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ASBESTOS MANAGEMENT PLAN

AMP NT0687-H

Department of Infrastructure

Lot 232, Lajamanu

January 2015

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ASBESTOS MANAGEMENT PLAN

Department of Infrastructure

Lot 232, Lajamanu



Prepared for:
Department of Infrastructure
GPO Box 61
Palmerston NT 0831

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Prepared by:
Greencap

Written/Submitted by:



Paul Felvus
HazMat Consultant

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AMP Review Date:	*Maximum 5 years

Statement of Limitations

This report has been prepared in accordance with the agreement between Department of Infrastructure and Greencap.

Within the limitations of the agreed upon scope of services, this work has been undertaken and performed in a professional manner, in accordance with generally accepted practices, using a degree of skill and care ordinarily exercised by members of its profession and consulting practice. No other warranty, expressed or implied, is made.

This report is solely for the use of Department of Infrastructure and any reliance on this report by third parties shall be at such party's sole risk and may not contain sufficient information for purposes of other parties or for other uses. This report shall only be presented in full and may not be used to support any other objective than those set out in the report, except where written approval with comments are provided by Greencap.

ASBESTOS MANAGEMENT PLAN

Department of Infrastructure

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1.0 INSTRUCTIONS

Greencap was contracted by Department of Infrastructure (“the client”) to prepare this Asbestos Management Plan (AMP) for Lot 232, Lajamanu.

2.0 PURPOSE OF THIS ASBESTOS MANAGEMENT PLAN

Asbestos risk to human health is acknowledged as being present when airborne asbestos fibres are inhaled. Inhalation of asbestos fibres can lead to respiratory disease. Therefore, all Asbestos Containing Materials (ACM) should remain undisturbed and in good condition until removal is conducted under controlled conditions.

The purpose of this AMP is to ensure that all practicable steps are taken to prevent, or minimise the risk of exposure to airborne asbestos fibres, for all occupants and Department of Infrastructure. This is driven by legislation, regulations and guidance offered by codes of practice and supported by an understanding of sound management of ACM.

Sound management practices are achieved by the identification and listing of the known locations of the ACM in an Asbestos Register. An Asbestos Register is drafted following a building, structure, or plant and equipment inspection with sampling of suspect ACM and subsequent analysis by a National Association of Testing Authorities (NATA) accredited laboratory. Following these determinations, the implementation of appropriate control measures including engineering and administrative systems regarding the management of confirmed ACM can occur.

This AMP has been prepared in accordance with the Safe Work Australia *Code of Practice: How to Manage and Control Asbestos in the Workplace* (December 2011) and the Northern Territory Australian *Work Health & Safety (National Uniform Legislation) Regulations 2012, Chapter 8 Asbestos, Part 3 Management of Asbestos and Associated Risks*. Department of Infrastructure aims to satisfy or exceed the requirements specified in any regulatory requirements, and encompasses the following principles:

- The ultimate goal is for the site to be free of ACM.
- Consideration will be given to removal of ACM where practicable. This is in preference to other control measures such as enclosure, encapsulation or sealing. Removal is to be accomplished in a programmed, planned and controlled manner;
- Where deemed necessary, steps are to be taken to label identified ACM;
- Control measures are to be established to prevent exposure to airborne asbestos fibres (including monitoring the condition of ACM and minimising the possibility of damage to ACM);
- All workers, contractors and other persons are to be made aware of the Asbestos Register and the AMP before commencing work at the site.
- As required and defined, asbestos awareness training and instruction is to be provided, including information about the consequences of exposure to airborne asbestos fibres.

2.1 Asbestos Management Plan Regulatory Requirements

A person with management or control of a workplace must ensure that a copy of the AMP for the workplace is readily accessible to:

- a worker who has carried out, carries out or intends to carry out, work at the workplace; and
- a health and safety representative who represents a worker; and
- a person conducting a business or undertaking who has carried out, carries out or intends to carry out, work at the workplace; and
- a person conducting a business or undertaking who has required, requires, or intends to require work to be carried out at the workplace.

An AMP is required at a workplace where asbestos is known to be located at that workplace, and where there is an Asbestos Register. The regulatory requirement for an Asbestos Register, and therefore an AMP does not apply if:

- the workplace is a building that was constructed after 31 December 2003; and
- no asbestos has been identified at the workplace; and
- no asbestos is likely to be at the workplace from time to time.

Whilst it is not a requirement under the regulations to have an AMP at a workplace where no asbestos has been identified, it is however good practice to have an AMP in the event that asbestos materials are located or suspected during works that may uncover otherwise hidden materials, if that is likely.

A person with management or control of a workplace that has an AMP must ensure that the plan is reviewed and as necessary revised in the following circumstances:

- there is a review of the Asbestos Register or a control measure
- asbestos is removed from, or disturbed, sealed or enclosed at the workplace
- the plan is no longer adequate for managing asbestos or ACM at the workplace
- a health and safety representative requests a review
- at least once every 5 years.

3.0 OBJECTIVES OF THIS ASBESTOS MANAGEMENT PLAN

The AMP represents an integrated risk management approach to ensure that practicable steps are taken to prevent or minimise the risk of exposure to airborne asbestos fibres.

The AMP therefore:

- Outlines the necessary actions to control the risk as required by regulation and codes of practice.
- Identifies and describes the administrative line of authority for the site, outlining responsibilities, procedures and systems for the effective management and control of ACM.
- Establishes a timetable for the review and assessment of the ACM.
- Where appropriate, instigates a work permit system, which ensures that any proposed maintenance, installation, alteration, renovation or demolition at the site is notified to the Management Plan Controller.
- Requires that all participants involved in the management and operations at the site/s, particularly where ACM is likely to be disturbed are clearly informed and as necessary trained to manage the asbestos risks.

The Asbestos Register forms an integral part of an effective AMP. The AMP and Asbestos Register must be made available as required for inspection by employers, employees, union representatives, government representatives, contractors and maintenance personnel.

4.0 LEGISLATIVE REQUIREMENTS AND REFERENCES

This AMP is designed to assist in the general obligations pertaining to asbestos management to ensure the health and safety of employees, contractors, visitors and others accessing the site. The AMP also addresses specific asbestos related legislative requirements and guidelines as approved industry standards.

The following legislation, industry standard documentation (Codes of Practice) are relevant to this AMP and are to be construed as forming an integral part of this AMP:

- *Work Health and Safety (National Uniform Legislation) Act 2011*
- *Work Health and Safety (National Uniform Legislation) Regulations 2012*
- *Code of Practice: How to Safely Remove Asbestos*
- *Code of Practice: How to Manage and Control Asbestos in the Workplace*
- *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres 2nd Edition [NOHSC: 3003 (2005)].*

5.0 ASBESTOS OVERVIEW

Asbestos is a naturally occurring crystalline fibrous mineral silicate and they are commonly known by their colors, as "blue asbestos", "brown asbestos" and "white asbestos". There are two major groups of asbestos:

- Serpentine group minerals: Chrysotile (white asbestos); and
- Amphibole group minerals: Amosite (brown asbestos), Crocidolite (blue asbestos) and minor forms including actinolite, tremolite and anthophyllite.

Asbestos minerals have separable long fibres that are strong and flexible enough to be spun and woven and are heat resistant. Because of these characteristics, asbestos has been historically used for a wide range of manufactured goods, mostly in building materials, friction products, heat-resistant fabrics, gaskets, and coatings.

Asbestos mainly affects the lungs, and breathing in high levels of asbestos fibres over time can lead to a number of diseases and cancers (asbestos is a known carcinogen). The aim is to reduce the risk of exposure to ACM. This management plan aids in ensuring that ACM in the workplace are managed in such a way that they do not become damaged and increase the risk of exposure.

5.1 Types of Asbestos Containing Materials

ACM can be classified into two main groups, friable and non-friable.

ACM considered to be friable are materials that can be crumbled, pulverised or reduced to powder by hand pressure when dry. Friable asbestos materials are considered a higher risk as they more readily liberate asbestos fibres causing them to become airborne, with minimal disturbance.

Those ACM which do not meet the definition of friable are considered non-friable and generally considered a lower risk if properly handled. Non-friable ACM are often referred to as 'bonded', where asbestos is bound in a bonded matrix (e.g. fibre cement sheeting) or various resin/binders (e.g. vinyl floor tiles).

The following table details the common material found in the two groups:

Table 1: Friable or Non-Friable

Friable	Non-Friable (bonded)
<ul style="list-style-type: none"> ▪ Asbestos Contaminated Dust (ACD) Dust that has settled within a workplace and is (or assumed to be) contaminated with asbestos. ▪ Sprayed or trowelled asbestos materials applied to ceilings, walls and other surfaces for fire-rating purposes. This material is often referred to as ‘limpet asbestos’. ▪ Asbestos-containing insulation on pipes, boilers, tanks, ducts etc. which is often referred to as asbestos lagging. ▪ Asbestos paper products, millboard in electrical switchboards or underlay lining for linoleum or vinyl floor coverings. ▪ Asbestos textiles, braided asbestos, rope, tape, gaskets etc. (note that rope and millboard are potentially friable). ▪ Asbestos millboard from inside auxiliary switchboxes/fuse boards or air-conditioning reheat boxes. ▪ Low Density Board Ceiling and Wall Panels 	<ul style="list-style-type: none"> ▪ Asbestos cement sheeting and corrugated sheeting products, i.e. cement-like or concrete-like products (e.g. ‘fibro’ and ‘super six roofing’ –see description below). ▪ Vinyl tiles and vinyl flooring mastic and associated adhesives. ▪ Asbestos containing compounds, mastic from mechanical fittings, and roofing membranes. ▪ Electrical switchboards containing compressed asbestos tar electrical boards and asbestos-cement sheeting. ▪ Roofing sealants, bituminous membranes, tar composites and similar materials were occasionally mixed with asbestos materials.

Asbestos cement products are a very common type of ACM and were installed extensively throughout commercial, industrial and residential facilities up until the early to mid-1980’s. Asbestos cement products were manufactured in numerous shapes and sizes and include asbestos cement sheeting eaves, awnings, walls, ceilings and gables/cladding, corrugated/moulded asbestos-cement sheeting roofs, ridge-capping and gutters.

Asbestos cement products are comprised of Portland cement, sand, binders and various combinations of both asbestos and non-asbestos fibres. The asbestos is usually tightly bound or encapsulated within the cement matrix of the products. Manufactured asbestos cement products are usually deemed bonded or non-friable.

In general, the asbestos fibres are less likely to be released and become airborne in significant quantities unless the cement matrix is disturbed or disrupted, as in the case of disturbance with power tools etc.

The following list ranks different types of asbestos according to the likelihood that airborne asbestos can be released into the air if it has deteriorated or been disturbed. The potential risk to health is greater for items higher up the list if people are exposed to airborne asbestos, but any ACM can produce asbestos fibres if they are disturbed.

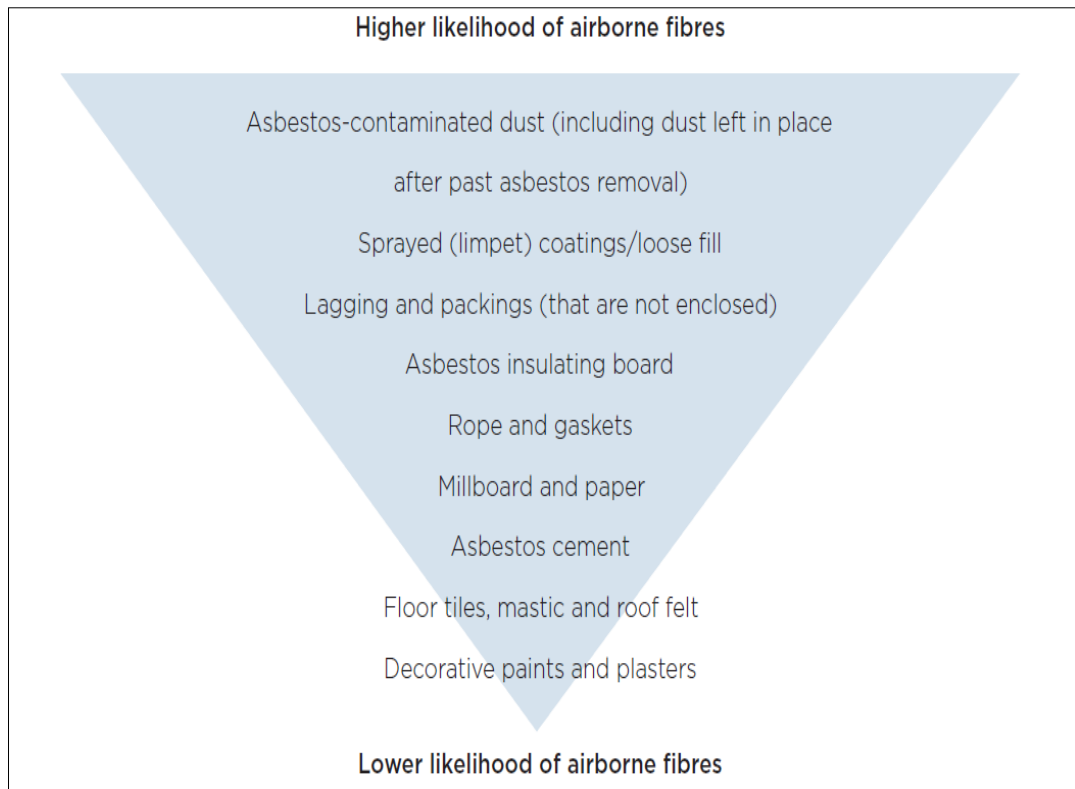


Figure 1: Extract from the SafeWork Australia Code of Practice: "How to Manage and Control Asbestos in the Workplace (December 2011)"

5.2 Rating the Risk of Asbestos Containing Materials

Based on the assessment of the type of asbestos containing material in the previous point 5.1 Types of Asbestos Containing Material and cross reference with disturbance potential will determine the risk rating for the asbestos material in that location. This table Asbestos Risk Rating Matrix is an indicator of the likelihood of airborne asbestos risk.

Table 2: Asbestos Risk Rating Matrix

Friability		Friable Asbestos Materials		Non-Friable / Bonded Asbestos Materials	
Condition		Unsatisfactory / Deteriorated / Exposed Fibres	Satisfactory / Not Exposed / Friable When Exposed	Unsatisfactory (Poor / Damaged)	Satisfactory (Stable)
Percentage Asbestos					
Disturbance Potential	High	Very High	Very High	High	Medium
	Med	Very High	High	Medium	Low
	Low	High	Medium	Low	Low

- **Very High**

The ACM in this category includes damaged or exposed friable asbestos such as insulation materials, which are likely to pose an unacceptable risk. Such occurrences require immediate remedial action in the form of enclosure, sealing or removal.

- **High**

The ACM detected and rated in this category are generally in poor or damaged condition and have some potential to pose an unacceptable risk if they are further damaged.

- **Medium**

The ACM detected and rated in this category do not pose an immediate or significant risk provided they are not disturbed. However the material has deteriorated and removal should be planned.

- **Low**

The ACM detected and rated in this category do not pose a significant risk provided they are not disturbed. The material has not deteriorated significantly and unless it's condition changes, removal is not seen as necessary in the medium term.

5.3 Plan for Removal of Asbestos Containing Materials

Once the ACM has been assessed and given a risk rating, it is vital to assess the management of the risk with the asbestos risk management timetable. This table highlights the direct action required, be it immediate removal, controls put in place, register update or leave and manage.

ACM identified as presenting an elevated risk should be removed in accordance with the below table, or earlier if appropriate. When ACM has been removed from a site, it is a requirement under the NT *Work Health and Safety (National Uniform Legislation) Regulations 2012* that the Asbestos Register is revised, and, if necessary, the AMP is revised.

Table 3: Asbestos Risk Management Timetable

Time frame		Less 12 months	12 to 36 months	>36 months
Risk Rating	Very High	Immediate Removal Update Register	-	-
	High	Removal / Plan for Removal Put Controls in Place	Update Register Removal	-
	Medium	Put Controls in Place Leave and Manage	Update Register Leave and Manage	Plan for Removal Leave and Manage
	Low	Leave and Manage	Update Register Leave and Manage	Plan for Removal Leave and Manage

The ultimate goal is to have a workplace free of the asbestos hazard, therefore eliminating the risk that ACM present.

6.0 ORGANISATIONAL RESPONSIBILITIES

This AMP is an operational and maintenance manual, designed in accordance with the *Code of Practice: How to Manage and Control Asbestos in the Workplace* to ensure that future works at the site do not result in uncontrolled asbestos-related risks. All asbestos-related activities carried out at the site are to be carried out under the auspices of this AMP. The following key personnel are responsible for its implementation:

Management Plan Controller

The AMP and Register Controller is responsible for administration and supervision of asbestos-related tasks at the site.

Department of Infrastructure has appointed the following person as the AMP Controller and Asbestos Register Controller:

Title: CEO	Contact Details:
Michael Lloyd	08 8946 5069

In the event that the Management Plan Controller is not available, please contact:

Title: Asbestos Consultant	Contact Details:
GREENCAP	08 8984 4244

The following tasks are to be conducted by the Management Plan Controller:

- Maintain the Asbestos Register for the site and ensure that the **ACM are regularly re-assessed** by a competent person to comply with the *NT Work Health and Safety (National Uniform Legislation) Regulations 2012* and the *Code of Practice: How to Manage and Control Asbestos in the Workplace*. It is recommended that the Asbestos Register be reviewed at least every 12 months and a visual inspection of identified ACM should be undertaken as part of any review.
- The Asbestos Register must also be reviewed/updated by a competent person (asbestos consultant) when:
 - The AMP is reviewed
 - Further asbestos or ACM is identified at the workplace; or
 - Asbestos is removed from, or disturbed, sealed or enclosed at, the workplace.
 - Prior to demolition or refurbishment
- More frequent reviews may be required where a risk assessment indicates the need for reassessment

- **Maintain the AMP** and ensure the AMP is reviewed by a competent person (asbestos consultant) when:
 - there is a review of the Asbestos Register or a control measure;
 - asbestos is removed from, or disturbed, sealed or enclosed at, the workplace;
 - the plan is no longer adequate for managing asbestos or ACM at the workplace;
 - a health and safety representative requests a review;
 - changes to Department of Infrastructure systems or the Management Plan Controller relinquishes control of the AMP; or
 - at least once every 5 years.
- **Liase with tenants, contractors and maintenance personnel** and ensure that all contractors whose work may impact ACM are informed of the presence of asbestos at the site;
- Administer **asbestos inductions and asbestos awareness training** for contractors, site management and other key personnel as necessary;
- In the event that remedial or maintenance works are to be carried out, the Management Plan Controller must ensure that a **risk assessment** with recommendations are performed by a competent person prior to any work with or adjacent to ACM.
- Engage a **licensed asbestos removal contractor and an independent hygienist consultant** as required by state legislative requirements to conduct asbestos removal works and provide airborne fibre monitoring and clearance inspections.
- **Inform occupants** of all asbestos remedial works and air monitoring results;
- **Prior to renovation or demolition works**, ensure materials identified as containing asbestos are safely removed by an appropriately licensed removal contractor from any proposed work area or appropriately contained so as to prevent accidental damage;
- **Prior to renovation or demolition works** contact Greencap for recommendations regarding a penetrative / destructive asbestos inspection;
- Ensure exposure to asbestos is kept as low as reasonably achievable and that no person is exposed to airborne asbestos fibres in excess of the exposure standard;
- **Ensure** asbestos-related **records are maintained** with this AMP. File all asbestos related documentation on an on-going basis including Asbestos Register updates, asbestos removal specifications, asbestos removal control plans, air monitoring and clearance inspection certificates.

7.0 ASBESTOS REGISTER

Greencap has prepared comprehensive Asbestos Register/s for Department of Infrastructure. Please refer to Asbestos Register Number below, in which it details the type, condition and location of known asbestos containing materials.

Register No. NT0687-H	Lot 232, Lajamanu
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The Asbestos Register is used as a reference to outline specific locations of known ACM at the site. All personnel working at the site must be made aware of the presence of the ACM in the areas they are accessing and the absolute necessity to ensure that these materials remain undisturbed.

It is a requirement of the *NT Work Health and Safety (National Uniform Legislation) Regulations 2012* that a person with management and control of a workplace makes the current Asbestos Register of the site available to:

- a worker who has carried out, carries out or intends to carry out, work at the workplace; and
- a health and safety representative who represents a worker referred to in paragraph (a); and
- a person conducting a business or undertaking who has carried out, carries out or intends to carry out, work at the workplace; and
- a person conducting a business or undertaking who has required, requires, or intends to require work to be carried out at the workplace.

Should the Asbestos Register not adequately cover the area of the proposed works, further investigation by a competent person (asbestos consultant) must be conducted prior to commencing work.

The Asbestos Register must be updated if at any time conditions change to the current conditions in which the ACM is observed.

It is recommended that annual re-surveys are conducted for this site to verify that any change in conditions are captured, reported and dealt with prior to the management plan review in 5 years' time or incidents occur due to these condition changes.

Asbestos Surveys Conducted	Update of Asbestos Survey Due
January 2015 & AMP Development	
⋮	January 2015
⋮	January 2016
⋮	January 2017
⋮	January 2018
January 2019 & AMP Review	⋮

7.1 Limitations of the Asbestos Management Plan and Asbestos Register

The Asbestos Register describes the known, visible and accessible sources of ACM identified on site. Whilst we understand the register was prepared with all due care and every attempt was made during the survey to locate all ACM, it is important to note that, without substantial demolition of the buildings, fittings and equipment, it is not possible to guarantee that every source of asbestos has been located. Inherent with the nature and construction of the building, are areas that are either not physically or visually accessible.

Such inaccessible areas fall into a number of categories:

- Inside set ceilings or wall cavities.
- Building facades or other height restricted areas.
- Those areas accessible only by dismantling equipment or performing minor local demolition works.
- Service shafts, ducts etc., concealed within the building structure or internal areas of the plant or equipment.
- Totally inaccessible areas such as voids and cavities created and intimately concealed within the building structure. These voids are only accessible during demolition works.
- Asbestos materials covered or concealed (partially or otherwise) by other materials/items preventing or limiting visual access or identification/recognition.
- Asbestos materials installed in non-typical applications, covered by other materials or installed in such a manner that disguises or conceals their nature in any way that may hinder their identification or recognition as an asbestos material.

Hence it is possible that ACM concealed within inaccessible voids and areas may not have been detected.

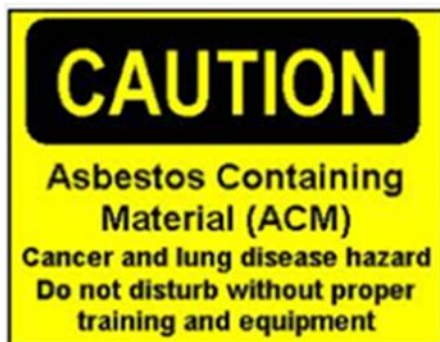
Therefore, it is important that personnel proceed with caution when opening up or entering any previously and normally inaccessible areas to avoid disturbing concealed and/or previously unknown ACM.

7.2 Signage and Labeling – Displaying of Asbestos Warning Signs

Warning signs that have been wrongly removed, encapsulated or painted over should be replaced. All labels should comply with *AS1319 Safety Signs for the Occupational Environment*.

The practicability of labeling non-friable asbestos items in public access areas should be carefully considered in relation to the potential risks of exposure. Labeling is not always considered appropriate for asbestos situations in occupied areas as signs warning of the presence of asbestos may cause unnecessary alarm and disruption. In this case it may be appropriate to apply General Awareness warning signs indicating that asbestos does exist on the site.

Below are typical of signage found in commercial buildings.





8.0 INADVERTENT DISTURBANCE / NEWLY SUSPECTED MATERIALS

8.1 Damage to Asbestos Containing Materials

Whenever any ACM are damaged, the damage must be reported to the AMP Controller immediately. The Management Plan Controller will instigate the appropriate corrective action.

It is important that the procedure in Appendix A of this AMP is adhered to. If only minor damage occurs, e.g. minor cracking to asbestos cement sheet, the Management Plan Controller may assess the damage and decide an appropriate course of action, which may be to simply seal any exposed edges with paint. Any more serious damage may be assessed by an asbestos consultant or be removed by a licensed asbestos removal contractor.

8.2 Newly Suspected Asbestos-Containing Materials

If materials are encountered that are not listed in the Asbestos Register, unknown to the worker or suspected of containing asbestos, then it is imperative that work cease pending further investigation and sampling, and appropriate precautions for dealing with asbestos materials should be implemented.

Contact Greencap (8984 4244) for asbestos identification and an on-site risk assessment and inspection.

If either of the above situations occurs, any work should immediately cease, and **Appendix A - Emergency Procedure for Accidental Damage or Discovery of New Asbestos-Containing Materials** must be followed.

All reports of damaged ACM are to be kept on file with the AMP.

8.3 Background Airborne Fibre Monitoring

If ACM has been identified during routine inspection as being friable and of a high or very high risk, consideration should be given to conducting airborne fibre monitoring (AFM) to determine if airborne asbestos concentrations are safe in regards to asbestos risk or if control measures have been or are effective.

Additionally, if evidence of airborne asbestos fibre concentrations is required for sites containing ACM, background AFM should be considered. AFM can be conducted to alleviate any doubt in regard to the asbestos risk caused by the ACM being present. All AFM results should be kept on file in the AMP.

9.0 CONTRACTORS & MAINTENANCE PERSONNEL

The Management Plan Controller must ensure that all contractors working at the site are inducted and made aware of the Asbestos Register and the AMP. All Contractors / Maintenance Personnel working at the site shall be responsible for ensuring that works are conducted in accordance with the AMP and all inductions have been completed.

Contractors / Maintenance Personnel must also ensure proper safety procedures are followed and works are conducted in accordance with all relevant legislative requirements, this AMP and best industry practice.

9.1 General Works and Maintenance Activities

General day to day maintenance activities conducted by tenants or contractors that have been pre-determined as low risk activities do not require the written authorisation to proceed with onsite works from the Management Plan Controller.

It is a Department of Infrastructure directive that contractors and staff do not perform any works that will disturb ACM.

A suitably licensed asbestos removal contractor and an independent asbestos consultant must be engaged for any work on ACM.

9.2 Controls on Use of Certain Equipment

The NT WHS Regulations 2012 state that a Person Conducting a Business or Undertaking (PCBU) **must not use**, or direct or allow a worker to use, either of the following on asbestos or ACM:

- a) High-pressure water spray
- b) Compressed air

Sub-regulation (a) does not apply to the use of a high pressure water spray for fire-fighting or fire protection purposes.

A PCBU must not use, or direct or allow a worker to use, any of the following equipment on asbestos or ACM unless the use of the equipment is controlled:

- a) Power tools;
- b) Brooms;
- c) Any other implements that cause the release of airborne asbestos into the atmosphere

9.3 Contractor and Maintenance Personnel Asbestos Induction

All contractors and maintenance personnel visiting the site must report to the AMP Controller prior to commencing any works. The Management Plan Controller will provide a brief induction for the site, examine the works to be performed and advise what can, and cannot, be done. The induction will include the dissemination of the following information:

- Areas of the Building that are known to contain ACM;
- Provide access to the Asbestos Register and AMP for the site and these are made available on site to all contractors for reference prior to conducting works;
- The AMP provides direction on how to work safely with the ACM and work on site.
- Any asbestos abatement works must be approved by the Management Plan Controller and conducted by suitably qualified (licensed) contractors;
- During normal routine maintenance work, external contractors and other personnel must report any residual, deteriorating or damaged ACM (or suspected ACM) to the Management Plan Controller as soon as possible so that the appropriate corrective action can be initiated;
- There is no guarantee that all ACM have been identified on site due to access limitations and any suspect materials encountered during building, demolition or maintenance works must also be reported to the Management Plan Controller. If any suspect materials that are not noted in the Asbestos Register are encountered, all work in the area must cease until the suspect material has been assessed by an asbestos consultant.

Contractors and maintenance personnel will need to confirm they understand the requirements of the AMP.

Details of contractors or other personnel who have attended the induction are to be kept on file.

10.0 CONSULTATION IN REGARDS TO ASBESTOS

If ACM are present or thought to be present in a workplace, there must be full consultation, information sharing and involvement by everyone in the workplace, including employees, workers, contractors and others involved.

The Management Plan Controller must appoint a competent person, being a suitably qualified / experienced occupational hygiene (asbestos) consultant to assist in the following areas:

- Conduct surveys to assess risk involved with proposed works where disturbance of ACM is likely to occur prior to commencing proposed works and regular review of ACM as required by legislation;
- Where appropriate, develop 'Scope of Works' documentation for removal of ACM;
- Provide occupational hygienist services during asbestos abatement works (e.g. airborne fibre monitoring and inspections);
- Review the AMP and Asbestos Register as required.
- Provide asbestos awareness training

11.0 PROPOSED REFURBISHMENT OR DEMOLITION

It is a requirement under the NT *Work Health and Safety (National Uniform Legislation) Regulations 2012* that the Asbestos Register be revised if it is inadequate for the proposed demolition or refurbishment. As previously stated there are limitations to a standard Asbestos Register due to access restrictions. Prior to any significant refurbishment or demolition works, further investigations must be performed using destructive survey inspection and sampling techniques.

Contact Greencap (8984 4244) for recommendations regarding an intrusive / destructive survey.

12.0 REMOVAL OF ASBESTOS CONTAINING MATERIALS

Materials identified as containing asbestos should be removed from any proposed work area or satisfactorily contained prior to commencement of maintenance, refurbishment or demolition works. A specific scope of works document (works specification) must be produced to manage the asbestos abatement project.

The removal of asbestos must be controlled within a strict asbestos removal technical specification. This specification must be prepared in accordance with the Safe Work Australia *Code of Practice: How to Safely Remove Asbestos* should include:

- Work area isolation (barrier protection, buffer zone);
- Removal methods (friable/non-friable);
- Contamination control methods (negative air pressure/decontamination procedures); and
- Health and safety procedures (respiratory protection, working at heights, scaffolding).

As required by legislation, a person conducting a business or undertaking that commissions the removal of asbestos must ensure that the asbestos removal work is carried out by a licensed asbestos removalist who is licensed to carry out the work and an asbestos consultant to conduct airborne fibre monitoring and clearance inspections.

Asbestos abatement works must be performed in accordance with all legislative requirements. The statutory requirements for asbestos removal are prescribed in the NT *Work Health and Safety (National Uniform Legislation) Regulations 2012* and require compliance with the SafeWork Australia *Code of Practice: How to Safely Remove Asbestos*.

By law, any removal of non-friable or bonded asbestos must be removed by either a Class A or Class B licensed asbestos removalist where the amount is greater than 10 m². Friable asbestos materials must only be removed by a Class A licensed asbestos removalist (regardless of quantity) and must ensure that an independent licensed asbestos assessor undertakes air monitoring and inspections.

It is a Department of Infrastructure directive that any works involving the removal, encapsulation or otherwise abatement of ACM in any form or quantity, must be performed by a licensed asbestos removal contractor. The exception to this is asbestos contaminated dust that is not associated with the removal of friable or non-friable asbestos and is only a minor contamination, as per regulation 458 sub regulation (2) (b) of the NT *Work Health and Safety (National Uniform Legislation) Regulations 2012*.

12.1 Licensed Asbestos Removal Contractor

The Management Plan Controller will engage a suitably licensed asbestos removal contractor as prescribed by legislation to conduct asbestos abatement works. The asbestos removal contractor must perform all works in accordance with licensing requirements and the *Code of Practice: How to Safely Remove Asbestos*.

The asbestos removal contractor must develop a site-specific asbestos removal control plan before commencing any asbestos removal works. Note also that excepting for emergencies, 5 days prior notification to NT Work Safe is required for licensed ACM removal.

As prescribed by the *NT Work Health and Safety (National Uniform Legislation) Regulations 2012*, only a Class A licensed asbestos removal contractor can conduct works involving the removal of friable ACM that is more than minor contamination.

Only a contractor holding either a Class A or Class B license can remove bonded ACM in quantities equal to or exceeding 10m². The asbestos removal contractor must prepare an asbestos removal control plan / safe work method statement (SWMS), detailing the proposed work methodologies to be used to safely and effectively remove, enclose or encapsulate the ACM. The removalist must notify the regulator (NT WorkSafe) and obtain approval prior to commencement of abatement works.

Below is a list of contractors (in no particular order) that are licensed by the regulator (NT WorkSafe) to conduct asbestos removal. They are independent of Greencap Pty Ltd.

CONTRACTOR	LICENCE TYPE	CONTACT	PHONE
Kaefer Integrated Services	Class A (Including Class B removal)	Peter Younger	08 8947 2941
McMahon Services (NT)	Class A (Including Class B removal)	Kris Sharpe	08 8930 2504
JAC Asbestos Removals	Class B	Bob Vile	0417 000 302

An independent licensed asbestos assessor is also required to conduct airborne fibre monitoring and clearance inspections during (and after) Class A notifiable licensed asbestos removal work. In addition, the hygienist / assessor can oversee the correct management of the removal to ensure regulatory compliance. Clearance inspections and monitoring requirements can be undertaken by Greencap.

CONTACT: Greencap (8984 4244)

13.0 OCCUPATIONAL HYGIENE CONSULTING SERVICES

- **Prepare an Asbestos Removal Scope of Works Document**
 - Department of Infrastructure, may, at their discretion, engage a suitably qualified asbestos consultant to prepare the technical documentation/specification to describe how the ACM is to be removed safely from the site.
- **Asbestos Removal Tendering Process**
 - Department of Infrastructure may engage a suitably qualified asbestos consultant to manage the asbestos removal tendering process on behalf of the building owner/client.
- **Review of Contractor Asbestos Removal Control Plan / SWMS**
 - The contractors Asbestos Removal Control Plan / SWMS should be reviewed to ensure it adequately covers the safe working requirements of the project. The Management Plan Controller may request a suitably qualified occupational hygienist undertake such a review.
- **Visual Inspections**
 - A suitably qualified occupational hygiene consultant (licensed asbestos assessor) must inspect the removal works and provide a clearance certificate for each work area following ACM removal. Further, the Management Plan Controller may require asbestos abatement works to be supervised on site full time by the consultant.
- **Airborne Fibre Monitoring**
 - In accordance with the *Code of Practice: How to Safely Remove Asbestos* and the *Work Health and Safety (National Uniform Legislation) Regulations 2012*, air monitoring should be performed whenever ACM is being removed, to ensure the control measures are effective. The requirements for air monitoring must be established prior to commencement of works.

All asbestos fibre air monitoring must be conducted in accordance with the *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres 2nd Edition [NOHSC: 3003 (2005)]* and should be conducted by a NATA accredited laboratory.
- **Bulk Sample Analysis**
 - Suspected ACM may from time to time be uncovered at the site (e.g. during demolition works). Where additional sample analysis is required, analysis will normally be by polarised light microscopy including dispersion staining. Other approved methods including X-ray diffraction may be used where required. All analysis work must be conducted by a NATA accredited laboratory.

14.0 TRANSPORT AND DISPOSAL OF ASBESTOS WASTE

Waste containing asbestos must be stored and transported in a receptacle designed to prevent the release of its contents. This can include standard 200µm thick clear polythene labeled asbestos waste bags or suitably sealed and labeled drums.

Asbestos waste must be disposed of at an EPA licensed waste facilities. Asbestos removal contractor's vehicles must also be EPA licensed to transport asbestos waste.

15.0 ASBESTOS AWARENESS TRAINING

It is recommended that selected staff be provided with asbestos awareness training. It may be prudent to also offer training to employees, and contractors (especially long term / regular contractors) to increase their awareness of asbestos issues at the site. The information should cover the following aspects:

- Background information on asbestos;
- Asbestos related health effects and risks (e.g. asbestos is only a health risk when disturbed, resulting in the release of asbestos fibres into the airborne environment which may be subsequently inhaled);
- Asbestos-related legislation;
- Sources and general locations of ACM at the site(s) (as noted in the Asbestos Register);
- An overview of the structure and function of the AMP (i.e. a summary of how asbestos issues are managed at the site/s); and
- Responsibilities of the building owner, management, tenants, staff and contractors.
- The training should be designed to serve a number of purposes:
 - To increase the awareness and knowledge of building management personnel with respect to their statutory obligations in respect of the management of asbestos hazards at the site/s;
 - 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 in respect of providing information, instruction and training to those potentially exposed to risk.

Greencap has developed Specific PowerPoint based asbestos awareness training packages to meet such training requirements.

ASBESTOS MANAGEMENT PLAN

Department of Infrastructure

Appendix A: Emergency Procedure for Accidental Damage or Discovery of New Asbestos-Containing Materials

ASBESTOS MANAGEMENT PLAN

Department of Infrastructure

STEP	WHO	ACTION
1. Stop work	Worker (or others) discovers or suspects ACM has been damaged or new item identified	Stop work immediately. Go to Step 2
2. Restrict access to affected area & shut off air-handling system	Contractor or worker supervisor	Restrict access to the area by closing doors, taping off access points and installing temporary signage to prevent site occupants or members of the public from entering the immediate area, and to prevent any further disturbance of asbestos materials in the area. Air handling systems should be shut-off (where relevant). Go to Step 3.
3. Notify the Management Plan Controller	Contractor or worker supervisor	Notify the Management Plan Controller Michael Lloyd - 08 8946 5069 GREENCAP – 08 8984 4244 Go to Step 4.
4. Implement Incident Notification Process	Management Plan Controller	Assess situation, contact Greencap for advice. Management Plan Controller –notify by telephone and email, key stakeholders as per incident notification process. Go to Step 5.
5. Notify Asbestos Consultant	Management Plan Controller	Management Plan Controller - Notify asbestos Consultant to arrange risk assessment and advise appropriate control strategies. Go to Step 6.
6. Risk assess damage and sample material (if required)	Asbestos Consultant	Asbestos Consultant to attend site to risk assess material and if necessary, take sample of suspected asbestos materials: Notify AMP Controller result of analysis Negative result – resume works Positive result – Go to step 7
7. Engage Licensed Asbestos Removal Contractor for clean-up	Management Plan Controller (in consultation with Asbestos Consultant)	Management Plan Controller (in consultation with Asbestos Consultant) to engage a Licensed Asbestos Removal Contractor to undertake asbestos cleanup and decontamination works. Go to Step 8.

STEP	WHO	ACTION
<p>8. Conduct asbestos fibre air monitoring & independent visual clearance inspection</p>	<p>Asbestos Consultant/Hygienist</p>	<p>Conduct asbestos fibre air monitoring adjacent to the contaminated work area to ensure that fibre levels do not exceed acceptable levels.</p> <p>After clean-up works have been completed, an independent visual clearance inspection shall be conducted to ensure that the asbestos removal has been completed to a satisfactory standard.</p> <p>Airborne asbestos fibre clearance monitoring shall also be conducted as required within removal work areas to ensure areas are safe for re-occupation by unprotected personnel.</p> <p>Asbestos Consultant to issue clearance documentation.</p> <p>Go to Step 9.</p>
<p>9. Staff Debrief / Review AMP procedures and controls</p>	<p>Management Plan Controller / Asbestos Consultant</p>	<p>Debrief staff</p> <p>Management Plan Controller and Asbestos Consultant to review the AMP procedures and controls to ensure they were being followed correctly.</p> <p>Go to Step 10.</p>
<p>10. Update Asbestos Register and archive documents</p>	<p>Asbestos Consultant / Management Plan Controller</p>	<p>Asbestos Consultant to update sites Asbestos Register.</p> <p>Management Plan Controller – to archive incident documents and re-issue the updated Asbestos Register for the Building.</p>