TOWNSVILLE LOCAL DISASTER MANAGEMENT GROUP

City of Townsville

Environmental Health & Disaster Waste Sub Plan

Local Disaster Management Plan (LDMP) Sub Plan

V3 July 2026

This plan is to be read in conjunction with the Townsville Local Disaster Management Plan (LDMP)

Executive Summary

This Environmental Health and Disaster Waste Sub Plan has been developed by the Townsville Local Disaster Management Group (TLDMG) to outline the arrangements for managing environmental health, including food hygiene, and the management of the waste and debris that can be created by a disaster in the Townsville City Council (TCC) local government area.

Section 1 provides an overview of the plan including the aim and objectives, ownership, functional responsibility and the support agencies required to implement the plan. It also provides links to other key documents that inform this plan.

Section 2 relates to how the plan is activated, who needs to be notified and includes a visual aid flowchart as a quick reference guide. This section also identifies how the Environmental Health and Asbestos Working Groups will be activated.

Section 3 provides an overview of the Environmental Health & Disaster Waste Working Group (EHDWWG) including membership and meetings.

Section 4 provides detail on public health and hygiene measures post disaster.

Section 5 covers information on Shelters and Evacuation Centres.

Section 6 provides information on the provision of safe drinking water post disaster.

Section 7 provides information on food safety following the impact of a disaster.

Section 8 provides information on wastewater and sanitation following the impact of a disaster.

Section 9 provides detail on pest control following the impact of a disaster.

Section 10 provides detail on management of infectious diseases post disaster.

Section 11 provides detail on environmental management post disaster.

Section 12 provides detail on waste management post disaster.

Section 13 provides detailed information on the Asbestos Working Group (AWG) and the process for managing asbestos containing material post disaster.

Appendix A-D provide supporting information as checklists for the EHWG and AWG Chairpersons, asbestos fact sheets and useful information for the public and data on Townsville suburbs with construction prior to 1980, when the building code changed for wind loadings (and more likely to have disaster waste from cyclone wind damage), 1990, when asbestos was banned in building products (more likely to have ACM in disaster waste). Asbestos was banned from all products in 2003.

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Endorsement

This plan is recommended for distribution by the Townsville Local Disaster Management Group (TLDMG).

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Deputy Chairperson
TLDMG Environmental Health and Disaster Waste Working Group

Date: 14/07/26

Zac Dawes
Local Disaster Coordinator
Townsville Local Disaster Management Group

Date: 14/07/26

Cr Nicholas Dametto
Chair
Townsville Local Disaster Management Group

Date: 15/9/26

Version Control & Record of Amendments

Version	Author	Amendments	Date
1.0		Supersedes the Environmental Health Sub Plan and the Asbestos Sub Plan Consultation with Deloitte	August 2024
2.0	Z Dawes	Annual Review	July 2025
3.0	Zac Dawes	Annual Review	July 2026

Consultation

A consultative process is used when developing the LDMP and associated Sub Plans. Prior to adoption, the Sub Plan is released for consultation with all core members and advisors of the LDMG and the working group members The key stakeholders to be consulted in the development of Sub Plans varies for each plan and is determined by TCC. Updates to plans are based on stakeholder feedback and records are maintained by TCC on the stakeholders that were consulted and those that provided feedback.

1. Overview of Plan

1.1 Aim & Objectives of the Plan

The aim of this sub-plan is to minimise public health risks that may emerge during and after a disaster and to manage risks associated with disaster waste. This is achieved through the provision of temporary preventative or control measures and by prioritising and directing the allocation of resources for effective public health and environmental protection. The key objectives are to:

- collaborate to implement temporary preventative health protection measures to minimise risks to public health
- provide clear, concise and timely information to the Townsville Local Disaster Management Group (LDMG) and community
- define the responsibilities of the Environmental Health and Disaster Waste Working Group (EHDWWG) members
- ensure a coordinated and collaborative response between various council departments and partner agencies to minimise public health risks to the community.

It outlines the public health and disaster waste response strategy, planning processes and how the efforts of a range of organisations may be harnessed into an efficient, coordinated response during disaster events.

1.2 Context & Assumptions

A major disaster causes significant disruption to the community. Water supplies, sewage treatment, refuse disposal, and access to safe food may be compromised. A range of risks to public health may emerge and continue for some time.

Queensland Health (QH) is the lead agency for the compliance of public health matters. Townsville City Council (TCC) also has many responsibilities relating to public health and has multiple Environmental Health Officers (EHOs) to deliver business as usual (BAU) activities.

If TCC's capacity is exceeded during a disaster, a request for assistance (RFA) to the District Disaster Management Group (DDMG) may be required to engage the Townsville Hospital and Health Service (THHS) and/or suitable resources from other councils to support the TCC EHOs.

Each agency will be responsible for ensuring their personnel undertake relevant / appropriate training within the scope of their operations for Environmental Health, Waste and Asbestos-related activities.

1.3 Ownership

This sub-plan is owned by the Local Disaster Coordinator (LDC) on behalf of the LDMG. All significant amendments must be approved by the LDMG.

The owner will ensure the:

- master document is retained with relevant supporting documents
- level of circulation of the sub-plan is determined by the LDMG, and details of copyholders are recorded
- sub-plan is updated and reviewed on at least an annual basis, or after activation, whichever is the sooner
- sub-plan is tested and exercised as determined by the LDMG.

1.4 Functional Responsibility & Support Agencies

TCC will work collaboratively with QH to fulfil shared responsibilities for the provision of public health services.

The LDC is to ensure all agencies and members of the TLDMG are aware of the Environmental Health and Disaster Waste Sub Plan. The sub-plan also directly applies to all member and advisor organisations of the LDMG. Each support agency or organisation is responsible for:

- providing its own financial services and support to its response operations in the field
- maintaining compliance with its own financial policies and procedures and,
- ensuring accurate recordkeeping of expenditure for submission to relevant funding bodies post-event.

Support agencies may include:

- Safe Food Qld
- QFD Chemical Services Unit
- Australian Red Cross
- Work Safe

1.5 Links with other Documents

This sub-plan is interdependent on, and should be read in conjunction with, the LDMP. It links directly to all other sub-plans that respond to disasters, including the LDMG Emergency Contact Lists. This plan also directly links to:

- TCC Emergency Response Plan
- TCC Environmental Health Emergency Operating Procedure
- TCC Resource Recovery Services Emergency Operating Procedure
- TCC Property, Fleet and Emergency Management (PFEM) Emergency Operating Procedure
- TCC Construction Maintenance and Operations Emergency Operating Procedure
- TCC Vector Control Emergency Operating Procedure
- TCC Resource Recovery Emergency Operating Procedures
- Townsville Hospital and Health Service (THHS) Emergency Management Plan
- THHS Pandemic Management plan
- QH Pandemic Plan
- Queensland Health Public Health Sub Plan
- QH Disaster and Emergency Incident Plan

2. Activation & Notification Procedures

2.1 Activation of the Plan

Activation of this Sub Plan will be at the discretion of the TLDMG and follows the same escalation outlined in the LDMP.

The Environmental Health & Disaster Waste Working Group (EHDWWG) Chairperson is responsible for the implementation of this Sub Plan and will liaise with relevant state government agencies and other stakeholders as required to ensure a coordinated community response between state and local government. The operational lead will provide regular reports and updates to the TLDMG

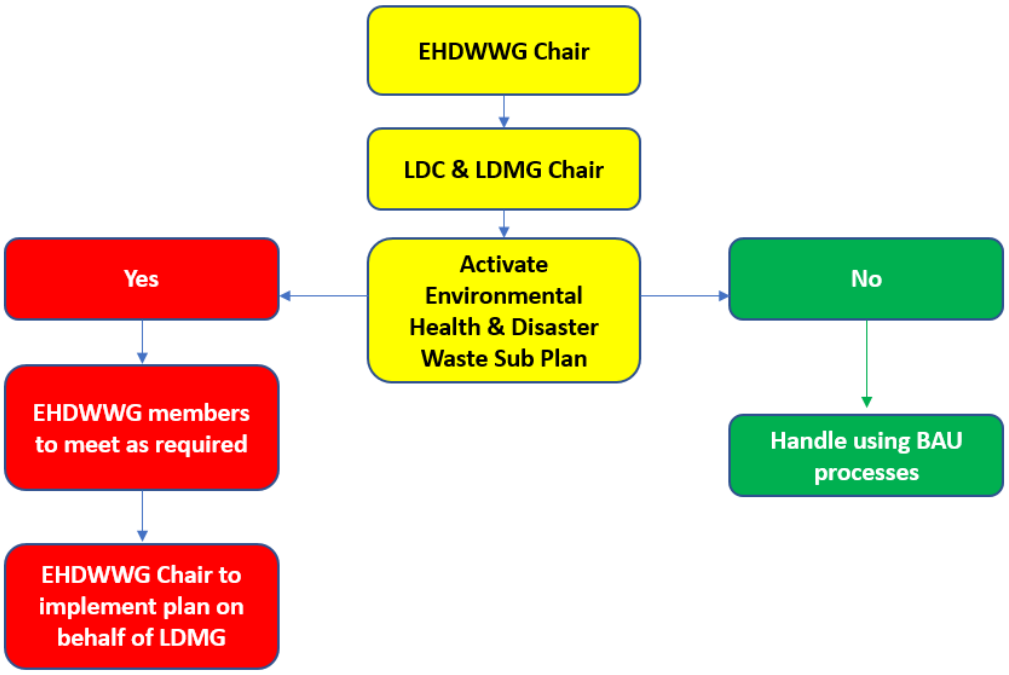
A request may be put to the Chairperson to activate this plan for events outside of the activation of the TLDMG (an example of when this might occur could be a widespread water contamination incident.

2.2 Triggers

Trigger points for when this plan will be activated include:

- There is a potential or known public health risk directly related to an emergency or disaster event, there is a potential or known public health risk likely to impact a large population of the local community'
- There has been a disaster event that has caused damage to buildings (including residential housing and/or workplaces) and there is a potential or known public health risk to the local community due to the presence or exposure of ACM, and a coordinated response is required. Refer to Section 14 of this plan.
- The TLDMG are at Lean Forward or Stand-Up level of activation (event-dependent).

2.3 Notification Flowchart



2.4 Notification Process

The EHDWWG Chairpersons will maintain a watching brief for any events that may require the activation of this plan.

If a need is identified, they will notify the LDMG Chair and Local Disaster Coordinator who can also activate this plan if required.

Once activated, the EHDWWG Chairperson will convene a meeting of the working group members as required and will implement this sub-plan on behalf of the LDMG.

If a decision is made to not activate the plan, then environmental health and disaster waste issues will continue to be addressed using standard agency procedures.

2.5 Activation of the Environmental Health & Disaster Waste Working Group

The LDC or the Chair of the TLDMG will direct the Chair of the Environmental Health & Disaster Waste Working Group to activate when and if required. When time permits this will be endorsed via the core membership of TLDMG – refer section 3.

3. Environmental Health & Disaster Waste Working Group (EHDWWG)

3.1 Meetings

The Environmental Health & Disaster Waste Working Group will meet at least annually to perform planning, review and renew activities associated with the arrangements outlined within this sub plan. A formal Attendance Record will be kept, and minutes will be documented for each meeting.

Meetings will be called by the Chair. Members may request a special meeting be convened by the Chair depending on the circumstances. No business should be conducted at meetings without a quorum which comprises half the membership plus one.

3.2 Membership

The EHDWWG comprises of key Council and state agencies personnel, which have interrelated roles in public health disaster preparedness and response. Refer confidential contact list in Guardian IMS. Operations relating to the public health components of this Sub Plan will be managed by the EHDWWG. This is to be achieved through periodic meetings with key personnel from each agency, who will foster cooperative and synergistic operations under the EHDWWG Terms of Reference.

The Chairperson may appoint other agencies to the EHDWWG or invite other agencies to attend meetings if deemed necessary.

3.3 Key Functions

KEY FUNCTION	LEAD AGENCY	SUPPORT AGENCY	ADVISORY AGENCY	EVENT DESCRIPTION
Food safety	QH (TPHU) TCC (EH)		Safe Food Production	• Major food-borne illness outbreak • Food safety for business and residents • Food business closures and reopening's
Environmental protection	DETSI	TCC (EH) QH (TPHU) DLGWV	QFD TCC (Lab) TCC (CMO) MSQ	• Large scale pollution event (e.g. water pollution or air pollution).

KEY FUNCTION	LEAD AGENCY	SUPPORT AGENCY	ADVISORY AGENCY	EVENT DESCRIPTION
Public Health	QH	TCC (EH) WHSQ DPI		• Mould • Pandemic • Epidemic • Mosquito-borne disease outbreak
Asbestos management	TCC (Property)	TCC (EH) WHSQ DETSI QH (TPHU) TCC (RR)		• Damaged asbestos buildings and asbestos removal following an emergency event • Asbestos waste (collection and disposal)
Waste management	TCC (RR)	DETSI		• Manage incidents associated with Council's landfills • Temporary landfills • Temporary transfer stations
Water quality	TCC (Water)	QH (TPHU) DLGWV	TCC (Lab)	• Manage incidents associated with Council's treatment plant • Unsafe drinking water • No drinking water supply
Wastewater management	TCC (Water)	DETSI QH (TPHU) DLGWV DPI	TCC (Lab)	• Manage incidents associated with Council's treatment plant • Discharges to waterways or stormwater infrastructure
Education and advice	TLDMG Media & Comms	Agency-specific media messaging		• Provide information and advice to the community

3.4 EHDWWG Coordination

The Chairperson or their delegate is responsible for coordinating the efforts of the EHDWWG and establishing opportunities for collaboration and support. The Chairperson will evaluate the situation and establish priorities for the team.

3.4.1 EHDWWG Coordination Room

Depending on the event, function and lead agency, a suitably sized meeting room is to be made available for the EHDWWG to meet and discuss the work group's response to the event.

The EHDWWG Coordination Room can be set up during the Lean Forward / Prepare phase if there is an imminent event.

In the event of a declared pandemic, this plan will be governed/guided by the Queensland Health Chief Health Officer (CHO) directives that may change at short notice and potentially result in changes to the systems and processes detailed in this document. Where meetings occur in person, the current restrictions applicable for the designated venue must be first established and followed by all participants where required.

3.5 Environmental Health Response Strategy

Where possible before disaster impact, the LDMG should direct the EHDWWG to commence planning to identify and mitigate possible public health and environmental risks that may arise from the event. This will usually involve taking initial action to protect key assets such as power supplies, water and sewerage treatment and refuse management facilities. It will also likely require public health focused messages to be developed and delivered to the community to assist them in preparing for the event.

Once a disaster impact has occurred, the LDMG should direct the EHDWWG to develop an Event-specific Public Health & Environment Plan.

This plan is to outline the public health and environmental risks in the region arising from the disaster event and how they are to be treated. The event-specific plan should address the tasks of all agencies that will contribute to the public health and environmental effort and the resources required. It should also detail the public information messages required and how they will be implemented. The plan is to be approved by the LDMG. Council's Environmental Health and Land Protection staff will develop the plan on behalf of the LDMG.

3.6 QDMA Request for Assistance (RFA)

Should the EHDWWG require assistance to respond to an event, the Request for Assistance (RFA) is to be made by the respective Chairperson and submitted to the LDC. If the LDCC is activated, the RFA can be submitted directly to the Logistics Officer in the LDCC. Refer to the Logistics Sub-Plan.

3.7 Impact Assessment

An initial impact assessment of disaster affected areas will be undertaken in accordance with the LDMP. This will provide the LDMG with emerging information on public health and environmental risks and inform the development of appropriate strategies to minimise those risks.

Further impact assessments may need to be coordinated by the EHDWWG to gather additional or more detailed data to inform strategies e.g. to determine locations of ACM risk.

3.7.1 Mapping

Impact assessment data obtained by the EHDWWG should be made available spatially to support the operation. This can be achieved via Guardian IMS. Assistance may be available from the Intelligence Cell in the LDCC.

3.8 Public Information & Warnings

The TLDMG will keep the community informed by providing public health messages and information shared from each agencies official pages which will then be shared on the Townsville disaster information social media pages and the Emergency Management & Disaster Dashboard so its accessible to community in a central location. All public health messages will be managed in accordance with the Public Information and Warnings Sub-Plan.

3.8.1 Media Briefings

It is standard practice to have a subject matter expert with the Chair of the TLDMG during media briefings and this may involve EHDWWG members.

3.9 Financial Management Arrangements

All expenses incurred as a result of activating this plan are to be absorbed through the individual agencies. Refer to the TLDMG Financial Management Plan for further information regarding expenses during activation.

3.10 Situation Reports

During activations, the EHDWWG Chair will provide daily updates, and situation reports (SitReps) to the TLDMG. This will be undertaken via Guardian IMS.

During operations, the EHDWWG Chair will be responsible for recording key decisions and actions. This can be recorded in the form of a diary or notebook and remain the property of the LDCC at the end of the event.

4. Personal Hygiene & Clean Up

Maintaining personal hygiene after a disaster event is often the single most effective strategy that can be applied to minimise the risk of disease and infection. Ensuring affected communities have access to sufficient quantities of appropriate personal hygiene supplies must be a consideration in the Event-specific Public Health Plan. Additional supplies may need to be obtained through the Local Disaster Coordination Centre.

Public messages about how individuals can maintain appropriate levels of personal hygiene should be developed and distributed. Such public messaging may consider:

- Handwashing and use of sanitizer products including safety advice on their use and storage.
- Treatment of minor cuts and scratches to avoid infection.
- Avoidance of potentially contaminated waters e.g. floodwaters
- Use of Personal Protective Equipment e.g. gloves, waterproof boots, etc.

Undertaking clean up after a disaster poses a significant risk to public health as large numbers of people (emergency works, affected individuals) commence moving around the impact zone. Toxic waste, raw sewerage, putrescible waste and toxic bacteria which can cause diseases like melioidosis all pose a threat to public health.

The public health plan must identify measures to minimise these risks including establishing standards for personal protective equipment, identification of specific risks and risk areas, and advice on treatment of cuts and scratches, etc to reduce likelihood of infection.

Mould after floods is a major health risk and public messaging should be developed to warn the public about the risks of mould causing lung infections. Mould may grow on anything that has been affected by floodwaters or hot/humid conditions and may affect all household goods including carpets, rugs, mattresses, wall coverings and curtains. Mouldy hay and stock feeds may also pose a risk to public health. Workers and emergency responders should be made aware of such risks and be provided with advice on personal protective equipment to be used to reduce exposure.

Melioidosis is a potentially life-threatening disease caused by the bacterium *Burkholderia pseudomallei*, commonly found in soil and muddy water in tropical regions like northern Australia. It typically spreads through skin cuts, inhalation of contaminated dust or water droplets, and occasionally through ingestion. People with weakened immune systems, diabetes, kidney or lung disease, or those who work outdoors are at higher risk. To stay protected, especially during the wet season, it's important to wear protective clothing and footwear when in contact with soil or muddy water, avoid exposure to stormwater, and promptly clean and cover any skin wounds.

5. Shelters & Evacuation Centres

5.1 Shelters and Evacuation Centres Sub Plan

The EHOs will have a key role in ensuring that shelters and evacuation centres meet requirements regarding water supply, food safety, sanitation, waste management, ventilation and space. Public health issues can deteriorate rapidly when temporary emergency facilities are established and there are large concentrations of people. Refer to the Shelters and Evacuation Centres Sub Plan.

5.2 Evacuation Centres Assessment Tool

A tool to assist Public Health planners in assessing evacuation centres has been developed by Queensland Health. This tool known as the Evacuation Centre Assessment Tool (ECAT) is provided in spreadsheet format and is held by the Council's Environmental Health Staff. It augments the planning tools provided in the Evacuation and Shelters and Evacuation Centre Sub Plan.

6. Provision of Safe Drinking Water

6.1 Potable Reticulated Water Supply

The Water and Wastewater Team will monitor the quality and safety of potable reticulated water in accordance with the approved Drinking Water Quality Management Plan (DWQMP). If the water supply is not safe for human consumption, a boiled water notice will be issued in accordance with TCC's BAU processes.

TCC's Team Manager Network Service Delivery has responsibility for the safety and reliability of the reticulated water supply and will engage with the EHOs as required.

Water and Wastewater staff will refer to the approved DWQMP Incident and Event Procedures and business continuity plans (BCPs) for the business areas during an emergency.

6.2 Other Water Supply

Owners of private water supplies should refer to QH's Safe Water on Rural Properties.

6.3 Length of Disruption

The forecast length of the water disruption will be considered in determining the most appropriate response. During short disruptions it is likely no specific action will be required other than to inform the community of the outage, reason for it, anticipated return of supply, and special instructions.

Alternative strategies may need to be considered and implemented for longer disruptions. These will typically be managed through water cartage and conserve use requests in consultation with the co-regulators. If additional support is required, Water and Wastewater will liaise with the LDC who will collaborate with the District and/or State Disaster Coordination Centres as required.

6.4 Minimum Water Supply Requirements

The provision of water is based on a minimum requirement of 15L/person/day. A minimum of four litres of safe drinking water is required for consumption, and 11L of suitable water for hygiene and cooking needs[1].

Residents should be encouraged to include adequate supplies of safe drinking water in their emergency kits in case the disaster affects Council's ability to provide this service.

Issues to be addressed in ensuring the provision of safe and adequate water supplies include:

- Water quality assessment processes
- Safety and control of supply
- Bacterial sampling

[1] WHO Technical Notes on Drinking Water, Sanitation and Hygiene in Emergencies, July 2013.

- Water source monitoring programs
- Sources of water and water treatment standards
- Provision of public advice to boil water as necessary
- Ensuring adequate water storage capacities
- Transport and distribution of potable water to those who require it

Each evacuation centre must be supplied with sufficient drinking water. This may be supplied initially on site by mains or storage tank water. Capacity of each centre should be identified within the Shelters and Evacuation Centres Sub Plan.

Where no potable water is available from mains or tanks at an evacuation centre, water supply may be arranged with designated water carriers. The Townsville City Council licenses water carriers. Townsville City Council Environmental Health team maintain a list of licensed water carriers.

Bottled water may be used and could be either stored in bulk at each centre or supplied as required by wholesalers or retailers in the locality when the need arises. The larger outlets such as supermarkets or bulk wholesalers such as Campbells should be approached prior to the disaster event to avoid panic buying by arranging limits on public purchasing of bulk water supplies so that adequate supplies are maintained for evacuation centres. Additional bottled water supplies may be requested through the Local Disaster Coordination Centre as required.

Public Health messages should be developed to educate the community on how to adequately treat tank water collected from roofs and stored in tanks on their property. This should include advice on first flush devices, coarse and fine filtration and disinfection strategies. Such public health messages should also provide general advice on chemical disinfection of water using chlorine tablets, including the availability of such tablets.

Public health messages regarding water safety may be delivered via media outlets and brochures/pamphlets on water safety should be made available to evacuation centres, council offices, libraries, schools, shops and other places where the public may gather.

General information and advice should be freely distributed throughout the affected area relating to potential hazards of polluted drinking water supplies and the fire and explosion dangers of using bottled gas to boil water during power outages. Food Safety

Food safety may be compromised as a result of the impact of a disaster event and is usually related to spoilage caused by lack of refrigeration during power outages or poor sanitation and food handling procedures.

7. Food Safety

Food safety may be compromised as a result of the impact of a disaster event and is usually related to spoilage caused by lack of refrigeration during power outages or poor sanitation and food handling procedures.

7.1 Food premises

The TCC, Environmental Health team is to identify food suppliers who may be affected by the disaster event and ensure they maintain adequate refrigeration and food handling processes. TCC maintains a register of licensed food businesses within the Property and Rating System. A desktop assessment of affected food businesses should be completed by the EHOs as soon as practicable to determine the priority and required actions. This will inform the decisions on what premises to inspect and in which order.

Consideration should be given to:

- Retail food suppliers – cafés, restaurants, etc.
- Institutional food suppliers – hospitals, nursing homes, schools.
- Evacuation Centres – including the provision of donated food by members of the public.

The EHDWWG should seek to implement an increased food safety monitoring program that undertakes inspections of food suppliers (as detailed above) to ensure adequate food handling and storage arrangements are maintained – refer TCC Environmental Health Operating Procedure. Any limitations should be identified and rectified where possible.

7.2 Inspections

The EHOs will undertake inspections of impacted food businesses and temporary food suppliers / kitchen facilities to ensure compliance with the *Food Act 2006* and the Food Safety Standards.

Where resources are limited, the EHOs may seek assistance through an RFA (refer to section 3.2). Priority will be governed by risk. Risk will be established on the key principles of vulnerability (schools and childcares, aged care facilities, disabled care facilities, etc), volume (major food suppliers), and remaining licensed food premises.

Inspections prevent and minimise the risk of food-borne illness in the community and focus on the safe storage and production of food to ensure it is safe for human consumption. This includes:

- maintenance of appropriate temperature control of foods requiring freezing, chilling or heating
- protection of food from spoiling and contamination
- preparation of food in premises in a fit state to prepare food for sale.

The EHOs may exercise emergency powers granted under Division 8 of the *Food Act 2006* where there is reason to believe food is not or cannot be prepared, stored or served in a safe manner. Directions can be given verbally or in writing.

Where the EHO is unable to get to food premises, they may attempt to contact the food businesses via telephone or email.

The establishment of temporary kitchens and the mass feeding of the public or response workers may be necessary during disaster operations. In many cases these facilities will be provided by specific organisations (service clubs, etc) that maintain high food safety standards. However, routine and regular inspections of such facilities should be considered to ensure public safety.

7.3 Food Disposal

Spoilt food resulting from lack of refrigeration or stock damaged by the impact of the disaster should be identified and removed to safe areas away from the public. Spoilt food must be removed from public spaces as quickly as possible. This includes food spoilage at retail food suppliers, institutions, evacuation centres and private residences. The event-specific Public Health Plan should specify the arrangements for removal and management of spoilt food supplies.

Commercial quantities of spoilt or contaminated food should be disposed of at TCC's transfer stations. Operations at these sites are directed by TCC's Resource Recovery staff. The LDMG will determine arrangements for isolated communities, relevant to the circumstances.

Public messages should be developed to advise the community of the arrangements for the removal of spoilt food and how to maintain adequate food safety standards.

7.4 Donated Food

TCC and the LDMG will not accept donated food from the community due to food safety risks. However, it is acknowledged that community groups may facilitate catering or food drops as a response to the disaster.

Public messaging should also be developed discouraging donations of food to evacuation centres in order to minimise the risk of illness caused by inadequately prepared or spoilt food. Details on the symptoms of food poisoning and the immediate actions required should be widely distributed as part of public health messaging.

8. Wastewater Management

8.1 Reticulated Sewerage System

Sewerage interruptions may be caused by infrastructure failure or the inability to treat effluent prior to discharge. This is managed by the Team Manager Network Service Delivery under the BCP and BaU processes in accordance with TCC's licence. Loss of reticulated sewerage services to the community greatly increases the risk of disease and illness, though the likelihood of this occurring is low.

To protect the reticulated sewerage system, specific messaging may be required in order to ensure the integrity and functionality of the reticulated sewerage system e.g. regarding disposal of non-flushable materials.

Medium-longer-term outages of the sewerage system will need to be escalated to the LDMG for consideration of appropriate action e.g. deployment of alternate facilities such as port-a-loos or evacuation of the affected community.

8.2 Other Sewerage Systems

Onsite treatment and disposal of wastewater in areas where reticulated sewerage is unavailable are the responsibility of the property owner. Funding may be available under Disaster Recovery Funding Arrangements (DRFA) to support homeowners to inspect and/or repair damaged sewerage systems. Refer to the Financial Management Sub-Plan.

8.3 Emergency Ablution and Sewerage Services

The event-specific Public Health Plan should consider emergency ablution facilities and matters relating to sewerage services including the public health risks associated with sewerage /sullage overflows.

Emergency ablution facilities may be established to support evacuation centres or to support large concentrations of emergency response workers deployed to respond to the event. They may also be installed to support longer term shelter solutions and to support affected members of the community.

The arrangements for the removal of sullage and sewerage from such temporary sites should be considered including the sanitizing of such assets during and after their use. Onsite disposal of sewerage and sullage must conform to established standards and public health inspections may be required to monitor issues with such facilities.

Sewerage overflows may have public health and environmental impacts, and the Event Specific Public Health & Environment Plan should address the actions to be taken in the event of such overflows affecting the community.

Public messaging that advises people what actions they should take to minimise public health issues relating to their own septic and sewerage systems should be considered.

Additional resources may be needed to pump out and dispose of sewerage or sullage overflows. Disposal strategies for excess sewerage/sullage should be developed.

9. Pest Control

9.1 Vector & Vermin Control

The threat of an increase in vectors and vermin is significantly increased following excessive rain and flooding. This can be exacerbated by seasonal influences, unavailability of insect repellent, concentrations of people in evacuation centres, and isolated communities.

Additional pest control may be required in the aftermath of a disaster to protect public health. TCC has limited capacity to undertake such operations, and external assistance may be required. The LDMG is to consider the need for vermin and vector control and may seek assistance from other local governments and / or QH via the DDMG as required.

The EHDWWG should include arrangements to undertake surveillance to ascertain the extent of the problem via:

- Vector identification
- Vermin identification
- Treatment options

10. Infectious Disease Control

10.1 Infectious Disease Outbreaks

Outbreaks of infectious disease are more likely to occur after a disaster. Ongoing community education on preventative measures that reinforce good hygiene practice is important.

QH has lead agency responsibility for the clinical management of any infectious disease outbreak. The LDMG will provide support to QH for the management of infectious disease outbreaks. The LDMG has prepared a Pandemic Management Plan.

Managing infectious disease outbreaks is vital to maintaining public health after a disaster. Promoting the use of basic personal hygiene within the community remains the primary method of prevention. Public messaging about not swimming in flood waters, staying away from dead animals and using appropriate personal protective equipment should be reinforced throughout the disaster event.

However, an outbreak of infectious disease may occur despite these efforts.

The EHDWWG should address the surveillance and reporting of infectious diseases and provide advice on any isolation or separation of infected individuals from susceptible groups. Council's environmental health staff may also be required to assist Qld Health in the control of suspected disease outbreaks.

11. Environmental Protection

11.1 Contaminants

Environmental issues from disasters include the uncontrolled release of contaminants such as fuel, oil, chemicals, raw materials and sediments.

TCC and DETSI have regulatory obligations for certain high-impact industrial activities which are licensed under the Environmental Protection Act. All persons performing activities that have a potential to cause harm to the environment have a general environmental duty to protect the environment and report any incidents. TCC will monitor and respond to reports of environmental incidents to ensure corrective and/or remedial action is taken if required.

QFD are the lead agency and must be notified of any hazardous chemical (HAZCHEM) incidents.

TLDMG will support QFD sharing warnings and public information, plant & equipment, evacuations and shelter options if required.

11.2 Noise & other Emissions

Other factors impacting the environment may include noise and exhaust gases from generators used by residents and businesses experiencing ongoing power loss. TCC will provide education and advice if the use of generators results in noise complaints and take enforcement action where necessary.

Carbon monoxide poisoning is a serious risk when generators are being used indoors or in enclosed spaces. Information on the proper use of generators (including ventilation and electrical safety) will be disseminated via LDMG communications during extended power loss.

11.3 Biosecurity

Biosecurity issues arising from disasters are generally related to the potential introduction of plant and animal pests during disaster response and recovery operations. TLDMG will assemble a taskforce of relevant staff and agencies to address any biosecurity issues arising from disasters. Senior Team Leader Environment can advise TCC on biosecurity issues and monitor matters relevant to biosecurity and take action to prevent incursions of new pests. Refer TCC Biosecurity Plan.

11.4 Natural Assets and Species-Based Assets

Disasters can result in significant damage and risk to natural assets and species-based assets. The land managers for agencies, including Senior Team Leader Environment for TCC, will be advised of on-ground damage caused by disasters to natural assets that require operational works by TCC staff prior to works commencing, to ensure local and state matters of environmental interest are managed appropriately. TCC will work in collaboration with DETSI to develop remediation plans to address damage and minimise the risk of further deterioration.

Animals, both wild, livestock and pets are often displaced after disaster events. Snakes are often very evident after during and after floods. Livestock may wander due to downed fences and pose a risk to road users. Pets may be lost or homeless after a disaster.

The EHWG should consider arrangements for animal management for each of the above categories and should provide for public messages that include:

- What to do with wandering livestock
- Who to contact for assistance with wild animals e.g. snake handlers, animal welfare providers, etc
- What to do with lost or homeless pets.

12. Waste Management

12.1 Waste storage, sorting and Disposal

TCC retains responsibility for the management of waste during disasters in accordance with their license. The quantities of waste following a disaster may be significantly higher than normal and the use of additional waste disposal sites may be necessary.

Large quantities of waste and refuse may be generated as a result of a disaster situation including Green, Building (including asbestos – refer section 13), Putrescible, Household, and Industrial (including toxic chemicals) waste. The capacity to remove all this waste, as well as the capacity to store it all may be compromised by the disaster event.

TCC may set up temporary waste receiving, sorting and storage areas if required due to disaster waste[2]. This may involve identification of emergency or temporary landfill sites (requires EHP approval if flood wastes are involved) and / or processes for the collection of refuse/waste (where the public can take different types of waste).

Changes to kerbside collection schedules will be communicated by TCC Resource Recovery as per normal BAU processes. Transfer stations will be opened as soon as is practicable and safe following a major event so that residents can commence property clean up.

Public health messages regarding waste disposal and actions required will need to be provided to the community.

Waste management issues will need to be considered by LDMG when temporary facilities, such as evacuation centres, are established.

Additional resources may be required to manage waste demands. The LDMG should consider whether external assistance is required to effectively manage waste and submit a RFA to the DDMG if necessary (refer to section 3.2).

The Event Specific Public Health & Environment Plan must address the refuse/waste disposal issues for all the above waste/refuse elements.

[2] It is noted that sorting and storing waste generated by or because of a disaster situation does not trigger ERA62.

12.2 Disposal of Dead Animals

Disposal of dead animals will be at TCC's selected Waste Facilities under the management of the Waste Team. If these facilities are not suitable, or areas are isolated, the LDMG will make alternative arrangements applicable to the circumstances.

The public health risk posed by the large-scale death of livestock and animals through contamination of water and stock feed can be significant. The LDMG will liaise with the Department of Primary Industries, Queensland (QDPI)) to determine the appropriate course of action.

Biosecurity Queensland may be contacted in certain situations to implement the AusVetPlan.

The Event Specific Public Health & Environment Plan should consider:

- Selection of appropriate disposal sites
- Method of disposal (burial, cremation)
- Collection, transportation and disposal procedures.

13. Asbestos Containing Material (ACM)

Damage to buildings may result in the generation of large quantities of asbestos waste. Requirements for the safe handling and removal of asbestos must be adhered to. The LDMG may seek assistance from the DDMG via RFA to manage significant quantities of asbestos containing material (ACM).

13.1 Risk and Response Priority

Damage assessment information should consider

- Whether ACM is likely or not likely to be present
- Locations of ACM risk
- Approximate number of houses/buildings affected
- Whether the ACM risk is high or medium priority.

Property Risk Based on Year of Build

Year	Risk	Production/Circulation of ACM
1950 – 1979	High	High production, high circulation
1980 – 1984	Medium	No production, still in circulation
1985 -1990	Low	No production, still small quantities in circulation
1991 - current	Negligible	Use of AC in building products banned, asbestos unlikely to be present, but any actions should proceed with caution

There are two possible scenarios:

Priority Type	Description
High	"Washing machine effect" - caused by a tidal surge with shattered ACM strewn all over the ground and into the soil like confetti.
Medium	Intact ACM damaged, dislodged and dispersed where it is lying on the ground or loose on the structure due to a tornado or severe tropical cyclone. ACM has been mixed with debris (i.e., scattered building materials) in resident's yards, footpaths, parks, roads, public buildings etc.

Action required for ACM management will be determined whether the situation is a medium or high priority.

High Priority Areas

High priority areas will require a plan of action which would need to be developed on how to secure the site to allow for assessment and clean up. The assessment may require testing to be carried out to determine the extent of contamination. Clean up may require topsoil to be removed if testing demonstrates contamination.

The immediate response may include preventing entry into an area until the risk is removed or reduced. This may or may not involve the evacuation of residents from the area.

QPS assistance may be required to deny entry to the high-risk areas by unauthorised persons and to remove persons in danger.

Once the area has been secured by QPS then it may be necessary to establish traffic control using a security company or traffic control company. It will be necessary to establish a system of approved access.

When the area is secure then detailed investigation can commence on the level of hazard, isolating the high-risk areas and identifying the best method of hazard removal. This may require extensive soil decontamination using qualified and licensed ACM removal companies.

Medium Priority Areas

The first and main message for the community is that they should engage a suitably licensed contractor to clean up ACM on their property.

Council will be responsible for the clean-up of ACM on their own property/land.

Refer to Appendix C – 2019 Data on Townsville Suburbs Pre-1980 Damage by Suburb

13.2 Collection of ACM

For private land, it is the owner's responsibility to double wrap the ACM, label it and place it on the kerbside for collection.

A proposed method of collection is to be determined by the Working Group. In previous events, council crews were employed in the collection of ACM from the footpath of impacted areas in the following manner:

- 1st team - identifies kerbside piles which contains possible ACM and marks the pile accordingly.
- 2nd team - picks up the material.

To avoid exposure to asbestos fibres the ACM is to be double wrapped, labelled, and placed on pallets/trucks/skips so that the wrapping remains intact.

If ACM is to be collected from the kerbside, then householders will be requested to separate the debris being placed on the kerbside into four piles:

- Metal
- green waste
- ACM and
- the rest.

Any Council staff involved in the clean-up of ACM must have appropriate qualifications and conduct work in accordance with their safe work method statements and the use of issued PPE. The clean-up of ACM during a disaster event should be no different than how the staff would deal with it in their daily duties.

More information about qualification and licenses required for handling and removal of ACM refer to WHSQ website: Asbestos licences | WorkSafe.qld.gov.au

13.3 Air Monitoring

The EHDW Chairperson is to coordinate the implementation of air monitoring, where appropriate in determining if this is necessary. This monitoring will most likely be undertaken for high priority areas.

Air monitoring should be conducted by a suitably qualified contractor/consultant. Details of providers are included in the Environmental Health and Disaster Waste Sub Plan private contact list.

Air monitoring requirements in accordance with *How to Safely Remove Asbestos Code of Practice 2021.*

13.4 Use of Contractors

Suitably qualified and licensed contractors/ consultants will be required to supervise the identification and handling of ACM. Refer to Environmental Health and Disaster Waste Sub Plan private contact list.

The following link provides a list of businesses that are licensed to remove Friable and Non-friable (bonded) asbestos in Queensland. Which businesses are licensed to remove asbestos in Queensland? | WorkSafe.qld.gov.au

13.5 Transportation of ACM

Vehicles used for the transportation of ACM need to be registered with DETSI as regulated waste transport vehicles. In an emergency situation council can approach DETSI for temporary registration for the vehicles involved in the removal of ACM.

During the transportation of ACM and ACM-permeated soil the operators must comply with all environmental authorities' operational requirements. (e.g. ACM including impregnated soil must be double wrapped/bagged and identified, kept damp so no dust escapes during transport, disposal or temporary storage only at an authorised place) More information regarding the disposal of ACM-permeated soil, refer to the following; Disposal permit to remove, treat and dispose of contaminated soil - Guideline

Seals on the transport vehicles should be washed down (decontaminated) at the place of disposal. Currently there is no designated wash down facilities for this.

All loads are to be accompanied by Regulated Waste Tracking documentation.

More information about regulated waste and transport of regulated waste, refer to DETSI website:https://environment.des.qld.gov.au/management/waste/business/tracking

13.6 Facilities that Receive ACM Waste

The Stuart Waste Facility located at 24 Vantassel Street, Stuart is the primary facility for receiving ACM for direct disposal.

If no approved sites are readily available to receive the prepared ACM, then arrangements will be made to securely store ACM at temporary waste facilities prior to disposal.

A priority is to re-establish normal operations of council waste facilities as soon as possible to minimise the risk and reduce the cost of double handling ACM.

Staging sites will need to be established ensuring compliance with the environmental requirements provided by DETSI. Staging sites may be in the form of secure skip bins located near the incident area or a temporary waste transfer stations established in accordance *TCC Resource Recovery Operating Response Procedure*. Appropriate Security measures will be implemented.

If the current waste facilities are unavailable alternate plans may need to be established for the acceptance of contaminated soil from high priority refer to *TCC Resource Recovery Emergency Operating Procedure* for alternative locations.

Council will need to liaise with DETSI for the approval of any storage or staging sites.

13.7 Legislation & Codes of Practice

Actions involving asbestos are required to comply with the following legislation:

- *Public Health Act 2005* & *Public Health Regulation 2018* - measures prescribed to prevent and control public health risks (asbestos) in non-workplace areas.
- Codes of practice | Asbestos The management of exposure to asbestos during removal in a public place and workplace (the legislation includes environmental monitoring, operator licencing, personal protection measures and documentation). This legislation does not cover the transport of the material for disposal.
- *Environmental Protection Act 1994* and associated regulations. This legislation covers the exposure to asbestos and the emission of asbestos particles during the transport and disposal of asbestos containing material.
    - Local governments under the *Public Health Act 2005* are responsible for the management of public health risks arising from asbestos in a domestic setting.
    - Matters about asbestos from a workplace should be forwarded to WHSQ for their action.

13.8 Agency Roles and Responsibilities

Organisation / Agency	Responsibility

Department of Housing and Public Works (DHPW)	• Manage the clean-up and disposal of ACM from State Government owned properties, where the Agency has engaged QBuild to manage accordingly.
	• Note:
	  ○ TCC will need to formally engage DEPW for any services required under this plan – air monitoring or the like.
	  ○ TCC will be responsible for covering any costs related to DEPW services provided.

Department of Environment, Tourism, Science and Innovation (DETSI)	• Providing advice on disposal and transportation of ACM and compliance with the Environmental Protection Act 1994. • Approval to set up emergency landfill sites / staging sites.
Queensland Police Service (QPS)	• Providing information and advice regarding Qld Disaster Management Arrangements. Assist with requests for assistance from the LDMG to the District and/or State Disaster Management Groups (DDMG or SDMG). • Assist with restricting access to and/or evacuation of the affected area or structure, if there is a public health risk.
TLDMG	• Distribution of messages to the community on the safe management of ACM and the provision of information about AWG response
Townsville City Council	• Collection, clean up, and disposal of ACM on council land. • Coordinate any air monitoring with contractors. • Assist Qld Health with education and advice to the community. • Liaise with state government agencies to ensure a coordinated response. • The investigation of public health risks (asbestos in residential properties) under the Public Health Act 2005. • Issue Public Health Orders to remove or reduce the public health risk.
Townsville Public Health Unit (TPHU) (Queensland Health)	• Providing advice to the community and other agencies about the health risks from exposure to ACM.
Workplace Health and Safety Queensland (WHSQ)	• Providing advice to the working group on the safe handling and removal of ACM. Respond to any asbestos-related matters from a workplace.

13.9 ACM Responsibility Matrix

ACM Clean Up Actions	State Government Agencies					LDMG	TCC	Private landowners
	DHPW	DETSI	QPS	TPHU	WHSQ			
Assist with restricting access to, and/or evacuation of affected area if a public health risk exists.			R		R Workplaces only		R	
Providing advice to the community about health risk from exposure				R		R		
Providing advice to the community about current situation and what action they can take				R		R		
Providing advice to workers about health risks, safe handling, licensing. Respond to incidences on a work site.					R			
Serving Public Health Orders under the *Public Health Act 2005* where property owner has not removed the risk				R			R	
Air monitoring during clean-up activities	R			R	R Workplaces only		R	
Providing advice on disposal, transportation and compliance with the *Environmental Protection Act 1994* for residential settings		R					R	
Approval for set up of emergency landfill sites / staging sites		R					R	
Overall coordination and liaison with state government agencies to ensure a coordinated response							R	

13.10 Further Information & Weblinks - Asbestos

Workplace Health & Safety Queensland	
Website:	www.worksafe.qld.gov.au asbestos.qld.gov.au Qld Building and Construction Commission – Asbestos Safety
Publications:	Code of Practice - How to safety remove asbestos. https://www.asbestos.qld.gov.au/resources/codes-practice
	Factsheet – Safe clean-up of storm damaged material that may contain asbestos. https://www.asbestos.qld.gov.au/resources/safe-work-procedures/safe-cleanup-storm-damaged-materials-may-contain-asbestos
	Factsheet – Asbestos and Home Renovations https://www.asbestos.qld.gov.au/resources/guidance/asbestos-and-home-renovations
	Further resources can be obtained at: https://www.asbestos.qld.gov.au/resources/guidance
Townsville City Council	
Website:	www.townsville.qld.gov.au
Publications:	Emergency Management and Disaster Dashboard – disaster.townsville.qld.gov.au
Queensland Health	
Website:	www.health.qld.gov.au
Publications:	Website information - Asbestos - cleaning and/or removing asbestos containing materials. https://www.health.qld.gov.au/public-health/disaster/public-health-advice/asbestoshttp://www.health.qld.gov.au/disaster/storms/asbestos.asp
Department Environment, Tourism, Science & Innovation	
Website:	https://environment.des.qld.gov.au/
Publications:	Management of Regulated Wastes https://environment.des.qld.gov.au/management/waste/business/tracking

Appendix A: EHDWWG Chairperson Checklist

Key Task	Tick
• Maintain watching brief / state of readiness and receive initial information regarding disaster from Manager Water & Waste, Manager Environment & Natural Resources and Queensland Health.	
• Commence operations log and maintain records in Guardian IMS.	
• Regularly review Guardian for tasks and to maintain situational awareness.	
• Establish and maintain contact with the THHS.	
• Ensure adequate supplies are available to support operations, including PPE.	
• Monitor compliance with the *Food Act 2006*, *Environmental Protection Act 1994* and *Public Health Act 2005*.	
• Undertake surveillance and reporting on public health risks.	
• Make recommendations to the LDC in relation to public health matters and ensure the LDC is kept informed for the duration of the event.	
• Coordinate the implementation of temporary public health measures to treat public health risks in collaboration with Queensland Health and other key stakeholders.	
• Ensure the public health risks associated with temporary facilities are considered e.g. evacuation centres, emergency kitchens, etc.	
• Liaise with the Public Information Team Leader to ensure the community is kept informed of public health measures.	
• Provide Liaison Officer (LO) of appropriate delegation and authority to direct and control all ground activities.	
• Provide on ground tasking assistance from 0700 – 1800hrs daily for duration as directed by the appointed council liaison officer (TCC)	
• Confirm number and type of available resources and duration of availability.	
• Assist TCC with planning for and optimum utilisation of available ADF resources for TCC proposed program of works prior to commencing any on-ground assistance.	
• Conduct activities in the areas directed by TCC in accordance with council's program of works.	
• Ensure activities are executed strictly in accordance with the detailed tasking / work plan provided by TCC. Advise of any deviations from the tasking if / when these occur.	
• Provide 24 hours' notice of any resources required to support ADF tasking (trucks, excavators, backhoes, etc.)	
• Attend and participate in regular planning and coordination meetings as required during the tasking period. • Agree next day work plan / tasking with TCC NLT 1600hrs each day.	
• Provide twice daily situation reports to TCC.	
• Provide progress updates to TCC by way of hand mark-up on TCC's GIS mapping data NLT 1600hrs..	
TASK SPECIFIC	
Provide personnel to assist with clean-up of building, timber, general and green waste.	
Systematically undertake door knock to 100% of residential properties in tasked zones. Record completion by way of hand mark-up on TCC provide GIS mapping.	

Key Task	Tick
Clear storm debris from private property only if requested by and as directed by each resident.	
Stockpile debris on footpaths / road reserves for collection by TCC	
Sort debris into 3 separate piles: i. Green waste / timber ii. General building waste iii. Metals	
Where specifically requested, clear storm debris from public infrastructure, road reserves or parks?	
Identify private properties where asbestos containing material (ACM) may be present. Do not remove any debris from these properties. Report each case to TCC, move on to next residential property.	
• Contribute to situation reports (SITREPS).	
• Participate in debriefs.	

Appendix B: Asbestos Fact Sheet

WHAT IS ASBESTOS? WHAT ARE THE HEALTH RISKS?

What is asbestos?

Asbestos is the generic term for a number of fibrous silicate minerals. Products made from asbestos cement - a bonded asbestos material - include fibro sheeting (flat and profiled) guttering and downpipes, as well as other pipes for water, drainage or flues, corrugated roofing sheets, roofing shingles and guttering.

Asbestos is a type of building material used in the building industry between the 1940s and late 1980s.

Before the health risks were known, asbestos products were widely used because they were durable, fire resistant and had good insulation properties.

The manufacture and use of asbestos products was banned nationally from 31 December 2003. This ban applies to manufacture, supply, storage, sale, use, reuse, installation and replacement of asbestos.

What are the possible health effects of asbestos?

For detailed, current information on health monitoring, health effects and asbestos related diseases, please refer to the Queensland Government website:
https://www.asbestos.qld.gov.au/general-information/are-there-health-effects

The two types of asbestos

FRIABLE

Asbestos-containing materials fall into two broad categories: friable and non-friable (also known as bonded).

'Friable' is used to refer to asbestos-containing materials that can be easily reduced to powder when crushed by hand, when dry.

These materials can contain high percentages of asbestos fibres and are more likely to release these fibres into the airborne environment when disturbed. As such, they pose a greater risk to health.

Friable materials must only be handled and removed by an asbestos removalist with an 'A' class licence.

Examples of friable asbestos-containing materials include:

- low density asbestos fibre board (LDB)
- some sprayed-on fire retardants.
- sound proofing and insulation
- the lining on some old domestic heaters, stoves and hot water systems and associated pipe lagging
- the backing of sheet vinyl and linoleum floor coverings
- thermal lagging, such as pipe insulation.

NON-FRIABLE (BONDED)

'Non-friable', or bonded asbestos is used to refer to asbestos-containing materials in which the asbestos is firmly bound in the matrix of the material. These materials are unlikely to release measurable levels of asbestos fibre into the airborne environment if they are left undisturbed. Therefore, they generally pose a lower risk to health.

They are mainly made up of asbestos fibres together with a bonding compound (such as cement) and typically contain up to 15 per cent asbestos.

Non-friable materials containing asbestos are solid, quite rigid and the asbestos fibres are tightly bound in the material. Non-friable materials containing asbestos are the most common in domestic houses. They are commonly called 'fibro', 'asbestos cement' and 'AC sheeting'.

Examples of non-friable asbestos-containing materials include:

- asbestos cement products (flat, profiled and corrugated sheeting used in walls, ceilings and roofs, moulded items such as downpipes)
- plaster patching compounds
- textured paint
- vinyl floor coverings.

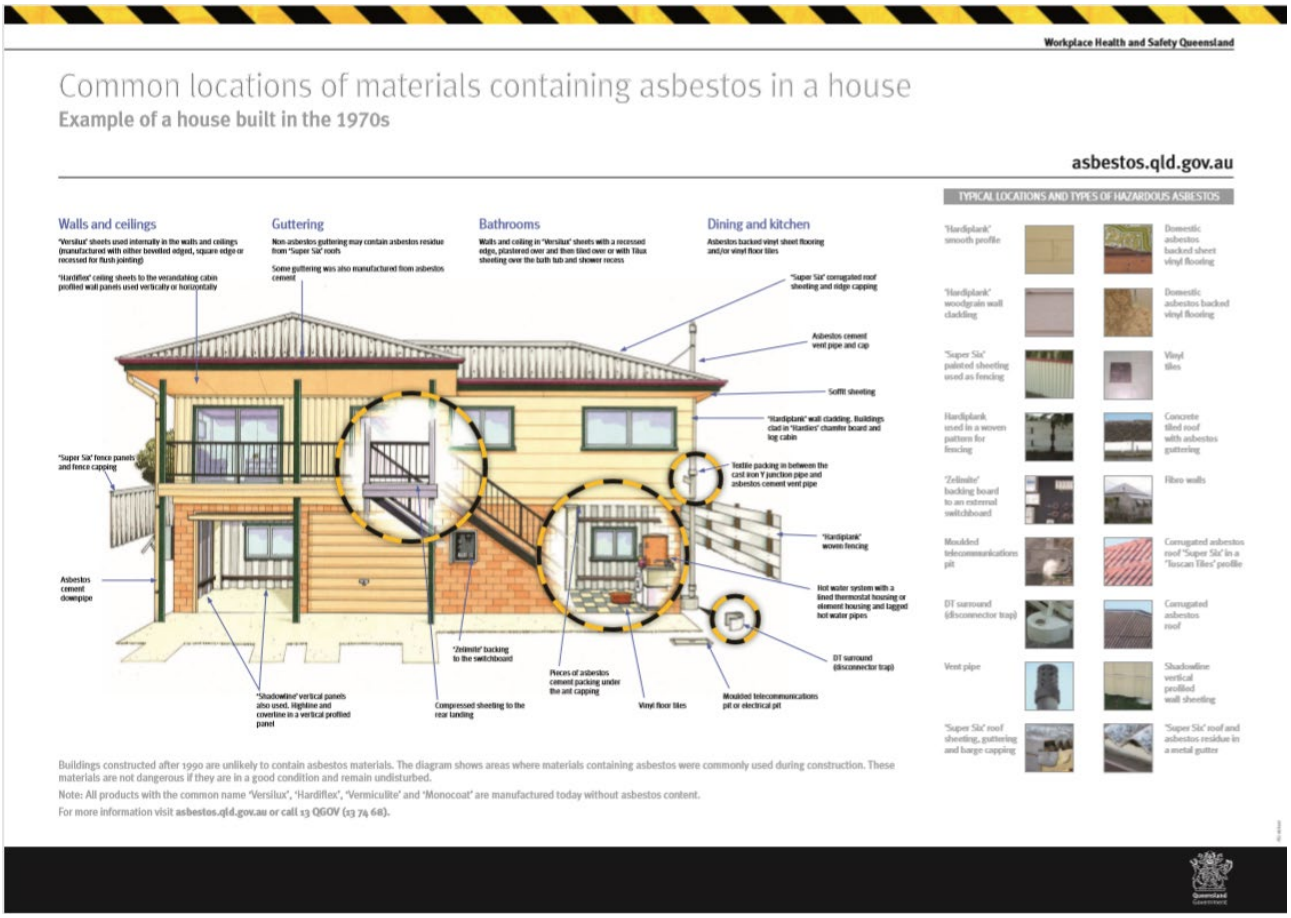
Know where asbestos is?

<u>Common Locations of Asbestos in domestic and commercial buildings:</u>

It is often very difficult to identify the presence of asbestos by sight. The only way to be certain is to have a sample of the material analysed by a laboratory.

Sampling of anything you suspect may contain asbestos is itself hazardous and should only be done by a competent person and analysed only in accredited laboratories.

Where materials have not been tested you should assume that it could contain asbestos and take adequate precautions before handling, removing or disturbing it. Sometimes manufacturer information may have been stamped on a product, or a label may state it contains asbestos. Typically, certain products can be identified by their age and likelihood to contain asbestos and must then be treated as asbestos materials.



Information taken from https://www.asbestos.qld.gov.au/sites/default/files/common-locations-materials-containing-asbestos-1970s-house.pdf?v=1569390504

Appendix C: Resident ACM Information and Messaging to the Public

Community Asbestos Clean-Up Kits

Residents should not be encouraged to handle ACM in large quantities. For anything over 10m^2, the resident should seek assistance from a licensed contractor to collect and remove safely. Refer to the *Handling Asbestos Safely after a Storm Factsheet* for more information.

Residents are encouraged to prepare their own ACM clean-up kit as part of the annual disaster preparedness to assist in safely cleaning up small quantities of ACM from their property. Recommended items for these kits, which can be purchased at any local hardware store, include the following:

Quantity	Item
1 pair	Disposable overalls
3	Disposable P2 Respirators
1 roll	Masking tape
1 pack	Permanent markers to write on tape
5 pair	Disposable gloves
1	2m Sheet of builder's plastic (Minimum 200µm thickness)

Example kit:

Communication & Media Releases - Messaging to the Public

Several key messages have been drafted for media releases and are located in the TLDMG Public Information & Warnings Sub Plan, including:

- The placement of separated debris on the footpath for the Council collection program
- ACM management advice for residents.

Any information that is required to be released to the media must be developed through consultation with the TLDMG Communications Member (or delegate) and LDC, TLDMG (or delegate).

The Chair will establish contact prior to the event (if time allows) or early after an event with the Media Liaison Officer in the LDMG to determine if any information is required.

Ongoing Communication

There is a need for ongoing public awareness to be coordinated by the TLDMG for:

- The placement of separated debris on the footpath for TCC collection
- Explain the residents their option to clean up ACM 10m^2 or smaller.
- Encouraging residents to first seek a contractor to clean up asbestos waste.
- The management of ACM using the kits
- The location of where ACM kits are available.
- Keeping of children away from affected areas and
- An understanding of ACM and its health effects.

Communication Tools

Communication tools to be used for asbestos messages in a disaster include TCC Asbestos in a disaster

Appendix D: Data on Townsville Suburbs – Pre 1980

	Dwelling Count	Residential Building Count	Residential Pre-1980 Construction Count	Residential Pre-1990 Probable Asbestos Containing Products Count
	*Counts of sub-divisions e.g.: apartments/ duplex)	* Whole buildings e.g.: detached house or apartment complex	Useful for predicting wind-based damage (pre cyclonic wind ratings)	Useful for where ACM may be within Townsville (pre ban on asbestos use in construction)
Aitkenvale	2,275	1,970	1,624	1,747
Alice river	1,022	1,017	9	520
Alligator creek	591	586	112	379
Annandale	3,042	3,038	550	1,057
Arcadia	325	282	217	244
Balgal beach	735	715	168	475
Barringha	50	50	32	48
Beach Holm	12	12	3	3
Belgian Gardens	1,024	685	518	582
Black River	605	601	173	386
Blue Hills^	-	-	-	-
Bluewater	460	452	145	364
Bluewater Park	417	414	-	157
Bohle	22	22	21	22
Bohle Plains	1,593	1,587	2	2
Brookhill	52	52	24	29
Burdell	2,915	2,874	1	50
Bushland Beach	2,632	2,610	1	337
Calcium	20	20	16	16
Cape Cleveland	-	-	-	-
Castle Hill	484	449	163	175
Clemant	-	-	-	-
Cluden	192	178	135	138
Condon	2,073	1,951	623	869

	Dwelling Count	Residential Building Count	Residential Pre-1980 Construction Count	Residential Pre-1990 Probable Asbestos Containing Products Count
	*Counts of sub-divisions e.g.: apartments/ duplex)	* Whole buildings e.g.: detached house or apartment complex	Useful for predicting wind-based damage (pre cyclonic wind ratings)	Useful for where ACM may be within Townsville (pre ban on asbestos use in construction)
Cosgrove	330	317	1	1
Cranbrook	2,601	2,326	1,882	2,085
Crystal Creek	-	-	-	-
Cungulla	285	283	6	281
Currajong	1,266	1,080	968	985
Deeragun	1,717	1,675	155	552
Douglas	2,736	2,413	237	298
Florence Bay	-	-	-	-
Garbutt	1,188	853	657	696
Granite Vale	12	11	8	10
Gulliver	1,308	1,210	1,171	1,178
Gumlow	71	71	5	12
Heatley	1,653	1,533	1,399	1,459
Hermit Park	1,874	1,438	902	1,110
Hervey Range*	102	101	54	66
Horseshoe Bay	555	540	116	227
Hyde Park	780	566	449	470
Idalia	1,808	1,541	59	59
Jensen	688	687	145	338
Julago	324	324	299	305
Kelso	4,171	4,120	1,201	1,958
Kirwan	8,401	8,087	2,420	3,229
Lynam	16	16	14	16
Majors Creek	212	208	61	126
Mount Elliot	-	-	-	-
Mount Louisa	3,611	3,568	727	873
Mount Low	2,091	2,062	2	409

	Dwelling Count	Residential Building Count	Residential Pre-1980 Construction Count	Residential Pre-1990 Probable Asbestos Containing Products Count
	*Counts of sub-divisions e.g.: apartments/ duplex)	* Whole buildings e.g.: detached house or apartment complex	Useful for predicting wind-based damage (pre cyclonic wind ratings)	Useful for where ACM may be within Townsville (pre ban on asbestos use in construction)
Mount St John	1	1	1	1
Mount Stuart	-	-	-	-
Mundingburra	1,552	1,332	1,092	1,180
Murray	1	1	1	1
Mutarnee	88	88	35	55
Mysterton	370	325	286	292
Nelly Bay	846	765	466	563
Nome	301	299	10	154
North Ward	3,481	1,514	767	1,040
Oak Valley	167	163	79	143
Oonoonba	1,141	992	409	412
Pallarenda	353	329	323	323
Paluma*	58	57	44	53
Picnic Bay	322	268	199	210
Pimlico	1,520	965	614	712
Pinnacles	42	41	8	9
Railway Estate	1,653	1,395	1,007	1,034
Rangewood	408	407	19	178
Rasmussen	1,964	1,844	460	1,043
Reid river	112	110	38	82
Rollingstone	72	72	47	55
Roseneath	149	146	123	125
Ross River	-	-	-	-
Rosslea	1,062	627	257	317
Rowes Bay	123	107	86	90
Saunders Beach	225	217	215	217
Shaw	390	384	2	5

	Dwelling Count	Residential Building Count	Residential Pre-1980 Construction Count	Residential Pre-1990 Probable Asbestos Containing Products Count
	*Counts of sub-divisions e.g.: apartments/ duplex)	* Whole buildings e.g.: detached house or apartment complex	Useful for predicting wind-based damage (pre cyclonic wind ratings)	Useful for where ACM may be within Townsville (pre ban on asbestos use in construction)
Shelly Beach	-	-	-	-
South Townsville	1,498	804	584	654
Stuart	359	355	338	344
Thuringowa Central	819	699	249	473
Toolakea	131	127	117	118
Toomulla	136	136	20	131
Toonpan	30	30	12	26
Town Common	3	3	3	3
Townsville City	1,783	417	217	244
Vincent	918	900	899	899
West End	2,398	1,714	1,067	1,162
West Point	57	56	25	41
Woodstock	179	179	60	116
Wulguru	1,904	1,807	1,269	1,596
Yabulu	259	259	39	191
Total	85,216	74,530	28,962	38,635

*May include counts outside the Townsville LGA
^included in Bluewater Park

Source – Australian Exposure Information Portal 2023

TOWNSVILLE
LOCAL DISASTER
MANAGEMENT GROUP

City of
Townsville