.2.1. Sampling

Spark will engage a competent person to take asbestos or ACM samples for analysis at an accredited elaborate. Spark are aware that a correctly conducted sampling process is essential for maintaining full risk control across any of their worksites and within occupied buildings, and said Competent Person will take the required samples from the respective areas.

Spark has carried out a series of full management surveys on their worksites and property. The results of these surveys are captured in Spark's Asbestos Management Plan and are available on site. Details of potential hazards, risks and controls relating to asbestos shall be clearly communicated to workers, contractors and site visitors via the site specific Asbestos Site Hazard Sheets, which will be combined into the Spark Asbestos Management Plan.

Note: Not all areas and plant of a given worksite or occupied building are available for inspection and/or testing. Therefore, Spark cannot guarantee that 100% of asbestos has been identified through planned asbestos surveys.

5.3. Assess

Spark has a responsibility to ensure that a person's exposure at the workplace to friable asbestos fibres is eliminated so far as is reasonably practicable. In general, if the ACM is in good condition and undisturbed, it is unlikely that airborne asbestos fibres will be released into the air. However, if the ACM deteriorates or is disturbed (or if there is ACD present), there is an increased likelihood airborne asbestos will be released.

Once Spark have identified or assumed the presence of asbestos or ACM/ACD at one of their worksites, they will carry out a suitable risk assessment process with assistance from a competent asbestos consultant to assess the likelihood of exposure to any airborne asbestos fibres.

Spark will make sure they assess the identified (or presumed) asbestos by considering:

- The condition of the asbestos.
- Likelihood of deterioration.
- Likelihood of disturbance through routine work practices, or natural disasters.
- Whether it is an area where workers are likely to be exposed to the Asbestos or ACM.

5.3.1. Testing

When it is necessary to know whether a substance is or is not asbestos, the substance will be tested by an accredited laboratory.

Sampling (e.g. removal of samples from a site) shall only be conducted by a person deemed competent. Testing of samples shall be conducted by a laboratory recognized by the International Accreditation New Zealand on behalf of the Testing Laboratory Registration Council.

The testing shall be by a method specified by a New Zealand accredited laboratory for the identification of Asbestos. All pertinent testing results shall be recorded in the Spark Asbestos Management Plan.

5.3.2. Control

When the level of risk and exposure has been assessed, Spark will make sure, so far as is reasonably practicable that they eliminate or minimise the risk by applying suitable and industry recognised controls using a systematic approach always.

In all instances, Spark will eliminate asbestos from their worksite portfolio as their first choice of control, and where this is not reasonably practicable to do so, then Spark will minimise the asbestos risks by systemically applying the following controls:

- Removal
- Enclosure
- Encapsulation
- Sealing
- Deferral

- **Enclosure**

Where practicable, Spark will apply enclosure controls by creating a physical barrier that prevents access to any identified or assumed asbestos or ACM in the workplace and therefore minimising the potential for exposure to airborne fibres. Spark will make sure the enclosure is signposted and specifically set up to provide access to the asbestos so it can be periodically inspected for its condition and recorded in the Asbestos Management Plan for each respective worksite.

- **Encapsulation**

Where Spark have identified asbestos or ACM and the original bonded asbestos state is still considered to be intact and where it would create a greater risk to remove it, then Spark will consider encapsulation for the same asbestos or ACM. This will require a contractor trained and experienced in working with asbestos coating the ACM with a product that penetrates and hardens the material.

- **Sealing**

The last and most least effective control method deployed by Spark for controlling airborne asbestos fibre release would be applying a sealing coat across the ACM surface. This method will only be used as an interim control until a more effective control such as removing or enclosure can be out into place.

- **Deferral**

Where the risk of asbestos exposure is negligible, and asbestos or ACM is inaccessible and fully contained, or is stable and unlikely to be damaged, then Spark will take no immediate action now. However, the identification and location of said asbestos or ACM will be recorded in the Asbestos Management Plan and accompanying Asbestos Risk Register, and ongoing assessment and monitoring will still be applied.

5.4. Asbestos Management Plan

The current Asbestos Register, will now form part of the proposed Spark Asbestos Management Plan. Site Specific Asbestos Information Sheets and Asbestos Action Plan will also be combined into the Asbestos Management Plan.

Where Spark have identified asbestos at any worksite across their worksite portfolio (including in soil, or naturally occurring asbestos) - then a specific Asbestos Management Plan will be developed and applied to that specific worksite.

Each Spark worksite Asbestos Management Plan will give clear concise information in the following format:

- The identification and location of any asbestos or ACM and where signs and labels are located
- Brief description around the decisions and reasons for making those the decisions for managing and controlling the asbestos in the workplace
- Worksite Asbestos Register
- Procedures for detailing incidents or emergencies involving asbestos ACM that might occur at the worksite
- Competency and training records of Spark management – where applicable
- Information on asbestos risk for that worksite, how it was assessed and how the controls were agreed upon and applied
- Processes e.g. information about priorities, dates for future removal, reviews and any circumstances that could impact on the timing of planned actions.
- Details of people with key responsibilities under the plan
- Timetable for review of records and plan
- Records of air monitoring, clearance certificates - if applicable

Spark will make sure either a hard or electronic copy of the Spark Asbestos Management Plan is readily available, and where applicable kept at the respective Spark worksite, and make copies available to workers and other PCBUS who have worked, are working, or plan to work at the Spark worksite, and their representatives.

5.4.1. Signage

If it is known that a worksite contains asbestos, then appropriate signage shall be put on the entrance of the worksite.

Figure 1: Asbestos Signage

5.4.2. Compromised Worksites

If a Spark worksite is known to contain an ongoing and present risk of Asbestos exposure, the following process will be put in place:

Step	Action
1	Access to the site will be disabled where practicable
2	Temporary signage indicating an Asbestos threat will be installed at primary entry points (the signage will include directions to contact SASOC to obtain access). SASOC: Spark Access Security Ops Centre
3	SASOC to deliver site Asbestos script (developed by the Spark Asbestos Incident Crisis Team: as outlined in the process covering Asbestos Incident Handling)
4	Standard access protocols to building will be re-instated when the Asbestos issue has been resolved (e.g. clearance certificates have been issued)

Decontamination facilities must be made available for anyone performing work at a compromised site.

5.5. Incident Reporting and Emergency Procedure

5.5.1. Accidental discovery or damage to Asbestos or ACM

1. In all situations, upon discovering or damaging existing or assumed asbestos or ACM a 'stop work' will be called by Spark and all work activities will cease within immediate vicinity of discovered material.

2. In the event of the above, immediately notify relevant Spark management and H&S team as detailed with the site Asbestos Management Plan and complete an online incident/ hazard form in accordance with Spark procedure. report hazard here

3. Access will be restricted to the site to prevent people from entering the immediate area and to prevent any further disturbance of asbestos materials by means of the following controls where practicable:
   - securing door access
   - installing temporary barriers
   - taping off access points and displaying suitable signage

4. Under no circumstance, will any person be allowed to access to such restricted area unless they have been granted permission, appropriately trained, being inducted into an agreed safe system of work and wearing the correct PPE / RPE as identified through a suitable risk assessment.

5. In the event of asbestos exposure, or assumed exposure to any person a Spark Asbestos Incident Crisis Team (refer to appendices – *definition of key terms*) will be immediately formed and act accordingly.

6. The Asbestos Incident Crisis Team will arrange for a competent person to conduct a survey and expert risk assessment and advice on appropriate asbestos control strategies for management and control of any friable asbestos fibres.

7. If the asbestos or ACM sample is positive, then a Licensed Asbestos Removalist will be engaged to undertake asbestos removal or other types of asbestos related work as required. A risk assessment and Asbestos Removal Control Plan will be developed and reviewed in consultation with Spark and a *competent asbestos consultant*. Note that, in all instances the *asbestos consultant / surveyor* will be independent of any *licensed asbestos removalist* contractor.

8. Spark will continue to work with the licensed asbestos removalist during any removal or clean-up operations and ensure ongoing communication is maintained throughout, until clearance certificates are issued; and all required details are recorded into the relevant worksite Asbestos Management Plan.

   Refer to the flowchart process document at end of this document: " Asbestos Incidient Management and Communications Process"

5.5.2. Asbestos Exposure

1. In the event of asbestos or potential asbestos exposure a request will be made for a list all persons (e.g. staff, supplier, workers and visitors to the same area) who have or may have been exposed to respirable asbestos fibres to be collated and made ready for future communication.

2. Each supplier and individual will be given both verbal and written confirmation in a sensitive manner in relation to the location, dates and level of exposure during their visit to the relevant worksite.

3. Where exposure has been identified by a competent person. Then all individuals will be offered an opportunity to participate in asbestos education sessions delivered by a qualified representative from a reputable Occupational Health Screening establishment.

4. During the same educational sessions, all attendees will be offered baseline medical screening if assessed as essential by the same qualified person and specialised screening establishment.

5. Where baseline medical screening is carried out, the individual will be requested to complete the Worksafe NZ process for being placed on the Worksafe Asbestos Register.

5.6. Review of Asbestos Management Plan

The relevant Spark Property Asset Manager will review and if necessary revise the Asbestos Management Plan every five years, or when any of the following applies:

- When Asbestos or ACM is unintentionally discovered or disturbed, including by natural disaster
- When recorded asbestos is removed, encapsulated, enclosed or sealed
- Asbestos controls are reviewed
- The plan has been deemed no longer adequate for managing the asbestos

5.6.1. Re-Inspections

For Spark owned or leased properties, the worksite shall be inspected by the relevant Spark Property Asset Manager, Spark H&S Advisor and accompanied by a *competent asbestos consultant* for any high-risk sites i.e. those that contain high risk friable products.

The frequency of the re-inspections shall be determined by Spark with the guidance from the competent Asbestos Consultant Person, based on the condition and location of the asbestos. Each site must have a re-inspection performed on it at least once a year. Annual re-inspections will capture any recommendations for both immediate and ongoing actions. The person performing the re-inspection shall review the worksite Asbestos Management Plan and check for disturbance on any previously identified asbestos and investigate any material changes to the site that have occurred since the last inspection and determine the appropriate course of action.

All re-inspections and their results shall be recorded in the worksite Asbestos Management Plan.

6. Performing Asbestos-Related Work

In all instances, Spark will make sure that any asbestos removal work is carried out by a *licensed asbestos removalist* who is licensed for that type of work (e.g. class A - B). This will be applicable for any amount of friable asbestos, or ACM (Asbestos Containing Material) or ACD (Asbestos Containing Dust), or any amount of Friable Asbestos, ACM or ACD associated with the removal of any amount of non-friable asbestos of ACM.

During any asbestos removal works Spark will limit access to removal areas and make sure that clearance inspections and monitoring is always conducted where any work requiring a class A licence is being carried out. Spark will also make sure that staff, suppliers and visitors at the asbestos removal site, are duly informed about the same works and provided with appropriate information, instruction and training where applicable; and take reasonable steps to inform all other persons within the immediate vicinity of any such works.

6.1. Licensed Asbestos Removalist - Requirements

6.1.1. Supervision

When licensed asbestos work is being carried at a Spark worksite, it must be supervised by a competent supervisor permitted under an Asbestos Removal Licence for the appropriate type of work. Where class A work is being undertaken, then the same supervisor must always be present at the asbestos removal area; and for class B removal depending of the level of risk, the same level of supervision will be still made available within vicinity of the same works and readily available.

6.1.2. Asbestos Removal Control Plan

In all circumstances, Spark will request an Asbestos Removal Control Plan be developed and submitted by the *licensed asbestos removalist*. The same plan will be reviewed by Spark for suitability in consultation with the engaged *licensed asbestos removalist* before the work starts.

The *licensed asbestos removalist* is to make sure that each plan is made specific to the Spark worksite and location of any proposed asbestos removal; and identifies the specific control measures they will use to make sure their workers and other people (e.g. Spark staff and visitors) are not put at risk when carrying out asbestos removal works.

Although this type of plan is specifically for licensed asbestos removal work. However, the same type of plan may be required for specific unlicensed removal work upon request from Spark.

6.1.3. Content of Asbestos Removal Control Plan

The Asbestos Removal Control Plan will include the following:

1. Work Area Plan (see specific requirements below)
2. Risk assessment and recommended controls
3. Details of how the asbestos removal will be carried out
4. Details of the asbestos to be removed e.g. location, type and condition
5. A detailed description of the asbestos removal area for the work and any air monitoring points
6. Details of the means of transport and disposal
7. Emergency contact names and procedures
8. Worker details including training records and certificates of supervisors
9. Worksafe notification for licenced removal works
10. Details of how the removalist will consult and commutate with their workers, and other PCBUs including Spark and their engaged Independent Asbestos Assessor

6.1.4. Work Area Plan (WAP)

Spark will make sure that any submitted Asbestos Removal Control Plan includes a WAP for overall clarity of location and access control. The same WAP will include the following items:

- Demarcation of asbestos removal areas including entrances and exits
- Location of warning signage and means to prevent unauthorised access
- Location of demarcation units where relevant
- Location of enclosures where relevant
- The location where asbestos waste is contained

6.1.5. Demolition or Refurbishment related work at Spark

Anyone performing non-routine maintenance (e.g. demolition or refurbishment) work on Spark worksites has a responsibility to ensure that asbestos is not disturbed during the completion of the proposed works. This is accomplished through the following:

- Reviewing the Spark Asbestos Management Plan and asbestos management survey to identify areas of known or presumed asbestos and access limitations encountered during the survey
- Both demolition and refurbishment surveys are to be carried out with the assistance of an Independent and competent Asbestos Consultant / Assessor
- Performing a Refurbishment and Demolition Survey for any areas where ACM may not have been identified during the management survey due to the limitations of the survey type
- Organising the removal of any asbestos that could be disturbed during the planned works
- Only utilising people who have the required competencies necessary to complete the assigned tasks
- Appropriate work equipment and PPE selection

Refer to the *Performing Demolition or Refurbishment Work Process* (held on Sparksafe Repository) for additional information.

6.1.6. Planned Work

Anyone performing any work on Spark worksites which has the potential to disturb Asbestos or ACM (e.g. anything which penetrates the building envelope) must first perform a refurbishment and demolition survey. This new survey, in conjunction with the original management survey will allow the supplier (PCBU) undertaking work on Spark's behalf to make an informed assessment of the asbestos risks involved in the proposed work. **Note**: All demolition and refurbishment surveys must be carried out by a competent person. (Refer Sect 6.2.4)

Based on the results of the survey, it may first be necessary to remediate any asbestos risks (by an appropriate control method) before initiating the proposed work.

For any work involved that may disturb asbestos then an Asbestos Removal Control Plan will be developed and submitted for review by the same contractor. (refer to above section 6.1.2

6.1.7. Monitoring, Audit and Inspection

Spark will make sure that before issuing a clearance certificate the following four stage process will be applied by a Licensed Asbestos Assessor.

1. Introductory checks of site condition and job completeness
2. Through visual inspection inside the enclosure / work area
3. Air monitoring
4. Final assessment of post enclosure / work area dismantling

Air Monitoring is mandatory for class A removal works; and optional for class B asbestos removal work. Note that, any requirement for class B air monitoring will be assessed and agreed in consultation with Spark management and the engaged asbestos removalist and Spark engaged competent Asbestos Consultant. The purpose of the airborne contamination standard (ACS) is to identify a limit on the amount of respirable fibres permitted in the workplace air. The standard is an average concentration over any eight-hour period of 0.1 respirable fibres per millilitre of air. Any work which is likely to exceed the ACS must be carried out inside a negative pressure enclosure. In all cases appropriate RPE and PPE must be worn where there is any level of asbestos possible in the air. Outside of the work area in areas where no protection is worn, respirable fibre levels must be below trace level (usually <0.01f/ml).

Audit
Spark may engage a *competent asbestos consultant* to carry independent audits on the any process or safe systems of work that has been applied to control and manage any class A removal works at a Spark worksite. Again, this will be agreed in consultation with the licensed asbestos removalist and competent Asbestos Consultant engaged by Spark.

Work Area Daily Inspections
Spark will make sure that any engaged Licensed Asbestos removalist engaged to remove class A removal works will carry out daily work area inspections to ensure that all risk controls have been applied and are effective.

6.2. Competency

6.2.1. Training

When identifying training and competency requirements for Worksafe permitted asbestos works, it is important to note whether the work requirements are work involving asbestos or asbestos removal works. This is because regulative requirements apply to both types of work.

WORK INVOLVING ASBESTOS

Asbestos related work

- 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
- Display of an artefact or thing
- Mining
- Laundering asbestos contaminated clothing
- Naturally occurring asbestos
- Work carried out in accordance with an approved method

Removing Asbestos

Unlicensed Removal

Up to 10m² Non-friable

- **Can remove 10m² or less of non-friable** asbestos & associated asbestos-contaminated dust (ACD)
- Removing ACD **not** associated with the removal of friable or non-friable asbestos and is only a minor contaminant.

Licensed Asbestos Removal

Class B

- **Can remove any amount of non-friable asbestos or ACM**
- ACD associated with removing **non-friable** asbestos or ACM

Class A

- **Can remove any amount of friable asbestos or ACM**
- Any amount of ACD
- Any amount of non-friable asbestos or ACM

6.2.2. Asbestos Awareness Training for Spark Staff

The purpose of Spark Asbestos Awareness Training is to educate any member of Staff who may encounter asbestos in their role or be involved in assisting a competent person with any asbestos related works specific to their worksite. This type of training would also assist the same person in recognising material that may contain asbestos or is an ACM, and assisting the competence person with maintaining the worksite Asbestos Management Plan.

However, the same training does not permit Spark staff to handle or work with asbestos or ACM in any form, or recommend and implement any control measures for any licensed or unlicensed asbestos removal works, without getting approval from Spark management.

All persons who may reasonably encounter asbestos as part of their role on Spark worksites must have received asbestos awareness training.

Role	Training
People who may encounter asbestos in their role	Asbestos Awareness Training
Spark Asset Managers and Project Managers	Asbestos Awareness Training for Managers (N.B additional BOHS IP405 – Managing Asbestos training be may considered for future *Spark Asset Managers* training)
People who will remove or handle unlicensed asbestos work	Asbestos Removal Competency Training

6.2.3. Licensed Asbestos Assessor

Any *licensed asbestos assessor* engaged by Spark or engaged by a *licensed asbestos removalist* to perform clearance inspections, issue clearance certificates and air monitoring for class A asbestos removal work will be required to hold a current licence as issued through the regulator (Worksafe NZ).

Note that, Spark are aware that until 4 April 2018, either a licensed asbestos assessor or competent person, may carry out *licensed asbestos surveyor / assessor* work for class A removal work. However, and for ensuring Best Practice, any person carrying out the following class A tasks at as a Spark worksite are to be registered as per the following requirements:

- Air monitoring during asbestos removal works
- Clearance inspection for asbestos removal works
- Issuing clearance certificates for asbestos removal works

In all circumstances, class A clearance inspection must be conducted by an independent Licensed Asbestos Assessor, or an *independent competent person* for class B Asbestos removal work only. Independent means the licensed asbestos assessor or competent person must be free from any conflict of interest with the removalist when carrying out their assessment work. This applies to both Spark and *licensed asbestos removalist* engaged to carry out class A and Class B asbestos removal works.

6.2.4. Competent Person

When Spark engages a competent person as an *asbestos consultant* to assist with the management of any asbestos works, the same person needs to have acquired through training and experience, the knowledge and skills of relevant asbestos removal industry practice and hold a certificate in relation to training specified by Worksafe or a tertiary qualification in occupational health and safety, occupational hygiene, science or environmental health.

Refer to Worksafe website for conformation on training courses specified by Worksafe for Licensed Asbestos Assessor work.

6.2.5. Licensed Asbestos Removalist

In all circumstances, Spark will make sure that an Asbestos Removalist with the appropriate licence will carry out work at a Spark worksite. There are two licenses available for conducting licensed asbestos removal work which are class A and Class B (see diagram 2 for further details). Spark will confirm the licence and supervision status of any *licensed asbestos removalist* they engage by visiting the WorkSafe website for pre-commencement verification at www.worksafe.govt.nz

Spark will make sure, so far as is reasonably practicable that any worker involved in any licensed asbestos removal work will retain current training and certification relevant to the class (e.g. A&B) of licensed asbestos removal work they will be undertaking; and all training records and certification are made available for a peer review and copies made available within their submitted Asbestos Removal Control Plan.

Any engaged *license asbestos removalist* must make sure *so far as is reasonably practicable*. That every worker who works with asbestos, is knowledgeable and experienced in similar workplaces, work plant and substances and is supervised by someone with knowledge and experience and is adequately trained in how to safely use everything they need to work with, including PPE. Spark are aware that post April 2018 any *licensed asbestos removalist* worker will have to be accredited through an external training course for the class of asbestos being removed. From this, any *licensed asbestos removalist* will have to produce their current and relevant license for removal and workers external and in-house training records prior to starting any removal work and keep all relevant records within the Asbestos Removal Control Plan.

A competent person is defined as a person with the knowledge, skills, and qualifications to carry out a task required by the regulations.

Anyone who is implementing any control on the asbestos (e.g. removal or encapsulation) must have the required competencies to perform the selected control method (e.g. licensed asbestos removalist for anyone removing friable asbestos).

Refer to the table below for specific competency requirements:

Role	Competency
Person who identifies asbestos	May be anyone from the list below, if they have the relevant experience, qualifications and training: • An occupational hygienist with asbestos experience • Licensed Asbestos Assessors • Asbestos removal supervisors • Someone who has passes the unit of competence for Asbestos Assessors • A person working for an accredited laboratory
Asbestos Surveyor / Licensed Assessor	The competency can be proven by a combination of training, experience and qualifications: • In addition to the above, an Asbestos Surveyor should have experience in the sector they are being commissioned for i.e. residential, commercial or industrial.

6.3. PPE

Anyone carrying out any work involving asbestos will need to utilise the appropriate PPE to minimise exposure to airborne asbestos. Examples include: RPEs, facemasks, coveralls, goggles, helmets, gloves and footwear. Any contaminated clothing or PPE must be decontaminated or disposed of in the prescribed manner.

6.4. Decontamination

Where removal work is being performed on Spark worksites, Spark will make sure that appropriate decontamination facilities have been provided (via the company performing the removal work) to decontaminate the work area, tools and workers. Asbestos waste must be disposed of properly.

For licensed removal work, a clearance certificate is required before the work area can be reoccupied for ordinary use. The asbestos removalist shall determine the appropriate decontamination procedure.

6.5. Waste Disposal

Spark shall ensure the asbestos removalist disposes of asbestos waste in an appropriate manner. The asbestos waste must be appropriately contained and marked clearly to indicate the presence of asbestos before removing it. Evidence of disposal at an appropriate waste centre shall be provided by the removalist in the form of disposal dockets.

6.6. Communications

In the event of an urgent asbestos incident, communications and signage protocols will be delivered as per the Spark Asbestos Incident Management Process (held on Sparksafe).

6.7. Health Monitoring

As Spark employees should not be carrying out Demolition or Refurbishment work, full health monitoring will not be conducted as part of standard operating procedure. However, if an accidental exposure does occur, Spark shall organise applicable education sessions and health monitoring (conducted by the approved health provider).

Any accidental exposures will be fully investigated by Spark's Asbestos Incident Crisis Team and Health and Safety Team.

7. Related Processes

Several processes outlining various operational issues relating to asbestos have been developed, including:

- Asbestos Incident Management and Communication Process
- Performing Demolition or Refurbishment Work Process
  These process flowcharts are added to the end of this document and held on Sparksafe Repository.

8. Photos of Spark worksites: Asbestos Containing Materials

External cladding of this building (Exchange) in the form of asbestos containing fibre cement.
Flat Sheet Wall Cladding (Textured Appearance) and Joining Strips: Crocidolite, Amosite.




Above: Wall and Ceiling boards with asbestos containing fibre cement.

Below: Floor tiles containing Asbestos.

Below: Asbestos pipe lagging and fibre cement pipes.

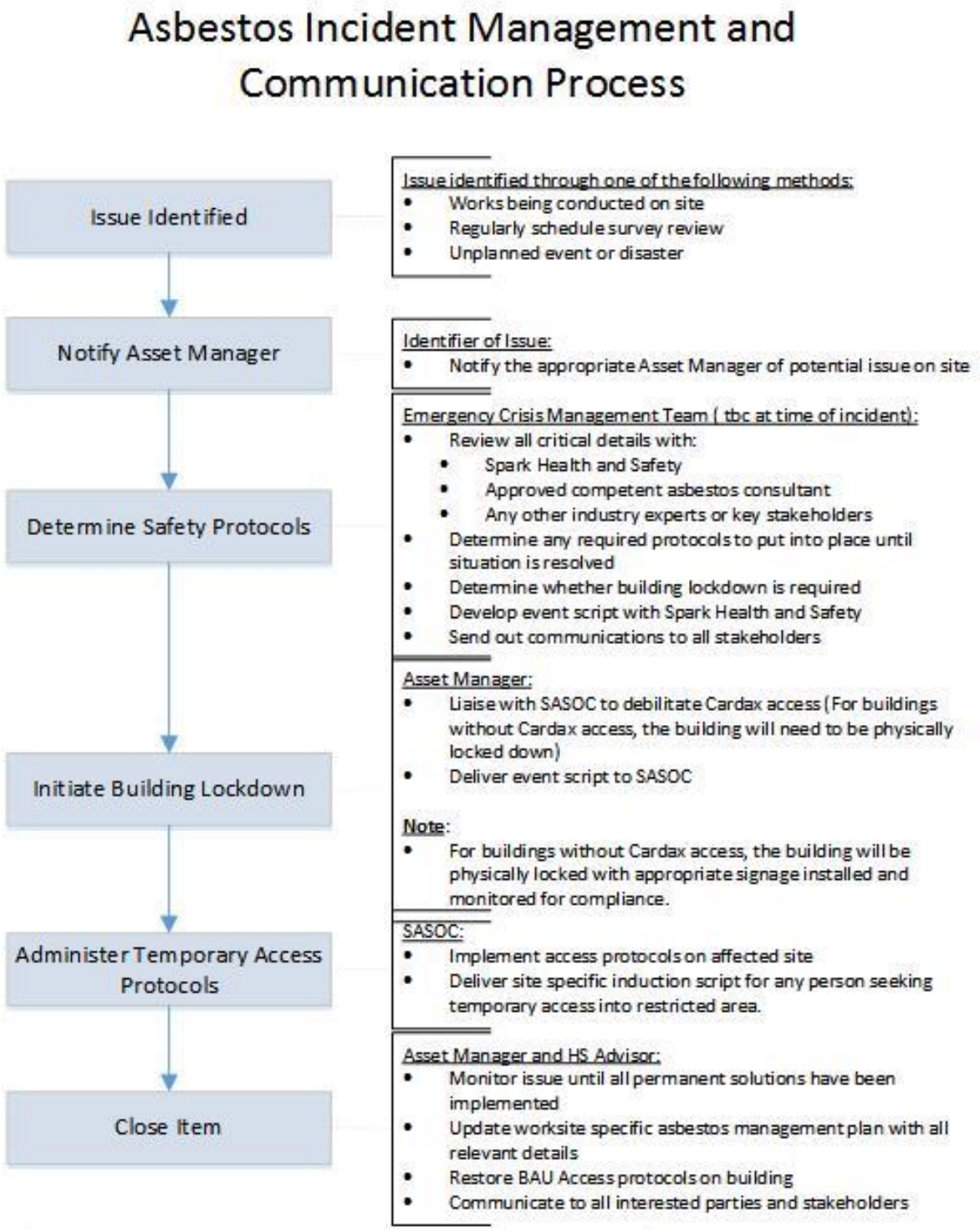



9. Definitions of Key Terms

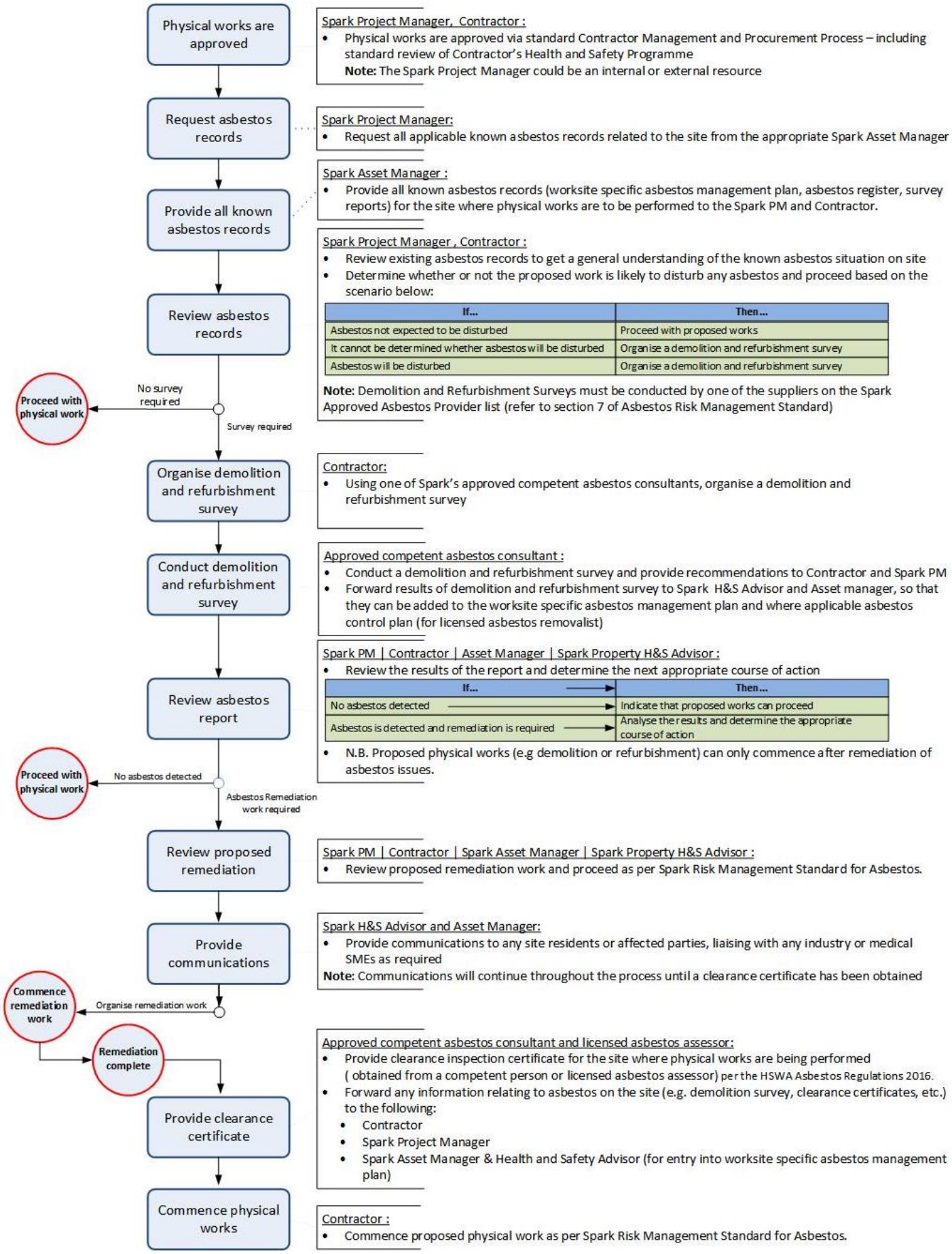
Term	Definition
ACM	Asbestos Containing Material
ACD	Asbestos Containing Dust or debris means dust or debris that has settled within a workplace and is, or is assumed to be, contaminated with asbestos.
Air Monitoring	Airborne asbestos fibre sampling which assists in assessing personal exposure and /or the effectiveness of asbestos control measures. This includes personal health exposure, control monitoring (during work) and clearance monitoring.
Airborne asbestos fibres	Fibres of asbestos small enough to be made airborne. Only respirable asbestos fibres (fibres < 3µm wide, more than 5 µm long and a length to width ration of more than 3:1) are counted.
Asbestos Removalist	A competent person from a company whose business or undertaking includes asbestos removal work and holds a license class relevant to the work being carried out. The license is issued by WorkSafe NZ.
Asbestos Site Hazard Sheets	Synopsis of the full management site asbestos survey highlighting the site specific asbestos hazards. Site Specific Asbestos Information sheets are now included as part of the Asbestos Management Plan.
Asbestos Work	Any work including removal, enclosure, sealing, drilling or cutting of asbestos.
Asbestos Work Area	The immediate area where work on ACM is occurring. The establishment of perimeter / boundaries are based on risk assessment.
Bonded Asbestos	Asbestos materials where fibres are contained within a product matrix such as asbestos cement sheeting. Other products include: profile sheets used for roofs, walls and flashing; roof shingles; water or flue pipes; plaster patching compounds; textured paint; vinyl floor tiles; friction products and elevator brakes. See also: Non-friable ACM.
Building Envelope	The physical separator between the conditioned and unconditioned environment of a building.
Clearance Inspection	An inspection done by a competent person or licensed assessor to verify that an asbestos work area is safe to reoccupy after asbestos work is completed.
Clearance Monitoring	Air monitoring with disturbance to surfaces using static or positional samples to measure the level of airborne asbestos fibres in an area following work on ACM. An area is considered clear when the fibre count is measured as below 0.01 fibres/ ml.
Encapsulation	Encapsulation helps protect the asbestos from mechanical damage, increases the life of the product and helps prevent the release of airborne asbestos during its removal.
Sealing	Sealing asbestos is done by adding a membrane layer like PVA to create a physical barrier that prevents release of asbestos fibres (unless membrane is cut or disturbed).

Term	Definition
Enclosure	Enclosing asbestos is done by creating a separate physical barrier that prevents access to the asbestos.
Inaccessible Areas	Areas which are difficult to access such as wall cavities; interior of plant and equipment, fire doors.
Licensed Asbestos Supervisors	The Health and Safety at Work (Asbestos) Regulations 2016 requires that restricted work involving asbestos must be supervised by a person named on a PCBU's Asbestos removal license relevant to the type of work being undertaken. There is a transition period under which current COC (Certificate of Competence) holders can continue to work under their COC.
Licensed Asbestos Work	Any work carried out on any quantity of friable asbestos or over 10sqm in total of non-friable asbestos for the duration of a project is subject to the PCBU carrying out the work holding the appropriate license class for the work. Class A license is required for friable asbestos work and Class B license is required for work on over 10sqm of non-friable asbestos.
Management Survey	Its purpose is to locate, as far as reasonably predictable, the presence and extent of any suspect ACMs in the building which could be damaged or disturbed during normal occupancy, including foreseeable maintenance, and to assess their condition.
Refurbishment and Demolition Survey	This survey is required before any refurbishment or demolition work is carried out. This type of survey is used to locate and describe, as far as reasonably practicable, all ACMs in the area where the refurbishment work will take place or in the whole building if demolition is planned.
Respiratory Protective Equipment (RPE)	RPE (respirators and breathing apparatus) are used in to protect workers when working with hazardous substances, such as gases, solvents, powdered chemicals and sprays. RPE comes with various forms of face piece, such as helmets, visors, hoods or masks.
Airborne Contamination Standard (ACS)	A standard used to identify a limit on the amount of respirable fibres permitted in the workplace air for monitoring. The standard is an average concentration over any eight-hour period of 0.1 respirable fibres per millilitre of air.
Spark Asbestos Incident Crisis Team	A crisis management team made up of relevant Stakeholder as detailed within this standard to post manage asbestos related exposure through accidental discovery or damage or exceedance of known air monitoring standards

10. Process Flowchart: Asbestos Incident Management & Communication



11. Process Flowchart: Demolition or Refurbishment work on a Spark Asset



Spark Project Manager, Contractor :

- Physical works are approved via standard Contractor Management and Procurement Process – including standard review of Contractor's Health and Safety Programme

Note: The Spark Project Manager could be an internal or external resource

Spark Project Manager:

- Request all applicable known asbestos records related to the site from the appropriate Spark Asset Manager

Spark Asset Manager :

- Provide all known asbestos records (worksite specific asbestos management plan, asbestos register, survey reports) for the site where physical works are to be performed to the Spark PM and Contractor.

Spark Project Manager , Contractor :

- Review existing asbestos records to get a general understanding of the known asbestos situation on site
- Determine whether or not the proposed work is likely to disturb any asbestos and proceed based on the scenario below:

If...	Then...
Asbestos not expected to be disturbed	Proceed with proposed works
It cannot be determined whether asbestos will be disturbed	Organise a demolition and refurbishment survey
Asbestos will be disturbed	Organise a demolition and refurbishment survey

Note: Demolition and Refurbishment Surveys must be conducted by one of the suppliers on the Spark Approved Asbestos Provider list (refer to section 7 of Asbestos Risk Management Standard)

Contractor:

- Using one of Spark's approved competent asbestos consultants, organise a demolition and refurbishment survey

Approved competent asbestos consultant :

- Conduct a demolition and refurbishment survey and provide recommendations to Contractor and Spark PM
- Forward results of demolition and refurbishment survey to Spark H&S Advisor and Asset manager, so that they can be added to the worksite specific asbestos management plan and where applicable asbestos control plan (for licensed asbestos removalist)

Spark PM | Contractor | Asset Manager | Spark Property H&S Advisor :

- Review the results of the report and determine the next appropriate course of action

If...	Then...
No asbestos detected	Indicate that proposed works can proceed
Asbestos is detected and remediation is required	Analyse the results and determine the appropriate course of action

- N.B. Proposed physical works (e.g demolition or refurbishment) can only commence after remediation of asbestos issues.

Spark PM | Contractor | Spark Asset Manager | Spark Property H&S Advisor :

- Review proposed remediation work and proceed as per Spark Risk Management Standard for Asbestos.

Spark H&S Advisor and Asset Manager:

- Provide communications to any site residents or affected parties, liaising with any industry or medical SMEs as required

Note: Communications will continue throughout the process until a clearance certificate has been obtained

Approved competent asbestos consultant and licensed asbestos assessor:

- Provide clearance inspection certificate for the site where physical works are being performed (obtained from a competent person or licensed asbestos assessor) per the HSWA Asbestos Regulations 2016.
- Forward any information relating to asbestos on the site (e.g. demolition survey, clearance certificates, etc.) to the following:
  - Contractor
  - Spark Project Manager
  - Spark Asset Manager & Health and Safety Advisor (for entry into worksite specific asbestos management plan)

Contractor :

- Commence proposed physical work as per Spark Risk Management Standard for Asbestos.