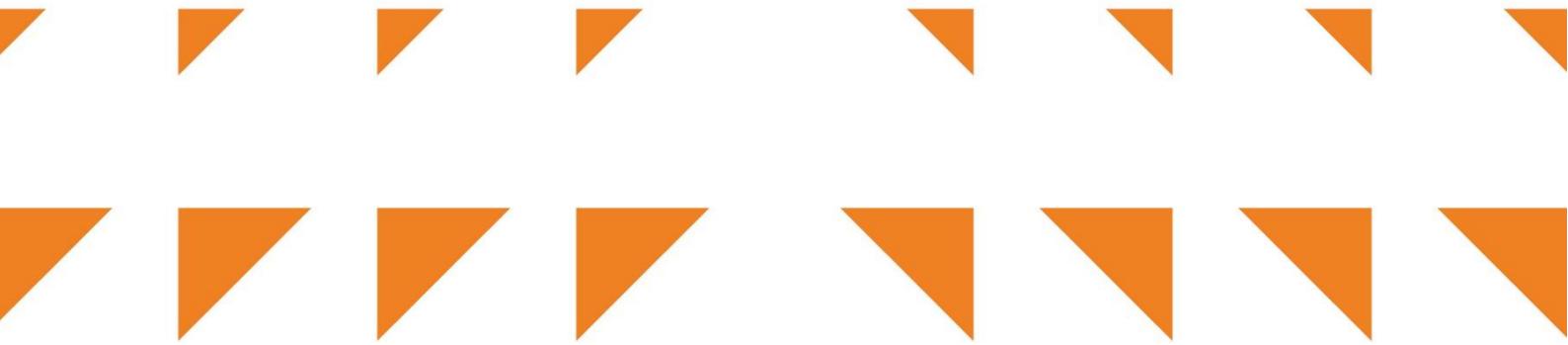




Groote Eylandt Local Emergency Plan



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1. Document control

1.1. Governance

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1.2. Version history

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16/11/2014	1	John McRoberts	First version
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30/12/2016	3	Kate Vanderlaan	Reviewed and updated
16/03/2018	4	Grant Nicholls	Reviewed and updated
28/11/2018	5	Travis Wurst	Reviewed and endorsed by the Regional Controller, as the Territory Controller's delegate
20/01/2020	6	Michael Hebb	Reviewed and endorsed by the Regional Controller, as the Territory Controller's delegate
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11/03/2025	11	Peter Malley	Reviewed and endorsed by the Regional Controller, as the Territory Controller's delegate
06/01/2026	12	James A O'Brien	Reviewed and endorsed by the Regional Controller, as the Territory Controller's delegate

Disclaimer: Every effort has been made to ensure that the information contained within this Plan is accurate and where possible reflects current best practice. However, the Northern Territory Emergency Service does not give any warranty or accept any liability in relation to the content of material contained in the document.

2. Acknowledgement of Country

The Northern Territory Fire and Emergency Services (NTFES) and the Northern Territory Police Force (NTPF) acknowledges the First Nations people throughout the Northern Territory (NT), from the red sands of Central Australia to the coastal people in the Top End.

We recognise their continuing connection to their lands, waters and culture. We also pay our respects to the Aboriginal and Torres Strait Islander people with whom we work and who we serve and protect.

We pay our respects to the Aboriginal and Torres Strait Islander cultures, and to their leaders past, present and emerging.

3. Introduction

3.1. Purpose

The purpose of this Plan is to describe the emergency management arrangements for Groote Eylandt Locality (the Locality).

3.2. Application

This Plan applies to the Locality.

3.3. Key considerations

The *Emergency Management Act 2013* (the Act) is the legislative basis for emergency management across the NT. The Act reflects an all hazards approach to emergency and disaster events, natural or otherwise. It provides for the adoption of measures necessary for the protection of life and property from the effects of such events.

The Act defines the emergency management structures, roles and responsibilities for the NT and, in conjunction with the Territory and regional emergency plan(s), form the basis for this Plan.

This Plan:

- confirms appointment of a Local Emergency Controller
- confirms establishment of the Local Emergency Committee (LEC)
- confirms appointment of a Local Recovery Coordinator
- confirms establishment of a Local Recovery Coordination Committee
- assesses hazards most likely to affect the community
- specifies control and coordination arrangements for mobilisation of local and, if necessary regional, resources
- identifies roles and responsibilities of key stakeholders
- details specific emergency response procedures for the higher risk situations

4. Locality context

This Plan complements the Northern Regional Emergency plan¹ as it relates to the Locality. For further information on the hierarchy of plans, refer to the Territory Emergency Plan². The Locality covers approximately 30,000 square kilometres (km) and is located approximately 650 km east southeast of Darwin and forms part of the Northern Region, as defined by the Territory Emergency Plan.

Groote Eylandt is the largest island in the Gulf of Carpentaria and the fourth largest island in Australia. The 3 main townships on the main island are Alyangula, Angurugu and Umbakumba.

Bickerton Island is located west of Groote Eylandt in the Gulf of Carpentaria. The major community of Milyakburra is situated on the central eastern section of the island, with approximately 124 people.

The Locality population can vary markedly, given the number of 'fly in, fly out' workers. At peak times, the population is approximately 3,200 with the main population centre being the town of Alyangula.

There are also a number of homelands in the Locality, population numbers for these homelands can vary widely during the course of the year:

Bushtel ID	Locality	Aliases	Approx. population
10270	Alyangula	Alyangula Town	751
451	Angurugu		1,037
555	Umbakumba		492
532	Milyakburra	Bickerton Island	124
Bushtel ID	Homelands	Aliases	Approx. population
959	Akwalirrumanja	4 Mile and Four Mile	35
445	Amanburnunga	Amengunua and Salt Lake	not recorded
446	Amirraba	8 Mile and Eight Mile	not recorded
960	Angwura	Angurrkurrikba, Anguwarmanja, Central Lake and Salt Lake	8
442	Alyingberrma	Alyingbarruma and Qantas	not recorded
865	Bardalumba	Bartalumba Bay and Bartelumba	31
472	Darrangmurmanja	Marble Point	not recorded
522	Malkala	Malkula Creek	94
545	Ngadumiyerrka	Little Paradise and Ngadumi Terrn	34
958	Scott Point	Milyangkarrngarnilangwa	not recorded
573	Yanbakwa	Yanbagwa, Yenbagwa, Yenbakwa and Yenbakway	8
572	Yedikba	Emerald River	10

To obtain more information about this Locality, BushTel³ is the central point for information about the remote communities of the NT, their people and cultural and historical influences.

¹ More information can be found at: <https://www.pfes.nt.gov.au/emergency-service/publications>

² More information can be found at: <https://www.pfes.nt.gov.au/emergency-service/emergency-management>

³ More information can be found at: [BushTel - Remote Communities of the NT](#)



LEGEND

	Police Station		Roads - Main - Sealed
	Homeland		Roads - Main - Unsealed
	Minor Community		Roads - Track
	Major Community		Watercourses - Major
			Emergency Management Boundary
			Emergency Management Regions

4.1. Climate and weather

The Locality is situated in the Top End and experiences weather conditions typical to those of the region. There is a distinct Wet Season (October to April) and Dry Season (May to September). The average annual rainfall at Groote Eylandt Airport is 1281 millimetres.

4.2. Geography

The Locality has predominant sand ridges on the eastern and southern extremities of the island which in turn give way to areas of scrub and heavy timber. There are many areas of undulating granite composition, the highest of which is 220 metres (m) above sea level.

4.3. Sacred sites

The Aboriginal Areas Protection Authority (AAPA) is a statutory body established under the *Northern Territory Aboriginal Sacred Sites Act 1989* and is responsible for overseeing the protection of Aboriginal sacred sites on land and sea across the NT.

A sacred site is defined by the *Aboriginal Land Rights (Northern Territory) Act 1976* (Cth) as being 'a site that is sacred to Aboriginals or is otherwise of significance according to Aboriginal tradition'. Sacred sites are typically landscape features or water places that are enlivened by the traditional narratives of Aboriginal people.

AAPA requests notification of any action that may have affected a sacred site. For more information on sacred sites relevant to this Locality, or to report an action that may have affected a sacred site, contact AAPA on (08) 8999 4365 or via email at enquiries.aapa@nt.gov.au.

4.4. Sites of conservation

The Groote Eylandt area is a site of significance to the NT, for further information about conservation sites, contact the Department of Lands, Planning and Environment (DLPE).

4.5. Tourism

Tourism is a major economic contributor to the Locality, particularly throughout the months of May to October.

4.6. NT and local government

This Locality sits within the East Arnhem region, with the following NT Government (NTG) agencies that have a presence in the Locality:

- NTPF
 - Police Station – Alyangula
 - Police Station - Angurugu
- NTFES
 - NT Emergency Service (NTES) Volunteer Unit (non-operational)
- Department of Health (DOH)
 - Alyangula Health Centre
 - Angurugu Health Clinic
 - Milyakburra Health Clinic (staffed 2 days a week)
 - Umbakumba Health Clinic
- Department of Education and Training (DET)

- Alyangula Area School
- Alyarrmandumanja Umbakumba School
- Angurugu School
- Milyakburra School

Local government in the Locality is provided by the East Arnhem Regional Council, (EARC). Council headquarters are in Nhulunbuy and it has a Service Delivery Centre in the Locality.

4.7. Building codes

Buildings and construction in the Locality are subject to the *Building Act 1993* and the *Building Regulations 1993*.

4.8. Land use

The Locality's land use is in consultation between EARC, Marthakal Homelands Resource Centre and Traditional Owners and include in the areas of:

- residential
- sewerage ponds
- South 32 (GEMCO) mine
- waste management

4.9. Homelands

Homelands (outstations) are typically located on Aboriginal land, which is held by the Aboriginal Land Trusts established under the *Aboriginal Land Rights (Northern Territory) Act 1976* (Cth). There are also some homelands that are located on Community Living Areas or parcels of land within national parks. Assets on homelands are owned by the underlying leaseholder, which for the majority of homelands is the relevant Aboriginal Land Trust. Generally, homelands are not subject to the NTG leasing or part of the NT's remote public housing system.

The homeland service provider for this Locality is Anindilyakwa Housing Aboriginal Corporation. Homeland service providers contribute to the delivery of housing, municipal and essential services, including fire breaks, where funding allows. Homeland service providers do not deliver emergency services. Land councils and local ranger groups within the Locality may provide land management activities on Aboriginal land, such as back burning, installing firebreaks and other mitigation works.

4.10. Power generation and distribution

Power generation for Alyangula is supplied by GEMCO diesel generators, whilst Umbakumba, Bickerton Island and Angurugu are supplied power distributed by Power and Water Corporation (PAWC). Bickerton Island power is supplemented with solar.

4.11. Water services

Water services for Alyangula is supplied by GEMCO generator powered bores, while Umbakumba, Bickerton Island and Angurugu are PAWC generator powered.

4.12. Health infrastructure

The Locality's health infrastructure has the capacity to provide to emergency medical aid in addition to routine health treatment. The health infrastructure is:

- Alyangula Health Centre
- Angurugu Health Clinic
- Milyakburra Health Clinic
- Umbakumba Health Clinic

Serious medical cases are required to be medically evacuated to Darwin.

4.13. Medically Vulnerable Clients

A list of all medically vulnerable clients is held with each health centre/clinic within the Locality. There are 2 aged care facilities in the Locality.

4.14. Emergency service infrastructure

The Locality has the following emergency service infrastructure:

- Alyangula Police Station and cells
- Angurugu Police Station
- South 32 Emergency Services (Fire and Ambulance)
- South 32 Mines Rescue Mess Quarters

4.15. Roads

The Locality has 4 main roads being:

- Rowell Highway - Alyangula to GEMCO Mine Site (approximately 20 km). This road is sealed throughout and passes through mining and special purpose lease areas. From the Rowell Highway, the access road from the GEMCO Mine Site to the Groote Eylandt Airport is known as the Airport Road. There is then an access road from Airport Road to the Angurugu Community
- Bartalumba Bay Road - Alyangula to Bartalumba Bay (approximately 10 km). This road is sealed and serviceable throughout the year
- Angurugu/Umbakumba Road - Airport to Umbakumba (approximately 70 km). This road is sealed. It is prone to flooding in several areas during the Wet Season
- Yanbakwa Road - Angurugu to Yanbakwa (approximately 40 km). This track is navigable mainly during the Dry and early Wet Seasons

4.16. Airports

The table below lists the airstrips in the Locality:

Name of the strip	Datum	Certified Aerodrome	Details (type, length, etc.)	Operator of the strip
Groote Eylandt Airport	13°58'24"S 136°27'39"E	Certified	YGTE – ERSA Reference RWY 10/28 – Grooved asphalt 1903 m x 30 m Midway N side primary illuminated windsock Lighting RWY 10/28 LIRL AFRU + PAL 126.0 RWY 10/28 PAPI (1) AFRU + PAL 126.0 (Requires 3 x one-second pulse to activate) RWY 10/28 Portable Emergency Lighting (2) 90 min prior notice	GEMCO
Milyakburra Airstrip	13°46'55"S 136°12'7"E	Non-Certified	Sealed 1271 m Lighting PAL solar	Not identified

Certified Aerodrome: An airport officially approved by the Australian Government Civil Aviation Safety Authority (CASA) that meets strict safety and operational standards, often including air traffic control services⁴.

4.17. Ports (barge landings)

Port facilities for the GEMCO operation are located at Milner Bay on the southern edge of the township of Alyangula.

The Umbakumba facility is located at the southwest corner of Port Langdon and the northern end of Umbakumba. The concrete landing is relatively well protected by a land spit, which runs in a northeast/southwest direction with seaward access to the landing being at the southern-most end.

4.18. Telecommunication

Alyangula, Angurugu and Umbakumba have access to a combination of landline, mobile and satellite communications delivery.

Bickerton Island (Milyakburra) has landline access, mobile phone and satellite internet.

4.19. Strengthening Telecommunications Against Natural Disasters

As a result of the Royal Commission into the 2019-2020 summer bushfires, the Commonwealth government implemented the Strengthening Telecommunications Against Natural Disasters (STAND) initiative. STAND is a Commonwealth funded program, aimed at enhancing the resilience of Australia's telecommunication networks, to prevent, mitigate and manage outages during emergencies.

There are currently 56 sites across the Territory that have STAND capability, and additional sites will be incorporated within the next stage of installation.

⁴ More information can be found at: <https://www.casa.gov.au/operations-safety-and-travel/aerodromes>

There are 5 STAND sites within this Locality which are located and managed by the following facilities:

- Angurugu School
- Angurugu Trade Training Centre
- Alyangula Area School
- Alyarrmandumanja Umbakumba School
- Milyakburra Community Centre Cyclone Shelter

4.20. Local radio stations

The Locality has the following radio stations:

- 102.1 FM Angurugu Radio
- 106.1 FM Australian Broadcasting Corporation (ABC) Radio Darwin
- 106.3 FM ABC Umbakumba Radio
- 107.7 FM ABC Radio National

5. Prevention

5.1. Emergency risk assessments

The Groote Eylandt LEC are responsible for undertaking appropriate activities to prevent and mitigate the impact of emergencies in their Locality.

5.2. Disaster hazard analysis and risk register

The Territory Emergency Management Council (TEMC) have identified 30 hazards, as outlined in the Territory Emergency Plan, that may pose a risk across the NT, which have been allocated to designated Controlling Authorities and Hazard Management Authorities.

Many hazards require specific prevention and mitigation measures, an annual risk assessment (rated against the National Emergency Risk Assessment Guidelines) is undertaken by the LEC and determines which hazards pose a greater risk to the Locality.

The LEC has identified the following hazards as posing a risk to the Locality, with further advice provided within **Annex C** for those hazards rated at medium risk or higher:

- air crash
- bushfire (within Fire Protection and Management Zones)
- coastal marine incident
- hazardous material
- heatwave
- road crash
- storm surge
- tropical cyclone

Hazard	Overall consequence	Overall likelihood	Risk rating
Air Crash	Minor	Rare	Low
Bushfire (within Fire Protection and Management Zones)	Moderate	Unlikely	Medium
Coastal marine incident	Insignificant	Likely	Low
Hazardous material	Moderate	Very Rare	Low
Heatwave	Major	Unlikely	High
Road crash	Minor	Likely	Medium
Storm surge	Major	Rare	High
Tropical cyclone	Major	Unlikely	High

5.3. Hazard specific prevention and mitigation strategies

Prevention and mitigation relates to measures to reduce exposure to hazards, and reduce or eliminate risk. Actions include identifying hazards, assessing threats to life and property, and from these activities, taking measures to reduce potential loss of life and property damage.

The cornerstone of mitigation is guided and coordinated risk assessments, which should involve all potentially affected members of a community. Strategies are developed based on a thorough understanding of hazards identified in emergency risk planning and their interaction with all aspects of society. Specific prevention and mitigation strategies for identified hazards can be found at **Annex C**.

6. Preparedness

Arrangements to ensure that, should an emergency occur, all resources and services that are needed to provide an emergency response and/or recovery to the effects can be efficiently mobilised and deployed.

6.1. Planning

NT emergency plans⁵ are required by the Act and are maintained at a Territory, regional and local level. Arrangements in plans aim to be flexible and scalable for all hazards. The planning process enables agreements to be reached between people and organisations in meeting communities' needs during emergencies. The plan becomes a record of the agreements made by contributing organisations to accept roles and responsibilities, provide resources and work cooperatively.

The Regional Controller is responsible for the annual review of operations and the effectiveness of the Local Emergency Plan, supported by the LEC and the NTES Planning and Preparedness Command.

6.2. Emergency resources and contacts

The Local Controller is responsible for maintaining the emergency resource register and LEC contact lists. Local emergency management stakeholders are to advise the Local Controller of changes to resource holdings, operational response capabilities and key personnel contacts. Emergency resource and LEC contact lists for each locality are available on Web-based Emergency Operations Centre (WebEOC).

6.3. Training and education

The Act provides the legislative requirement for those involved in emergency management activities to be appropriately trained. Training and education activities are undertaken to ensure agencies are familiar with and understand the NT emergency management arrangements, as well as the relevant controlling and hazard management authorities for identified hazards.

The NTES Learning and Development Command is responsible for emergency management training across the NT. Online and face to face training is scheduled throughout the year. For further information contact the NTES Learning and Development Command via email at Training.EMTU@pfes.nt.gov.au.

6.4. Community education and awareness

Effective and ongoing community education and preparedness programs that emphasise to communities the importance of practical and tested emergency plans and safety strategies is essential. Empowering communities to act in a timely and safe manner will minimise the loss of life, personal injury and damage to property and contribute to the effectiveness of any warning system.

List of available activities and initiatives but are not limited to within the area:

- NTES hazard briefings
- NTES Paddy Program

6.5. Exercises

Local level exercises are a key measure for testing the effectiveness of the Local Emergency Plan and should involve all relevant stakeholders. Exercises ensure that the Plan is robust and understood, and that capabilities and resources are adequate. Exercises are conducted if arrangements with the plan have not been enacted since the last review, or substantial changes have occurred, including:

- legislative changes

⁵ More information can be found at: <https://pfes.nt.gov.au/emergency-service/publications>

- major changes have occurred in the areas of key personnel, positions or functions across prevention, preparedness, response and recovery
- new or emerging hazards/risks have been identified.

The NTES Planning and Preparedness Command have developed resources that outlines the process to develop the exercise concept in designing, planning, conducting, facilitating, participating or evaluating exercises. The Local Controller can request an exercise by emailing the request through to EmergencyManagementPlanning@pfes.nt.gov.au.

7. Response

Actions taken in anticipation of, during and immediately after an emergency to ensure that its effects are minimised and that people affected are given immediate relief and support.

7.1. Activation of the Plan

This plan has 5 stages of activation and are designed to ensure a graduated response to hazardous events, reducing the possibility of under or over reaction by the emergency management agency.

The stages are:

Stage 1	Alert	This stage is declared when the Local Controller receives warning of an event which, in their opinion, may necessitate an emergency management response
Stage 2	Standby	This stage is declared when the Local Controller considers an emergency operation is imminent. During this stage passive emergency measures are commenced
Stage 3	Activation	This stage is declared when active emergency measures are required
Stage 4	Stand-down response operations and transition to Recovery	Stage 4 occurs when the Local Controller and Local Recovery Coordinator agree to transition to recovery (if required) in accordance with the transitional arrangements of this Plan
Stage 5	Recovery	This stage is called if ongoing recovery operations and coordination is required

The stages identified provide for a sequential response. However, it may be necessary because of the degree of warning and speed of onset of an event, for the Local Controller to skip the actions required under stage 1 or 2.

7.2. Control and coordination

Arrangements for response are based on pre-agreed roles and responsibilities for stakeholders. When the scale and complexity of an event is such that resources of the community are depleted a number of arrangements are in place to seek assistance from the region, the Territory and/or the Australian Government. Pathway for assistance is through the Regional Controller.

7.3. Local Emergency Controller

In accordance with section 76 of the Act, the Territory Controller or their delegate (section 112 of the Act) has appointed a Local Emergency Controller (Local Controller). The Local Controller for the Locality is the Officer In Charge of the Groote Eylandt Police Station. The Local Controller is subject to the directions of the Regional Controller. The powers, functions and directions of the Local Controller can be found in sections 77, 78 and 79 of the Act.

7.4. Local Emergency Committee

In accordance with section 80 of the Act, the Territory Controller has established a Groote Eylandt Local Emergency Committee (LEC). The Local Controller is Chair of the LEC and remaining membership consists of representatives from NT Government and non-government entities within the Locality. Division 11 of the Act specifies the establishment, functions, powers membership and procedure requirements of a LEC.

7.5. Emergency Operations Centre/Local Coordination Centre

NT Emergency Management Arrangements	Controlling Authority Arrangements
Emergency Operations Centre (EOC) (Territory and Regional level)	Incident Control Centre (ICC)
Local Coordination Centre (LCC) (local level)	Incident Control Point (ICP)

LCCs are established as required by the Local Controller to provide a central focus to the management, control and coordination of emergency operations in the Locality. When activated, the functions of the LCCs are:

- information collection and dissemination
- preparation and issue of official warnings and advice to the public
- coordination of the provision of resources required in the Locality
- submitting requests for resources through the Regional Controller to the Territory EOC where applicable
- dissemination of information to the media and general public.

The LCC for this Locality is the Alyangula Police Station. The Regional EOC is located in Darwin at the Peter McAulay Centre. Agencies and functional groups may establish their own coordination centres to provide the focal point for the overall control and coordination of their own agency resources. Liaison officers from functional groups and support agencies will attend the EOC as required.

ICCs will be established as required by a controlling authority to provide an identified facility for the management of all activities necessary for the resolution of an incident.

An ICP is normally located near the incident in its early stages but may be relocated to an ICC where more permanent and convenient facilities and services are available.

7.6. WebEOC

WebEOC is a critical information management system used throughout the NT for emergency management activities. The system is owned and maintained by NTPF and NTFES. The online platform is used for the coordination of multi-agency response to, and recovery from, an emergency event. WebEOC also enables real-time information sharing across all agencies involved in emergency management activities.

7.7. Situation reports

It is essential for effective control and coordination of emergency management operations that the Local Controller is able to gather and collate relevant information relating to the emergency from regular, concise and accurate Situation Reports (SITREPs).

LEC members are to provide SITREPs at agreed times to enable the preparation of a consolidated report which will be distributed to all committee members and other relevant authorities. This may be achieved through WebEOC.

7.8. Stakeholder notifications

Upon activation of the Plan the following personnel are to be advised as a matter of urgency:

- all available members of the LEC
- Northern Regional Controller
- NTES Territory Duty Officer (TDO)

7.9. Official warnings and general public information

Official warnings and general public information will be broadcast to the Locality through the following means:

- radio broadcast
- television news broadcast
- SecureNT website and social media broadcasts and updates

Official warnings are issued by the Bureau of Meteorology (the Bureau), Geoscience Australia, NTPF, NTFES and Controlling Authorities.

Emergency Alert is a national telephony-based emergency warning system that can deliver warning messages to landlines and mobile handsets based on the service address and mobile handsets based on the last known location of the device. Authority to utilise the Emergency Alert may be given by virtue of the pre-approval of a hazard specific emergency plan or under the Territory Emergency Plan.

The approval for the release of an Emergency Alert message can only be authorised by one of the following:

- Territory Controller
- Chief Officer, NTES
- Regional Controller
- Chief Fire Officer, NTFRS
- Deputy Chief Fire Officer, NTFRS
- Executive Director, BFNT
- Chief Fire Control Officer, BFNT

The Standard Emergency Warning Signal (SEWS) is an audio alert signal (wailing siren) which may be broadcast on public media to draw attention to the fact that an urgent safety message is about to be made. Generally, SEWS is only played before announcements concerning significant emergencies where emergency management arrangements should be activated as a result.

Control and hazard management authorities may have pre-planned use of SEWS for non-weather related events, through a pre-approved hazard-specific emergency plan.

The approval for the release of a SEWS message can only be authorised by one of the following:

- Territory Controller

- Chief Officer, NTES
- Manager Hazard Preparedness and Response NT (the Bureau) (for weather and flood-related events)

Warning and information messages for the general public are authorised by the Regional or Incident Controller. The dissemination of such emergency warnings and information is to be by whatever means are appropriate and available at the time.

7.10. Australasian Inter-Service Incident Management System

The Australasian Inter-Service Incident Management System (AIIMS)⁶ is a robust incident management system that enables the seamless integration of activities and resources of a single agency or multiple agencies when applied to the resolution of any event.

7.11. Closure of schools

The decision to close schools due to an impending threat will be made by the Chief Minister on advice from the TEMC. When the nature of an event demands an immediate response, local authorities will take the appropriate steps to ensure the safety to the public. This action may include the temporary closure of a school to begin preparations, pending formal closure of the school by the Chief Minister for the remainder of the event.

The decision to reopen schools will be made by the Chief Minister on advice from the Chief Executive DET.

7.12. Closure of government offices

The decision to close government offices due to an impending threat will be made by the Chief Minister on advice from the TEMC. When the nature of an event demands an immediate response, local authorities should take all appropriate steps to ensure public safety and the protection of property.

The decision to reopen government offices will be made by the Chief Minister on advice from the TEMC.

All NTG agencies are to have an emergency preparedness plan which sets out their processes for closing down their offices once approval has been given. This should have clearly articulated employee guidelines to ensure employees know when they are authorised to leave and are required to return to work.

7.13. Sheltering in community

The TEMC have identified the need to review opportunities to support 'sheltering in community' for weather-vulnerable communities under the NT Emergency Management Arrangements.

In the NT, 'sheltering in community' means residents remain in their community in a safe place before, during, and after a hazard. This may include staying at home or arranging their own safe accommodation. For those without options, formal emergency shelters or temporary accommodation may be provided by Incident Controllers until it's safe to return home.

This approach can be supported by additional community resources like personnel, goods, or equipment. While evacuation remains an option, sheltering in community is often safer and more effective when supported. The decision depends on community capacity and the specific event.

⁶ More information can be found at: <https://pfes.nt.gov.au/emergency-service/publications>

7.14. Emergency shelters and strong buildings

Emergency shelters and strong buildings are places of refuge that provide people with a place of protection and shelter during a disaster or emergency event such as a cyclone, flood or fire.

Alyangula does not have public cyclone shelters but does have sufficient cyclone sheltering for the current population, through the use of strong buildings.

The recognised emergency shelters within the Locality are:

Shelter(s)	People capacity
Trade Training Centre Angurugu	182
Trade Training Centre Umbakumba	182
Milyakburra Cyclone Shelter, Bickerton Island	80
Angurugu School	80
Umbakumba School	80

The DET in conjunction with NTPF and the shelter owners are responsible for the management of emergency shelters during an emergency event.

The responsibilities of the emergency shelter manager are:

- the provision of personnel to staff and operate the emergency shelters at such times as they are activated
- the maintenance of effective liaison with other stakeholders with responsibilities relating to cyclone shelters, in particular the NTPF.

Emergency shelters are opened under the direction of the Territory or Regional Controller in consultation with the Shelter Group (DET). Emergency shelters will not normally operate for more than 48 hours.

The timing of the opening of emergency shelters will be dependent upon the severity of the impending incident, the numbers to be sheltered, the time of day the incident is expected to impact and the period of time the emergency shelters are likely to be occupied. The announcement that emergency shelters are open in the Locality will be made by radio broadcast and social media, and will include emergency shelter rules such as no pets or alcohol being permitted in shelters. It is up to the discretion of the local shelter manager if food will be provided.

7.15. Evacuation

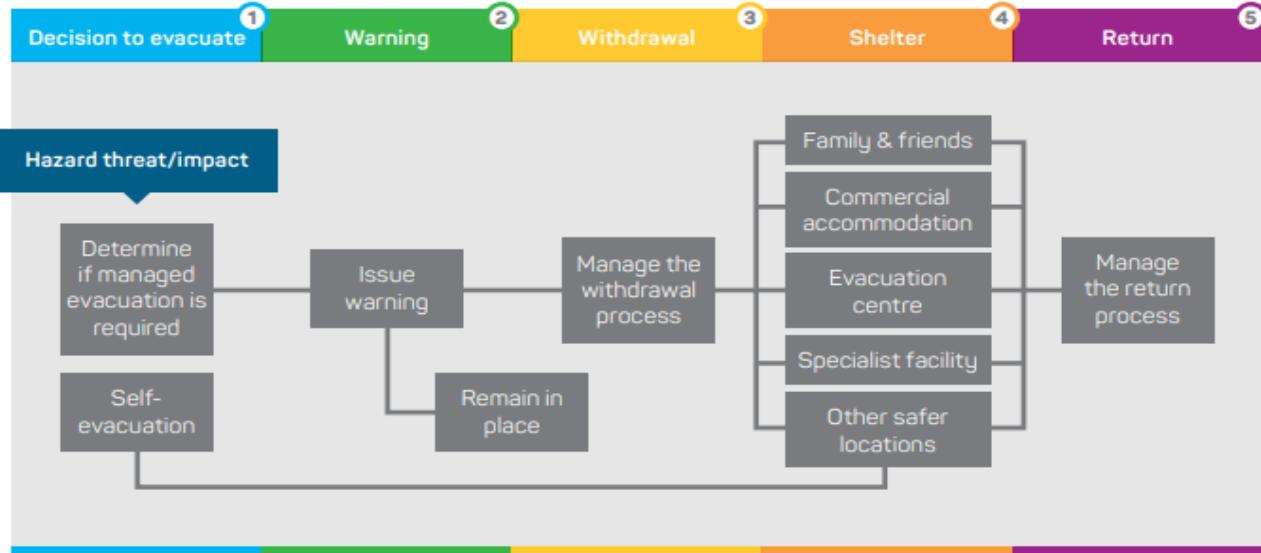
Evacuation is a risk management strategy that can be used to mitigate the effect of an emergency or disaster on a community. It involves the movement of people to a safer location and their return. The decision to evacuate a community, including establishing an evacuation centre, is not taken lightly as it represents significant resource and financial implications.

Evacuation of the Locality will be considered as a last resort. Where an evacuation is required the TEMC, in consultation with the Regional Controller, Local Controller and the LEC, will arrange emergency accommodation and transport, as necessary, through the relevant functional group/s.

Evacuation is a complex process that has 5 distinct steps:

1. decision
2. warning
3. withdrawal
4. shelter
5. return

Each step is linked and must be carefully planned and carried out in order for the entire process to be successful. Given an evacuation centre will only be opened as a part of an evacuation, it is vital to have an understanding of the 5-step process.



Source: Australian Institute of Disaster Resilience, Evacuation Planning Handbook, 2017

7.16. Identified evacuation centres

An evacuation centre is designed to accommodate people for short to medium periods of approximately 4 to 6 weeks, although this figure may vary.

An evacuation centre will provide some or all of the following services:

- assistance accessing finances and recreational activities
- beds
- linen
- meals
- medical services (or access to them)
- personal support

An evacuation centre implies the provision of these services in contrast to an emergency shelter, in which people are expected to be self-sufficient.

For further information on evacuation centres/shelters management, refer to the NT Evacuation Field Guide available on WebEOC.

7.17. Impact assessment

Immediately after an emergency event, there is a need to identify and assess impacts to inform short and long-term recovery priorities. Comprehensive assessment of all impacts is a vital component of emergency response activities. Guidelines for the conduct of rapid assessments in the NT, including the establishment of dedicated Rapid Assessment Teams (RATs) to collect data in the field, have been developed.

The Survey, Rescue and Impact Assessment Group, led by the NTPF, is responsible for coordinating rapid impact assessments. At the local level, local controllers or an Incident Controller if appointed, should contact the Survey, Rescue and Impact Assessment Group lead to discuss impact assessments if deemed appropriate.

8. Recovery

The coordinated process and measures for supporting emergency-affected communities in the reconstruction of physical infrastructure and restoration of the social, economic and natural environments.

In the NT, the Department of the Chief Minister and Cabinet (CM&C) lead recovery coordination.

8.1. Local Recovery Coordinator and Coordination Committee

When a region and/or Locality has been affected by an event, the Regional Recovery Coordinator may appoint a Local Recovery Coordinator in accordance with section 87 of the Act. The responsible agency for Recovery is the CM&C.

The Local Recovery Coordinator will be an employee of the East Arnhem region's CM&C office and will establish a Local Recovery Coordination Committee (LRCC) drawing from membership of the LEC and other relevant members of the community as needed. The Local Recovery Coordinator reports directly to the Regional Recovery Coordinator.

Local Recovery Coordinator and Committee functions, powers and directions are established in Division 12 and 13 of the Act respectively.

8.2. Transitional arrangements

The transition from response to recovery coordination reflects the shift from the protection of life and supporting the immediate needs of the community to establishing longer term, more sustainable support structures.

The transition to recovery coordination occurs after the completion of the transition checklist and at a time agreed by the Territory Controller and Territory Recovery Coordinator in accordance with the Territory Emergency Plan.

Transition will occur when the Territory Recovery Coordinator is satisfied that the following has occurred:

- The Territory Controller has briefed the TEMC and the Territory Recovery Coordinator
- The Regional Controller has briefed the Regional Recovery Coordinator
- Where there is significant changeover of personnel, the EOC planning operations and logistics sections have briefed incoming recovery planning, operations and logistics staff.

The Regional Recovery Coordinator will ensure all functional group leaders, agencies, support groups and other relevant stakeholders are notified prior to the transition to recovery. This notification is to include changes to relevant contact details and other pertinent information.

An example of response and recovery activities can be found at **Annex D**.

9. Debrief

Debrief processes embed continuous improvement into the delivery of emergency management activities. Consistent approaches to lessons learned encourage adaptability, and flexibility across all levels of government. Sharing of knowledge and experiences throughout emergency events assists with ongoing continuous improvement of people and organisations involved.

The NTG implements a lessons learned approach recognising the positive impact on organisational culture commensurate with increasing opportunities to achieve emergency management goals. Whilst lessons learned often begins in one agency through an internal debrief process, those lessons learned are transferable across multiple agencies.

During any operational response, personnel involved are encouraged to record activities where there are lessons to be learned. Activities can include decision making and consequential responses. Where decisions are made by an Incident Controller, Incident Management Team (IMT) member or a functional group member, those decisions should be recorded in a Decision Log (within WebEOC). Decision Logs can be referred to as part of the debrief process.

10. Related references

The following references apply:

- *Aboriginal Land Rights (Northern Territory) Act 1976 (Cth)*
- *Building Act 1993*
- *Building Regulations 1993*
- *Emergency Management Act 2013*
- National Disaster Risk Assessment Guidelines
- National Disaster Risk Reduction Framework
- Northern Regional Emergency Plan
- *Northern Territory Aboriginal Sacred Sites Act 1989*
- Rapid Assessment Team Guidelines
- Territory Emergency Plan
- Transition to Recovery Checklist

11. Annexures

Annex A Functional groups - roles and responsibilities

Annex B Functions table

Annex C Prevention, mitigation strategies and action plans for identified hazards

Annex D Summary of response and recovery activities

11.1. Annex A: Functional groups - roles and responsibilities

Functional group	Local contact
Animal Welfare	Anindilyakwa Land Council (ALC) Land and Sea Rangers
Critical Goods and Services	ALC/Groote Eylandt Bickerton Island Enterprises (GEBIE)/Groote Eylandt Mining Company (GEMCO)
Digital and Telecommunications	Department of Corporate and Digital Development (DCDD)
Emergency Shelter	DET
Engineering	GEBIE
Industry	Department of Trade, Business and Asian Relations (DTBAR)
Medical	NT Health Alyangula/Angurugu/Umbakumba
Public Health	NT Health Alyangula/Angurugu/Umbakumba
Public Information	CM&C
Public Utilities	ALC/EARC/PAWC/GEMCO
Survey, Rescue and Impact Assessment	NTPF
Transport	ALC/GEMCO/EARC/GEBIE/Sea Link
Welfare	ALC/Department of Children and Families (DCF)

Full details on functional group roles and responsibilities are detailed in the Territory Emergency Plan.

11.2. Annex B: Functions table

Emergency response and recovery functions with identified agencies/organisation/provider.

During an event some of these functions may be needed at a local level.

Functions	Agency/organisation/provider responsible
Animal/livestock management	ALC Land and Sea Rangers
Anti-looting protection	NTPF
Banking services	ANZ Bank/Australia Post
Broadcasting: What radio stations provide announcements?	ABC/Umbakumba Radio
Clearing of essential traffic routes	EARC/GEBIE/GEMCO
Clearing storm water drains	EARC
Clothing and household items	Country Women's Association/Groote Eylandt Leading Appliances Group
Community clean up	EARC/GEMCO/GEBIE/Individual property owners
Control, coordination and management	Designated Controlling Authority
Coordination to evacuate public	NTPF
Critical Goods and Services (protect/resupply) <ul style="list-style-type: none"> • food • bottle gas • camping equipment • building supplies 	Groote Eylandt Bush Shop/Angurugu Community Store/Groote Eylandt Leading Appliances/GEMCO township services/Groote Eylandt Lodge
Damaged public buildings: Coordination and inspections	DLI/Department of Housing, Local Government and Community Development (DHLGCD)
Disaster victim identification capability	NTPF
Emergency alerts	NTPF/NTFES
Emergency food distribution	GEBIE/ALC
Emergency Operations Centre (EOC), including WebEOC	NTPF/NTFES
Emergency shelter. Staff, operations and control	DET/Lagulalya Aboriginal Corporation
Evacuation centre - Staffing, operations and control	DCF
Financial relief/assistance	Centrelink
Identification of suitable buildings for shelters	LEC/DLI/South 32
Interpreter services	Aboriginal Interpreter Service via CM&C
Management of expenditure in emergencies	CM&C/DCF (Category A measures to individuals)/DTBAR (Category B measures)

Functions	Agency/organisation/provider responsible
Medical services	East Arnhem Regional Health Service
Network communications (IT): Responders/public maintenance and restoration of emergency communication	Telstra Network on satellite/DCDD
Power: Protection and restoration	South 32/PAWC
Public messaging during response and recovery.	Hazard Management Authority/CM&C
Public/environmental health management <ul style="list-style-type: none"> • all environmental health functions including water and food safety • disease control 	DOH
Rapid Impact Assessment	NTPF
Recovery coordination	CM&C
Repatriation	As per local arrangements/DCF
Restoration of public buildings	DLI/DHLGCD
Restoration of roads and bridges (council/territory) excluding railways	South 32/DLI
Road management and traffic control including public Information on road closures	DLI/NTPF
Sewerage: Protection and restoration	South 32/PAWC
Survey	NTPF/NTFES/South 32/EARC
Traffic Control	NTPF/DLI
Transport: Commercial and public airport/planes, automobiles, ferries, buses	South 32/DLI
Vulnerable groups (medical)	NT Health Alyangula/Angurugu/Umbakumba
Waste management <ul style="list-style-type: none"> • collection • disposal of stock 	South 32/EARC
Water (including drinking water): Protection and restoration	South 32/PAWC

11.3. Annex C: Prevention, mitigation strategies and action plans for identified hazards

11.3.1. Bushfire (within Fire Protection and Management Zones)

Hazard	Controlling authority	Hazard management authority
 Bushfire (within Fire Protection and Management Zones)	NT Fire and Emergency Services (Bushfires NT)	NT Fire and Emergency Services (Bushfires NT)

A fire hazard is an event, accidentally or deliberately caused, which requires a response from one or more of the statutory fire response agencies. A fire hazard can include, but not limited to:

Term	Definition
Structure fire	A fire burning part, or all of any building, shelter, or other construction.
Bushfire	An unplanned fire. It is a generic term that includes grass fires, forest fires and scrub fires. Bushfires are a natural, essential and complex part of the NT environment. The term bushfire is interchangeable with the term wildfire.
Vehicle fire	An undesired fire involving a motor vehicle.

In the NT, managing bushfire and vegetation on private properties is the responsibility of the landowner.

Landholder responsibility to control fire

The landholder or occupier of land must take all reasonable steps to protect property on the land from fire and inhibit the fire from spreading.

If a landholder or occupier is unable to control a fire and prevent it from spreading to other land, they must:

- notify fire control officer or fire warden and all neighbouring property holders
- call 000 in an emergency.

Under section 90(3) of the *Bushfires Management Act* the landholder or occupier commits an offence if the fire has the potential to spread to other land and they fail to take reasonable steps to control the fire and to notify all parties.

Communication, co-operation and shared responsibility within the community, matched by a capacity to undertake self-protective measures, form the basis of successful fire management throughout the NT.

The Groote Eylandt Locality utilises resources and trained personnel from South 32 and GEMCO ESS to respond to fires within the Locality.

In areas where there is no gazetted fire protection zone, if the owner or occupier of land is unable to control fire on the land, the owner or occupier must notify BFNT of this fact. When fires are reported to 000, the Joint Emergency Services Call Centre, (JESCC) will contact BFNT to triage the report. In these areas, firefighting response from BFNT is not guaranteed as there is no established volunteer firefighting resource. BFNT may assist the owner or occupier of the land through the coordination of information and advice to assist the owner or occupier to control the fire. This may include liaison with affected neighbouring owners or occupiers for resource support, provision of fire weather information or the

issuing of public information. In some circumstances, BFNT may deploy firefighting resources from larger regional centres to assist the owner or occupier to control the fire. BFNT have a rostered NT Duty Officer (NTDO) to provide 24/7 incident triage coverage who can be contacted through the JESCC.

Actions to be taken

As described above, in areas where there is no fire protection and management zones (BFNT) or emergency response area (NTFRS), fire is the responsibility of the landowner or occupier. Where an owner or occupier has contacted BFNT that they are unable to control fire on the land, BFNT may contact the Local Controller to discuss local response arrangements and coordination of resources.

Prevention and preparative controls include, but are not limited to:

- a fire danger period is declared over large areas when climatic and seasonal conditions presents increased fire risk for a prolonged period. A fire danger period usually coincides with the accepted 'fire season' in an area. Broadly this is during the Australian summer months in central Australia and during the Dry Season further north. A permit to burn is required before using fire during a fire danger period in all zones
- a fire ban can be declared for up to 24 hours. A combination of factors are considered when declaring a fire ban period including forecast fire danger, ignition likelihood, hazards and resourcing. All permits to burn are revoked within the declared fire ban area
- a fire management area can be declared in an area where BFNT have identified heightened fire risk. A fire management plan can be prescribed for a fire management area, and the Plan can require landowners to take action to prepare for, or prevent, the spread of fire
- additional fire regulations apply within NTFRS Emergency Response Areas (ERA) and BFNT Fire Protection and Management Zones (FPMZ). Permits to burn are required throughout the entire year inside an ERA or FPMZ and a minimum 4 m wide firebreak within the perimeter boundary of all properties and additional firebreaks around permanent structures and stationary engines is required within an FPMZ
- the BFNT Regional Fire Management Plan
- establishment of an IMT with liaison officers from other agencies to assist
- radio, television and social media posts.

Warning and advice approval flow (bushfire only):

The Australian Warning System is a national approach to information and warnings during emergencies like bushfire. The system uses a nationally consistent set of icons, like those below.

There are 3 warning levels:

Warning level	Description
	Advice (Yellow)
	Watch and Act (Orange)
	Emergency Warning (Red)

Each warning level has a set of action statements to give the community clearer advice about what to do. Calls to Action can be used flexibly across all 3 warning levels depending on the hazard.

All warnings and advice will be issued by the Incident Controller from the relevant controlling authority for fire (NTFRS or BFNT).

11.3.2. Heatwave

Hazard	Controlling Authority	Hazard Management Authority
 Heatwave	Department of Health	Department of Health

The NT has naturally warm to hot weather. However, maximum and minimum temperatures occasionally exceed historical records creating heatwave conditions. Heatwave (extreme heat) conditions occur across the Territory between the months of October and March. Extreme heat is predicted to become more frequent, more intense, of longer duration, and occurring earlier in the warm season.

A heatwave occurs when maximum and minimum temperatures are unusually hot (unusual for that location) projected over a 3 day period. Heatwaves can occur with or without high humidity. They have potential to cover a large area, exposing individuals and communities to hazardous heat. Forecast minimum and maximum temperatures are compared to the historical data of a location as well as temperatures over the last 30 days to establish a heatwave occurrence.

Extreme heat can be very taxing on the body. The human body can be over-heated when it is surrounded by a temperature close to or exceeding body temperature of 37°C in the presence of dehydration. If the body's temperature is unable to be reduced adequately by evaporation of perspiration or moving to cooler surroundings, the resulting illness may range from mild to severe/catastrophic.

NT Health publishes heat health alerts where a severe or extreme heatwave is forecast to affect:

- a major centre (Greater Darwin Region, Alice Springs, Katherine, Tennant Creek, Nhulunbuy; OR
- 3 or more populated centres in a Bureau weather district,

AND the forecast is:

- 3 or more days of severe heatwave; OR
- 2 or more days of extreme heatwave

The level of a severe or extreme heatwave event will determine the magnitude of response required to effectively manage the situation. The following describes heatwave incident response hierarchy and are based on AIIMS incident classification.

Level	Description
Level 1	The Severe or Extreme Heatwave has minimal or no impact on normal operations. The Severe or Extreme Heatwave continues for one - 3 days. Hospitals and health services may observe an increase in activity commensurate with the incident. Response by NT Health through heat health alerts.
Level 2	The Extreme Heatwave continues for approximately 3 – 6 days. The Extreme Heatwave has major impact on normal operations. The weather event is resulting in compounding impacts on essential services and infrastructure, and there are anticipated impacts on human health and infrastructure. Hospital and health service activity increases. Response by NT Health through heat health alerts and emergency medical attention.
Level 3	An Extreme Heatwave is protracted, exceeding 6 days. Maximum temperatures for the localities are exceeded for what is normally expected and multiple days with significantly increased night-time temperatures. Public infrastructure is affected. Power supply outages, compounding the heatwave and resulting in the public unable to seek respite from the heat. Abnormally high presentations at hospitals for heat related illness.

Prevention and preparative controls include, but are not limited to:

- preseason situational awareness with the Bureau
- developing heat health communication and community engagement strategies
- engagement with government and private agencies, functional groups and community organisations
- preparing fact sheets, and translating into indigenous and multicultural languages
- updating heat health advice email distribution list
- monitoring the Bureau heatwave forecast and decision support product
- public messaging (using radio, website posts, and social media posts) when a heatwave is forecasted, imminent or in progress

Public safety message process:

- NT Health receives heatwave warning from the Bureau
- the heatwave decision support product is reviewed and localities of forecast severe or extreme heatwave noted
- Director Environmental Health circulates information on extreme heat to stakeholders, listing all localities likely to be impacted
- NT Health Strategic Media, Marketing and Communications Team publish heat health alerts on NT Health Alerts webpage and other channels
- NT Health publishes media release through NTG Media Releases
- NT Health engages with media to broadcast heat health messages.

Warnings and advice approval flow:

The Australian Warning System is a national approach to information and warnings during emergencies like bushfire. The system uses a nationally consistent set of icons, like those below.

There are 3 warning levels:

Warning level	Description
	Advice (Yellow)
	Watch and Act (Orange)
	Emergency Warning (Red)

Each warning level has a set of action statements to give the community clearer advice about what to do. Calls to Action can be used flexibly across all 3 warning levels depending on the hazard.

11.3.3. Road crash

Hazard	Controlling authority	Hazard management authority
 Road crash	NT Police Force	NT Fire and Emergency Services (NT Fire and Rescue Service)

A road crash occurs when a vehicle collides with another vehicle, pedestrian, animal, road debris, or other stationary obstruction, such as a tree, pole or building. Road crashes often result in injury, disability, death, and or property damage as well as financial costs to both society and the individuals involved. Emergency services are frequently called on to extricate seriously injured casualties from their vehicles following road crashes. This is achieved by employing space creation techniques to create openings in the vehicle. These openings make it possible to administer first aid to the casualty and to remove them from the vehicle.

Several factors contribute to the risk of collisions, including vehicle design, speed of operation, road design, weather, road environment, driving skills, fatigue, impairment due to alcohol or drugs, and behaviour, notably aggressive driving, distracted driving, speeding and street racing.

In many NT localities, for incidents occurring within an NTFRS Emergency Response Area (ERA), NTFRS will respond as per pre-determined response arrangements contained within the Intergraph Computer-Aided Dispatch system. For incidents occurring outside of an ERA, response will be approved by the rostered NTFRS TDO. The Groote Eylandt utilises resources and trained personnel from South 32 and GEMCO ESS to respond to road crashes within the Locality.

Prevention and preparative controls include, but are not limited to:

- radio, television and social media posts
- targeted road safety campaigns
- community engagement strategies
- training in PUASAR024 - undertake road crash rescue delivered by NTES and NTFRS to NTPF and NTFES members.

Public message approval flow:

- Police Territory Duty Superintendent to approve public messaging and forward to NTPF and NTFES Media Unit for dissemination.

11.3.4. Storm surge

Hazard	Controlling authority	Hazard management authority	
	Storm surge	NT Police Force	NT Fire and Emergency Services (NT Emergency Service)

Storm surge is a powerful ocean movement caused by wind action and low pressure on the ocean's surface. These types of events can swamp low-lying areas, sometimes for distances inland. Strong winds at the coast can also create large waves, worsening the impact. While significant surges usually accompany tropical cyclones, storm surge caused by large low-pressure systems can also bring dangerous storm tides and damage to coastal communities around Australia.

Storm surge is an abnormal rise in sea level over and above the normal (astronomical) tide levels. It can be thought of as the change in the water level due to the presence of a storm. These powerful ocean movements are caused by strong winds piling water up against the coast as a cyclone approaches.

Storm tide is the water level that results from the combination of the storm surge and the normal (astronomical) tide. A 3m storm surge on top of a high tide that is 2m above the mean sea level will produce a storm tide that is 5m above mean sea level.

Storm surges are very sensitive to the characteristics of cyclones, making it very hard to predict. The paths of cyclones are often erratic, making it hard to forecast where and when they will make landfall and how high the tide will be at the time. Other elements that contribute to the risk of storm surge include the cyclone's speed and intensity, the angle at which it crosses the coast, the shape of the sea floor, and local topography.

Prevention and preparative controls include, but are not limited to:

- implementation of cyclone and storm preparation initiatives and council clean ups
- radio, television and social media posts
- localised community messaging

Public safety message process:

- the Bureau issue a storm surge advice to NTES TDO
- NTES TDO notifies Local Controller and NTES Manager Northern Command
- Local Controller notifies LEC
- NTES Manager Northern Command consults with the Bureau, Regional Controller, NTES Chief Officer and Incident Controller to determine recommended messaging
- NTPF and NTFES Media Unit or Public Information Officer receives approved messaging to publish.

11.3.5.Tropical cyclone

Hazard	Controlling Authority	Hazard Management Authority
 Tropical cyclone	NT Police Force	NT Fire and Emergency Services (NT Emergency Service)

A tropical cyclone⁷ hazard includes a cyclone threat to the township, housing and infrastructure of the Locality including the surrounding areas. During the cyclone season, November to April, the Bureau keeps a 24-hour watch on developing tropical weather systems. The Bureau will issue a Tropical Cyclone Advice whenever a tropical cyclone is likely to cause winds in excess of 62 km/h (gale force) over Australian communities within the next 48 hours.

A number of cyclones have directly or indirectly impacted NT in recent years. The following is a summary of significant tropical cyclones to have impacted the area:

- Severe Tropical Cyclone Megan – March 2024
Category 3 system at landfall. Brought destructive winds and major flooding to Borroloola and surrounding areas.
- Severe Tropical Cyclone Trevor – March 2019
Category 4 system at landfall. Triggered widespread evacuations across the Gulf of Carpentaria and caused significant wind damage and flooding.
- Severe Tropical Cyclone Marcus – March 2018
Category 5 at peak intensity, Category 2 when crossing near Darwin. Caused widespread damage with destructive winds and heavy rainfall across the Northern Territory, especially Darwin and surrounding regions.
- Severe Tropical Cyclone Lam – February 2015
Category 4 system at landfall. Brought destructive winds and flooding to Arnhem Land communities, damaging homes and infrastructure.
- Severe Tropical Cyclone Monica – April 2006
Category 5 system at peak intensity. One of the most intense cyclones recorded in the Southern Hemisphere; caused extensive environmental damage.
- Severe Tropical Cyclone Ingrid – March 2005
Category 4 system at landfall. Impacted Arnhem Land and the Tiwi Islands with strong winds and heavy rainfall.
- Severe Tropical Cyclone Tracy – December 1974
Category 4 system at landfall. Devastated Darwin, destroying most of the city and causing 71 fatalities.

Tropical Cyclones are classified into categories based on their sustained wind speed. These categories help communicate the potential severity of a cyclone's impact, including wind damage, storm surge, and flooding. Understanding these categories is essential for assessing risk and implementing appropriate emergency response measures.

The table on the following page outlines the classification system used for tropical cyclones:

⁷ More information can be found at: <http://www.bom.gov.au/cyclone/tropical-cyclone-knowledge-centre/understanding/tc-info/>

Table – Tropical cyclone categories

Category	Max mean wind (km/h)	Typical strongest gust (km/h)	Transport effects
1	63 - 88	< 125	Negligible house damage. Damage to some crops, trees and caravans. Craft may drag moorings
2	89 - 117	125 - 164	Minor house damage. Significant damage to signs, trees and caravans. Heavy damage to some crops. Risk of power failure. Small craft may break moorings.
3	118 - 159	165 - 224	Some roof and structural damage. Some caravans destroyed. Power failures likely.
4	160 - 199	225 - 279	Significant roofing loss and structural damage. Many caravans destroyed and blown away. Dangerous airborne debris. Widespread power failures.
5	>200	> 279	Extremely dangerous with widespread destruction.

Note: Corresponding approximate wind gusts and central pressure are also provided as a guide. Stronger gusts may be observed over hilltops, in gullies and around structures.

In March 2024, Tropical Cyclone Megan impacted the Locality with strong winds early 16 March, brought trees and power lines down around Alyangula, and by late 16 March, the Alyangula wharf was badly damaged as the Manganese bulk carrier MV Anikitos was pushed against it.

The slow movement of the cyclone resulted in very intense rainfall being recorded near the path of Megan. Widespread flooding occurred on Groote Eylandt during this event and roads were closed as a result. Groote Eylandt Airport recorded a two-day total of 680.4 mm.

For future events, if flooding is predicted in the Angurugu area, with the risk of the community being cut off from Alyangula, pre-deployment of staff will be initiated. This will include the allocation of 2 police officers, health personnel (from the health centre/clinics) and staff from DCF to the Angurugu Police Station. These personnel will be stationed as required, to ensure the continuation of essential services to the community.

As the Hazard Management Authority the NTES have established, equipped and trained volunteer units across the NT, to support response and recovery operations to tropical cyclones.

The NTES maintain the Territory EOC in a state of readiness. If the EOC is required to be activated by the Regional Controller, the NTES will support this activation and facilitate, where possible, the staffing requests for IMT personnel.

Prevention and preparative controls include, but are not limited to:

- implementation of cyclone preparation initiatives and council clean ups
- radio, television and social media posts.

Public safety message process (initial notification):

- the Bureau issue a cyclone advice to NTES TDO
- NTES TDO issues Australian Warning System to the NTPF and NTFES Media Unit
- NTES TDO notifies Local Controller and NTES Manager Northern Command
- Local Controller notifies LEC
- NTES Manager Northern Command consults with the Bureau, Regional Controller, NTES Chief Officer and Incident Controller to determine recommended messaging

- NTPF and NTFES Media Unit or Public Information Officer receives approved messaging to publish
- responsibility for development and promulgation of warnings and information post the establishment of an IMT will rest with the Public Information Officer and the Incident Controller.

The response to a cyclone event is staged and dependant on timings of the Watch and Warnings issued by the Bureau and the projected impact on the communities. The following table provides a guide to typical actions for members of the LEC upon receipt of notifications from the Bureau. The table also notes the need for LEC members to contribute to the recovery process post the impact of the cyclone.

Warnings and advice approval flow

The Australian Warning System is a national approach to information and warnings during emergencies like storm, flood and cyclone. The system uses a nationally consistent set of icons that are found below.

There are 3 warning levels:

Warning level	Description
	Advice (Yellow) An incident has started. There is no immediate danger. Stay up to date in case the situation changes
	Watch and Act (Orange) There is a heightened level of threat. Conditions are changing and you need to start taking action now to protect you and your family
	Emergency Warning (Red) An Emergency Warning is the highest level of warning. You may be in danger and need to take action immediately. Any delay now puts your life at risk.

Each warning level has a set of action statements to give the community clearer advice about what to do. Calls to Action can be used flexibly across all 3 warning levels depending on the hazard.

On advice from the Bureau's weather warnings, the NTES determine the Australian Warning System level. The NTES TDO is responsible for issuing Australian Warning System warnings and advice prior to an Incident Controller is appointed.

Actions to be taken – Tropical cyclone – guide only⁸

Organisation/ Provider	Watch	Warning (onset of Gale Force Winds)			Reduced risk	Transition to recovery
	48 hours	24 + hours	6 + hours	3 + hours		
All members	Attend briefings Inform key stakeholders Provide SITREPs Assist the Local Controller as required Ensure final preparations are undertaken prior to moving to Warning	Attend briefings Inform key personnel Assist the Local Controller as required	Attend briefings Assist the Local Controller as required Inform key personnel	Assist the Local Controller as required Take and remain in shelter	Remain in shelter until directed by Local Controller Assist the Local Controller as required	Attend briefings Inform key personnel Assist the Local Controller as required
Local Controller	Convene meeting of the LEC Ensure LEC members and community have activated their Cyclone Plan Co-ordinate the dissemination of the cyclone watch information to the relevant local community Communications established and maintained with Regional Controller, and	Convene meeting of the LEC Ensure that the dissemination of the cyclone warning information to the public is maintained Advise Regional Controller of state of preparedness and ascertain SITREPs requirement	Update LEC and allocate tasks as required Ensure that the dissemination of the cyclone warning information to the public is maintained At the appropriate time, advise persons at risk to move to a shelter	Take and remain in shelter	When it is declared safe to move outside, ascertain the extent of injury to persons and damage to property Give directions to survey teams advising community of reduced risk Provide SITREPs to Regional Controller and Incident Controller	Provide SITREPs to Regional Controller and Incident Controller Prepare for transition to recovery Begin compilation of information for Post Operation Report

⁸ Action stages as per Tropical Cyclone advice and warnings issued by the Bureau of Meteorology

Organisation/ Provider	Watch	Warning (onset of Gale Force Winds)			Reduced risk	Transition to recovery
	48 hours	24 + hours	6 + hours	3 + hours		
	NTES TDO and advise state of preparedness Participate in REC meetings as required	Activate EOC if required			Prepare for transition to recovery	
NTPF	Brief police members Disseminate warnings and information as required Maintain normal police duties Assist Local Controller as required Ensure all operational vehicles are fully fuelled	Brief police members Assist with the preparation of the EOC Disseminate Cyclone Warning information as directed by the Local Controller Brief the Local Controller and advise information received	Brief police members Disseminate cyclone information as directed by the Local Controller Limit transport and ensure all emergency vehicles are fully operational Co-ordinate the movement of personnel to shelter Commence final patrol of area Ensure all personnel take shelter	Take and remain in shelter	When advised by Local Controller move outside and ascertain the extent of injury to persons and damage to property and report with damage assessments Assist Local Controller with prioritising response operations	Assist in the preparation of the final SITREPs Ensure that all NTPF equipment used in the operation is accounted for, maintained and restored Inform key personnel
GEMCO	Brief South 32 staff Maintain normal duties	Brief South 32 staff	Brief South 32 staff	Brief South 32 staff	Remain in shelter On direction of the Local Controller	Advise Local Recovery Coordinator of any urgent priorities

Organisation/ Provider	Watch	Warning (onset of Gale Force Winds)			Reduced risk	Transition to recovery
	48 hours	24 + hours	6 + hours	3 + hours		
	Initiate South 32 internal cyclone preparedness measures Assist the Local Controller as required	Implement the South 32 internal Emergency Management Plan Assist the Local Controller as required	Implement the South 32 internal Emergency Management Plan On advice from the Local Controller ensure all South 32 personnel take shelter	Take and remain in shelter	advise South 32 personnel when it is safe to leave the shelter When it is considered safe, ascertain the extent of injuries to personnel and damage to property and advise the Local Controller	and participants in meetings as required
DET	Advise Regional Office of the Watch and brief staff Advise the Local Controller of the state of preparedness and availability of human resources Maintain normal education services	Ensure designated public shelters are prepared to take persons seeking shelter Advise Regional Office of the declaration of Warning and brief staff Carry out other duties as required by the Local Controller	Advise Regional Office of weather progression and brief staff Carry out tasks as allocated by the Local Controller Ensure all personnel takes shelter Provide emergency accommodation, and where possible, assist with welfare and other family services as needed	Brief staff Take and remain in shelter	Remain in shelter until advised by the Local Controller it is safe to move outside Restore facilities and resume normal education duties as soon as possible	Advise Local Recovery Coordinator of any urgent priorities and participate in meetings as required

Organisation/ Provider	Watch	Warning (onset of Gale Force Winds)			Reduced risk	Transition to recovery
	48 hours	24 + hours	6 + hours	3 + hours		
DOH	<p>Brief departmental personnel</p> <p>Advise the Local Controller of the state of preparedness and of any urgent requirements</p>	<p>Brief departmental personnel</p> <p>Determine health service priorities and advise the Local Controller</p> <p>Provide the Local Controller with information and advice on communications, medical, public health and community service matters</p> <p>Advise regional office Nhulunbuy of declaration of Warning</p>	<p>Check, prepare and secure health centres' stores and equipment</p> <p>Brief departmental personnel</p> <p>Advise regional office Nhulunbuy of declaration of weather progression</p> <p>Complete security of clinic facilities including essential vehicles, emergency power and communications equipment</p> <p>Ensure that ALL requests for assistance are channelled through the Local Controller</p> <p>Upon advice from the Local Controller, ensure all personnel takes shelter</p>	<p>Brief staff</p> <p>Take and remain in shelter</p>	<p>Remain in shelter until advised by the Local Controller that it is safe to move out</p> <p>Ensure personnel and facilities are available for casualty reception and treatment upon receipt of all clear advice</p> <p>Advise the Local Controller on all public health and family services matters and if necessary, liaise with Aerial Medical Service</p> <p>Restore departmental facilities</p> <p>Advise regional office Nhulunbuy on the declaration of reduced risk</p>	<p>Advise Local Recovery Coordinator of any urgent priorities and participate in meetings as required</p>

Organisation/ Provider	Watch	Warning (onset of Gale Force Winds)			Reduced risk	Transition to recovery
	48 hours	24 + hours	6 + hours	3 + hours		
EARC	<p>Brief personnel</p> <p>Advise the Local Controller of the state of preparedness and any urgent requirements</p> <p>Advise Regional Office in Nhulunbuy of the Watch</p> <p>Ensure final community clean-up is complete</p>	<p>Brief personnel</p> <p>Determine essential services priorities and notify Local Controller</p> <p>Provide the Local Controller with information and advice on communication</p> <p>Advise Regional Office of Warning declaration</p>	<p>Brief personnel</p> <p>Ensure vehicles, plant and equipment is fuelled up and prepared for recovery activities</p> <p>Advise the Regional Office of weather progression</p>	<p>Brief personnel</p> <p>Take and remain in shelter</p>	<p>Remain in shelter until advised by the Local Controller that it is safe to move out</p> <p>Brief personnel</p> <p>When directed by Local Controller conduct survey of community</p> <p>Brief Local Controller on all damage to infrastructure and essential services</p> <p>Restore services to community</p> <p>Clear roads of debris and fallen trees</p> <p>Advise regional office of reduced risk towards transition to recovery</p>	<p>Advise Recovery Coordinator of any urgent priorities and participate in meetings as required</p>
Support organisations	Provide support as requested by the Local Controller					

11.4. Annex D: Summary of response and recovery activities

The following tables list a summary of possible response and recovery activities to be considered following an event.

This table is presented as a guide only, assisting emergency managers with operational decision making, planning and resource allocation. It also highlights the importance of response and recovery coordination working collaboratively.

Activities have been broken down and are listed under either response or recovery for simplicity and ease of use. In practice not all response activities will be completed during the response phase. Likewise not all recovery activities will commence after the transition to recovery.

The post event period of any event is highly dynamic and produces many challenges, both foreseen and unpredicted. Response and recovery coordination must be flexible and able to adapt to the situation as it evolves.

In most cases the points noted in this table and in the ensuing document are outlined in greater detail in functional group or agency plans.



Activity	Response activities	Recovery activities
1. Situational awareness	Road clearance teams General public Media reports Survey and rescue teams Impact assessment teams	Contributes to recovery planning through impact assessment data Comprehensive Impact Assessments Needs Assessment
2. Public Information	Public Information Group activation Spokespersons identified SecureNT activated	Continues in recovery
3. Survey and Rescue	Survey teams deploy to designated areas Critical sites surveyed Deploy rescue teams – NTFRS and NTPF Specialist Response Division provide primary Urban Search and Rescue capability	Survey and Impact Assessment data used to contribute to the Recovery Action Plan
4. Road clearance	Road patrol teams deploy and check assigned routes Road clearance to priority sites	Restoration of road networks and bridges Return to business as usual
5. Emergency accommodation	Emergency accommodation and shelter - evacuation centres	Evacuation centres may continue into recovery Temporary accommodation options

Activity	Response activities	Recovery activities
	<p>Provision of resources that will enable people to remain in their homes</p> <p>Emergency clothing</p>	Repatriation planning
<p>6. Medical</p>	<p>Hospital</p> <ul style="list-style-type: none"> - identify any issues with accessing facilities - initial impact assessment - access to critical supplies e.g. medicines, consumables, power or fuel and water - ongoing acute clinical care and critical services requirements - increase morgue capacity <p>Health Centres</p> <ul style="list-style-type: none"> - identify any issues with accessing facilities - Access to critical supplies e.g. medicines, consumables, power or fuel and water <p>GP clinics and pharmacies</p> <ul style="list-style-type: none"> - identify operational GP services - identify operational pharmacies <p>Support Medically vulnerable people</p> <p>Medical retrieval services (air and road)</p>	<p>Ongoing provision of health services</p> <ul style="list-style-type: none"> - which may include business continuity plans - engagement with stakeholders <p>Repatriation of medically vulnerable people in community</p> <p>GP clinics and pharmacies</p> <ul style="list-style-type: none"> - ongoing liaison by the Medical Group <p>Medical retrieval services – resume business as usual</p>
<p>7. Essential goods and services</p>	<p>Establish emergency feeding and food distribution points</p> <p>Assessing the damage to suppliers and retailers of critical resources</p> <p>Assess the impact on barge operations and any effect on the ability to supply remote communities</p> <p>Implement interim banking arrangements</p>	<p>Ensure enablers are in place to support the re-opening of essential services</p> <p>Monitor levels and availability of essential goods</p> <p>Manage logistics arrangements supplying resources to outlying communities</p> <p>Public health inspections (food outlets)</p> <p>Banking sector business continuity arrangements</p>
	<u>Fuel</u>	Monitor fuel levels

Activity	Response activities	Recovery activities
	Fuel suppliers and point of sale Manage fuel supplies to emergency power generation	Infrastructure repairs Emergency fuel supplies for recovery Liaise with fuel suppliers, distributors and wholesalers to re-establish long term supply
	<u>Banking</u> Assess damage to banks and ATMs Implement temporary arrangements	Emergency cash outlets Implement long term arrangements
8. Evacuation	Evacuations within community	Support services for evacuees
	Evacuation out of community	Recovery information for evacuees
	Registration	Repatriation
9. Public health	Communicable disease control response	Ongoing in recovery
	Drinking water safety standards	
	Sewage and waste disposal	
	Safe food distribution and advice	
	Vector and vermin control	
	Food and commercial premises	
10. Utilities	Power supply	Restore power network
	Power generation	Restore water and sewerage infrastructure
	Water supply	
	Sewerage	Issue alerts until safe to use
	Emergency sanitation	
11. Impact assessments	Training assessment teams	Comprehensive impact assessments
	Initial impact assessments	Ongoing needs assessments
12. Transport infrastructure (supply lines)	<u>Air (airport/airstrip)</u> Clear the runway to allow air movements Establish a logistics hub at the airport Terminal damage and operational capability assessment	Monitor repairs and business continuity activities
	<u>Road</u> Highway and critical access roads damage assessment Repair work to commence immediately	Planning and prioritising repair work of all affected key roads for the Locality.

Activity	Response activities	Recovery activities
	<u>Port, harbour and barge</u> Assess damage to port infrastructure and harbour facilities Assess the damage to barge facilities	Repairing infrastructure Establish alternate arrangements for the supply of remote communities
13. Waste management	Waste management requirements and develop waste management plan if required	Continues in recovery
14. Repairs and reconstruction	Private housing <ul style="list-style-type: none"> - impact assessments - temporary repairs Government buildings <ul style="list-style-type: none"> - damage assessment Public housing <ul style="list-style-type: none"> - impact assessments Private industry <ul style="list-style-type: none"> - damage assessments 	Private housing <ul style="list-style-type: none"> - information and support to facilitate repairs Government buildings <ul style="list-style-type: none"> - repairs and reconstruction Public housing <ul style="list-style-type: none"> - long term repair plans Private industry <ul style="list-style-type: none"> - repair and reconstruction of enabling infrastructure - support DRFA payment facilitation where eligible Temporary accommodation for a visiting construction workforce if necessary or suitable accommodation is unavailable
15. Transport services	Staged re-establishment of public transport services	Continues in recovery
16. Telecommunication	Telstra and Optus will assess the damage to their infrastructure Put in place temporary measures to enable landline and mobile services	Repair damage networks and infrastructure (for private entities there is support for operators only)
17. Public safety	NTPF will maintain normal policing services to the community	Gradual return to business as usual
18. Animal welfare	Temporary emergency arrangements for pets	Reunite pets with their owners and cease emergency support arrangements
19. Community consultation	Information provision regarding the overall situation, response efforts, what services are available and how to access them	Community consultation process regarding long term recovery and community development led by relevant departments

12. Acronyms

Acronyms	Definitions
AAPA	Aboriginal Areas Protection Authority
ABC	Australian Broadcasting Corporation
AIIMS	Australasian Inter-Service Incident Management System
ALC	Anindilyakwa Land Council
BFNT	Bushfires NT
CM&C	Department of the Chief Minister and Cabinet
DAF	Department of Agriculture and Fisheries
DCF	Department of Children and Families
DCDD	Department of Corporate and Digital Development
DLPE	Department of Lands, Planning and Environment
DLI	Department of Logistics and Infrastructure
DTBAR	Department of Trade, Business, and Asian Relations
DET	Department of Education and Training
DOH	Department of Health
DHLGCD	Department of Housing, Local Government and Community Development
DRFA	Disaster Recovery Funding Arrangements
EARC	East Arnhem Regional Council
EOC	Emergency Operations Centre
ERA	Emergency Response Area
FERG	Fire and Emergency Response Group
FPMZ	Fire Protection and Management Zones
GEBIE	Groote Eylandt And Bickerton Island Enterprises
GEMCO	Groote Eylandt Mining Company

Acronyms	Definitions
ICC	Incident Control Centre
ICP	Incident Control Point
IMT	Incident Management Team
JESCC	Joint Emergency Services Communications Centre
LCC	Local Coordination Centre
LEC	Local Emergency Committee
LRCC	Local Recovery Coordination Committee
NERAG	National Emergency Risk Assessment Guidelines
NT	Northern Territory
NTES	Northern Territory Emergency Service
NTFRS	Northern Territory Fire and Rescue Service
NTG	Northern Territory Government
NTPF	Northern Territory Police Force
NTFES	Northern Territory Fire and Emergency Services
PAWC	Power and Water Corporation
PPRR	Prevention, Preparedness, Response and Recovery
RAT	Rapid Assessment Team
RCC	Rescue Coordination Centre
SEWS	Standard Emergency Warning Signal
SITREP	Situation Report
STAND	Strengthening Telecommunications Against Natural Disasters
TDO	Territory Duty Officer
TEMC	Territory Emergency Management Council
WebEOC	Web-Based Emergency Operations Centre