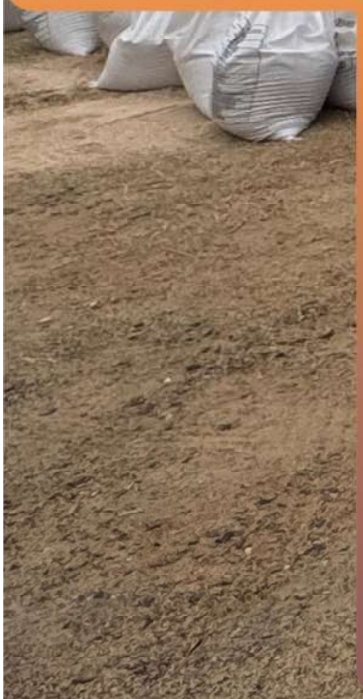

Office of the
Inspector-General of
Emergency Management

Tropical Cyclone Alfred and Associated Severe Weather (1 March – 16 March) – Event Report

Queensland Government

Document details

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Content disclaimer

The Office of the Inspector-General of Emergency Management has reviewed all relevant documentation and evidence provided by state agencies and other entities, the community, and sourced from media and other public reports. This review report is based on the information that has been supplied to the Office of the Inspector-General of Emergency Management as of 14 October 2025 and does not consider any other material that has not been provided or sighted by the Office of the Inspector-General of Emergency Management. It is therefore possible that some inconsistencies may be present despite the best efforts of the Office of the Inspector-General of Emergency Management to validate and align the raw data utilised throughout this report.

Cover image credit: Queensland Fire Department

Ref No: 2025/9672

14 October 2025

The Honourable Dan Purdie MP
Minister for Police and Emergency Services
PO Box 15195
City East Queensland 4002

Queensland Government
Inspector-General of
Emergency Management

Dear Minister

In accordance with the Government endorsed terms of reference dated 22 May 2025, I present the following reports:

- 2025 Significant Weather Events Summary Report
- North and Far North Queensland Tropical Low and Associated flooding (29 January – 28 February 2025) Event Report
- Tropical Cyclone Alfred and Associated Severe Weather (1 March – 16 March 2025) Event Report
- Western Queensland Surface Trough and Associated Flooding (21 March – 19 May 2025) Event Report

These reports detail the impacts of three major and distinct weather systems that affected 73 of the 77 local government areas and one town authority representing 95.5% of the state. The impact of the events included the displacement and isolation of residents, prolonged periods of power and telecommunications loss, extensive damage to homes, businesses and significant livestock losses.

The three weather events were unique and complex, affecting communities in different ways and requiring tailored responses. The individual event reports provide detailed insights into the nature of these impacts and the challenges faced. The 2025 Significant Weather Events Summary Report provides a whole of state perspective on the three events, highlighting compounding and cascading impacts on both the disaster management sector and the Queensland community. It also identifies commonalities across the events to support a holistic understanding of their collective impact.

The production of these reports has been a collaborative effort across Queensland's disaster management sector, reflecting both preparedness and response activities. This process enabled a deeper understanding of operational strengths, challenges and opportunities in managing widespread and compounding disasters. Community members contributed and shared their experiences through public submissions and attendance at community forums.

I recognise the commitment and hard work at all levels across Queensland, and I extend my sincere thanks to councils, state agencies, volunteers, emergency services personnel and disaster management practitioners, their dedication and service were crucial in responding to these events.

I acknowledge the work being undertaken to recover from the impact of these events is ongoing and will be for some time. The commitment of the entities and people is tireless, and I acknowledge everyone involved.

To the community members who supported one another during these challenging events, thank you. Your resilience, compassion, and unwavering commitment to helping others is deeply appreciated. You should be proud of your efforts, which will inspire and strengthen Queensland's response in the future.

Yours sincerely

Alistair Dawson APM
Inspector-General of Emergency Management

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Acknowledgement of Country

The Office of the Inspector-General of Emergency Management acknowledges Aboriginal peoples and Torres Strait Islander peoples as the Traditional Owners and Custodians of this Country. We recognise their connection to land, sea and community. We pay our respects to them, their cultures and to their elders past and present.

Acknowledgements

The Office of the Inspector-General of Emergency Management extends our sincere thanks to all who contributed to the reviews of the significant weather events that impacted Queensland between January and May 2025.

The scale of these events was extensive, impacting 73 of the 77 local government areas (LGAs) and one town authority. The impact across Queensland was widespread, with numerous local government areas affected by distinct weather events. Specifically:

- North and Far North Queensland Tropical Low and Associated flooding (29 January – 28 February 2025) Event – impacting 40 LGAs
- Tropical Cyclone Alfred and Associated Severe Weather (1 March – 16 March 2025) Event – impacting 18 LGAs
- Western Queensland Surface Trough and Associated Flooding (21 March – 19 May 2025) Event – impacting 41 LGAs

Notably, 19 LGAs were impacted by both the North and Western Queensland events, and 7 LGAs experienced effects from both TC Alfred and the Western Queensland Floods. These overlapping impacts created compounding challenges, stretching local resources and increasing emotional, social, and economic pressures on communities already in recovery.

We acknowledge the many community members who shared their experiences through our community forums, written submissions, and personal conversations. Your courage in sharing deeply personal and often confronting stories has provided invaluable insight into the real and lasting impacts of these events.

We thank the staff of Articulous, Australian Red Cross, and the Department of Communities for their support at community forums, helping create safe and inclusive spaces for dialogue.

Our gratitude also extends to local, state, federal, and non-government stakeholders who provided timely information and participated in interviews with thoughtfulness, care, and a genuine commitment to the review process.

To the emergency management practitioners and volunteers – your dedication and unwavering commitment, event after event, is to be commended. Your work remains the backbone of Queensland's disaster response and recovery.

Finally, we acknowledge the staff of the Office of the IGEM, along with seconded and contracted personnel, whose integrity, empathy, and rigour ensured the reviews were conducted to the highest standard.

Thank you to everyone who contributed. Your voices, insights and efforts have helped shape a stronger, more resilient Queensland, one that learns and continues to improve its preparedness, response, and recovery for future events.

Alistair Dawson APM
Inspector-General of Emergency Management

Table of Contents

Figures and tables

Executive summary

Tropical Cyclone (TC) Alfred and the associated severe weather from 1–16 March 2025 marked a significant moment in Queensland's disaster history, being the first cyclone to cross the southeast in more than 50 years, impacting 18 local government areas. The event tested the resilience of communities, infrastructure, and Queensland's disaster management arrangements (QDMA), revealing both strengths and opportunities for improvement.

The Office of the Inspector-General of Emergency Management (the Office) undertook this review to assess preparedness and response activities of entities with Queensland's Standard for Disaster Management in Queensland, identifying good practices, and provide recommendations for continuous improvements. The review was informed by community forums, public submissions, and engagement with local governments and agencies.

Key themes

Pre-season planning and preparedness

Pre-season planning ahead of the 2024–25 severe weather season saw many Queensland local governments and entities undertake disaster preparedness exercises. These included scenario-based simulations, evacuation planning, and multi-agency coordination activities designed to test the effectiveness of disaster management plans. These exercises helped identify capability gaps, refine operational processes, and build confidence in coordinated response efforts. Infrastructure providers such as Energy Queensland and major telecommunications companies also engaged in pre-season planning, conducting asset inspections, maintenance programs, and pre-deploying resources to high-risk areas.

Despite these efforts, the review found significant challenges in staffing and operational readiness. For example, many councils reported a limited pool of personnel formally trained in evacuation centre operations, with staff often required to perform multiple roles or who were unavailable due to personal impacts from flooding.

The review process identified confusion in the terminology and communication surrounding evacuation centres and other shelter options, which impacted both public understanding and agency coordination during the event. Terms such as 'evacuation centre' and 'place of refuge' were used inconsistently across entities, leading to uncertainty about the purpose, capacity, and accessibility of these facilities. This lack of clarity created barriers for residents seeking shelter and complicated the delivery of support services, particularly for some people at higher risk, such as people with disability or older people.

Investing in training, ensuring clarity in terminology, and embedding inclusive planning that reflects the diverse needs of communities are essential components of effective disaster preparedness. These efforts should be complemented by scenario-based planning that anticipates worst-case events in the locality, such as extended power outages, prolonged telecommunications failures, and accessibility. These are increasingly likely in Queensland's evolving risk environment. Establishing these practices as standard across all levels of disaster management will strengthen operational readiness, improve community resilience, and ensure that people at higher risk are not left behind during complex emergencies.

Power and telecommunications outages

The extended loss of electricity across Southeast Queensland—impacting more than 500,000 households and businesses, triggered widespread disruptions to essential services. Telecommunications infrastructure, with its heavy reliance on power, failed across large areas, leaving communities without mobile coverage and internet access. This breakdown impacted the ability of emergency services, local authorities, and residents to coordinate, report incidents, or seek assistance.

Critical infrastructure such as hospitals, aged care facilities, evacuation centres, water treatment plants and large-scale industry faced operational challenges due to power loss. Back-up generators, where available, were often constrained by fuel shortages or regulatory barriers to refuelling. The interdependency between electricity and telecommunications meant that once power was lost, communication towers and NBN hubs tended to quickly follow, compounding the sense of isolation.

These outages also exposed vulnerabilities in business continuity planning across sectors, particularly in aged care, disability services, and telecommunications. The event underscored the importance of robust redundancies, coordinated fuel strategies, and integrated planning to ensure continuity of essential services during prolonged disruptions.

Business continuity planning

Business continuity planning emerged as a critical theme in this event. It is essential for ensuring that organisations – government, non-government and private enterprise – can continue to deliver essential services during and after a disaster. Strong business continuity planning assists entities manage risks, stabilise operations and expedite recovery.

The lack of robust continuity arrangements was particularly evident across some businesses such as aged care, disability services, fuel supply planning and telecommunications redundancy. By way of example, service disruptions in the aged care and disability sectors left people without critical support, placing additional strain on emergency services and local governments to fill the void, underscoring the need for integrated planning across health, disability, and aged care sectors.

Further, back-up generators were used widely but often ran out of fuel, and refuelling was hindered by regulatory constraints or access issues. In a number of cases telecommunications infrastructure failed when back-up power was exhausted, leaving communities without access to emergency alerts or public information. These cascading disaster impacts highlights the need for integrated business continuity planning that consider interdependencies between sectors and infrastructure systems.

These examples demonstrate the interconnectivity of the arrangements and the need for strong business continuity plans to be embedded as standard practice across all sectors, that they are tested for effectiveness under challenging conditions to achieve clarity in understanding of roles and responsibilities.

Support for people at higher risk

Support for people at higher risk in disasters was a recurring theme throughout this event, particularly as it related to gaps in preparedness, coordination and continuity of care. The prolonged power and telecommunications outages, service disruptions and limited access to support,

heightened risks to these groups including people with disability, older adults, those with chronic health conditions and people experiencing homelessness.

The shift to in-home health support models – such as those under the National Disability Insurance Scheme (NDIS) and My Aged Care framework – have introduced new challenges for disaster preparedness and planning. During recent events, disruptions to these services, often caused by flooding, road closures, or personal impacts on carers and support workers, meant many individuals were unable to access essential daily care. As a result, some presented at evacuation centres not for shelter, but in search of critical health and support services.

Evacuation centres were consequently required to function as ad hoc care hubs, despite staff and volunteers often lacking the necessary training and equipment to provide specialised support. However, grassroots responses emerged as vital stopgaps: neighbours delivered medications, community halls offered generator-powered shelter, and island communities mobilised to assist residents with disabilities. These examples underscore the importance of strong local networks and proactive community engagement in building resilience and ensuring continuity of care during emergencies.

The event demonstrates the need for systemic, including and coordinated services, reflective of identified strategies.

Public information and warnings

The ability for the community to access public information and warnings was challenged during the event as a result of a loss of power and telecommunications for extended periods across large sections of Southeast Queensland. This meant critical information was often not received. Communities were unable to access disaster dashboards, emergency alerts, or updates from local councils. The reliance on digital platforms during widespread outages highlighted a major vulnerability and an urgent need for embedding localised offline messaging strategies, combined with increasing the resilience of core infrastructure. Many residents were directed to online resources they could not access, and satellite devices, while helpful for connectivity, do not receive Emergency Alerts—further limiting reach during critical moments.

The lack of connectivity of affected communities created a sense of confusion, frustration and isolation among residents, particularly in areas such as Hervey Bay and Redland Bay, where fast onset events and flash flooding occurred with little or no prior warning. The event highlighted the critical importance of effective communication systems to ensure communities remain connected and informed during disasters.

The future

The disaster events that unfolded across Queensland in 2025 starkly illustrate the increasingly cascading, compounding, and complex nature of contemporary disasters.

The compounding nature of these events was evident as communities already recovering from previous disasters faced new ones, intensifying social, economic, and environmental stress. Cascading effects emerged as damage to critical infrastructure—such as roads, power, and communications—disrupted emergency response (and recovery operations), creating knock-on effects across sectors. The complexity of managing these successive events required coordinated,

multi-agency responses and adaptive strategies that could address simultaneous risks across vast geographic areas.

These back-to-back, statewide disasters underscore the pressing need for integrated, forward-looking disaster risk reduction approaches that account for the systemic vulnerabilities and interdependencies shaping Queensland's resilience landscape.

Strengthening local leadership, investing in resilient infrastructure, and embedding community-led solutions into formal disaster management frameworks will be critical to enhancing Queensland's overall disaster resilience for the future.

Having regard to the scale, frequency, and complexity of recent disaster events, there is a need to further continue a culture of shared responsibility and proactive preparedness across Queensland communities.

Queenslanders should turn their minds to the changing shape, impact and magnitude of disasters as a part of everyday life, recognising that being aware of local risks, preparing for those risks, and planning accordingly are essential steps in this evolving process. The path forward should be shaped by evidence, guided by collaboration, and grounded in the lived experiences of those most affected

The better prepared individuals and communities are, the quicker and more effectively they can recover.

Tropical Cyclone Alfred and Associated Severe Weather Event Report

How to read this report

The Tropical Cyclone Alfred and Associated Severe Weather (1 March-16 March, 2025) Event Report (event report) is one of four reports written arising from the three significant weather events that occurred in the first half of 2025. The reports are written in line with the terms of reference and the additional reports are described as follows:

- North and Far North Queensland Tropical Low and Associated flooding (29 January- 28 February, 2025)
- The Western Queensland Surface Trough and Associated Flooding (21 March-19 May, 2025)
- 2025 Significant Weather Events Summary Report.

The three event-related reports are supported by a Summary Report, the purpose of which is to provide a whole-of-state summary of the three events, the impact on the disaster management sector and the Queensland community. The Summary Report will also provide an analysis of any commonalities between the three events.

The Summary Report discusses the cascading and compounding impact of the three events on the disaster management sector, and reflects upon the changing face of disasters and how strategic level planning in response to complex and potentially catastrophic crises can be achieved as identified in the Crisis Appreciation and Strategic Planning (CASP) Guidebook.[1]

The purpose of the reviews is to provide the disaster management sector in Queensland with an opportunity to reflect on preparedness and response activities undertaken by agencies tasked with keeping Queenslanders safe in times of natural disasters, and the opportunities for future enhancements.

Complicated vs complex

What's the difference between complicated and complex?

Complicated problems originate from causes that can be individually distinguished. They can be addressed piece-by-piece—for each input to the system there is a proportionate output. The relevant systems can be controlled and the problems they present admit permanent solutions.

On the other hand, **complex** problems result from networks of multiple interacting causes that cannot be individually distinguished. They cannot be addressed in a piecemeal way, and they are such that small inputs may result in disproportionate effects. The problems they present cannot be solved once and forever but need to be systematically managed.

Source: Roberto Poli, author of Working with the Future: Ideas and Tools to Govern Uncertainty (CASP, 2024, p 10).

The scope of the reviews is limited to Queensland and the response in this state. However, Australian Government agencies which regulate or provide services to the Queensland Government and local governments and are integral to the disaster management system were also invited to

[1] Crisis Appreciation and Strategic Planning Guidebook, National Emergency Management Agency, Australian Government, 2024, p. 10

provide submissions on their roles. We thank all entities for taking the time to provide a submission to inform this event report.

The reviews also provided the community the opportunity for their views and experiences of the events to be heard and to reflect on the performance of Queensland's disaster management arrangements (QDMA). Thank you to the community for engaging with the process, whether it was through a written submission or attendance at one of the community forums. This feedback has informed the evaluation of the effectiveness of the disaster management arrangements and has helped inform this event report.

While this event report can be read as a stand-alone document, the additional event reports and Summary Report provide a picture of the significant weather events that impacted the state during the first half of 2025. Together these documents provide an understanding of:

- Pre-season planning activities
- Integration of preparedness and response activities between all levels of government
- Opportunities to enhance community resilience
- Communication systems and connectivity of communities
- Provision of information to make informed decisions at both planning and response phases.

While each of the three events experienced in 2025 is unique and had specific impacts on each community, there are shared experiences which provide invaluable insights to government agencies, businesses, not-for-profit organisations and individuals on how to better manage their responses to natural disasters.

Recommendations:

A full list of recommendations is contained in the Summary Report.

Where recommendations are endorsed by government in full or in part, the Office's Monitoring, Evaluation and Reporting (MER) process will use the Summary Report to support assurance activities.

It is noted that individual event reports will only include recommendations relevant to the specific issues addressed, and therefore may not reflect the full suite of recommendations.

Timeline of events

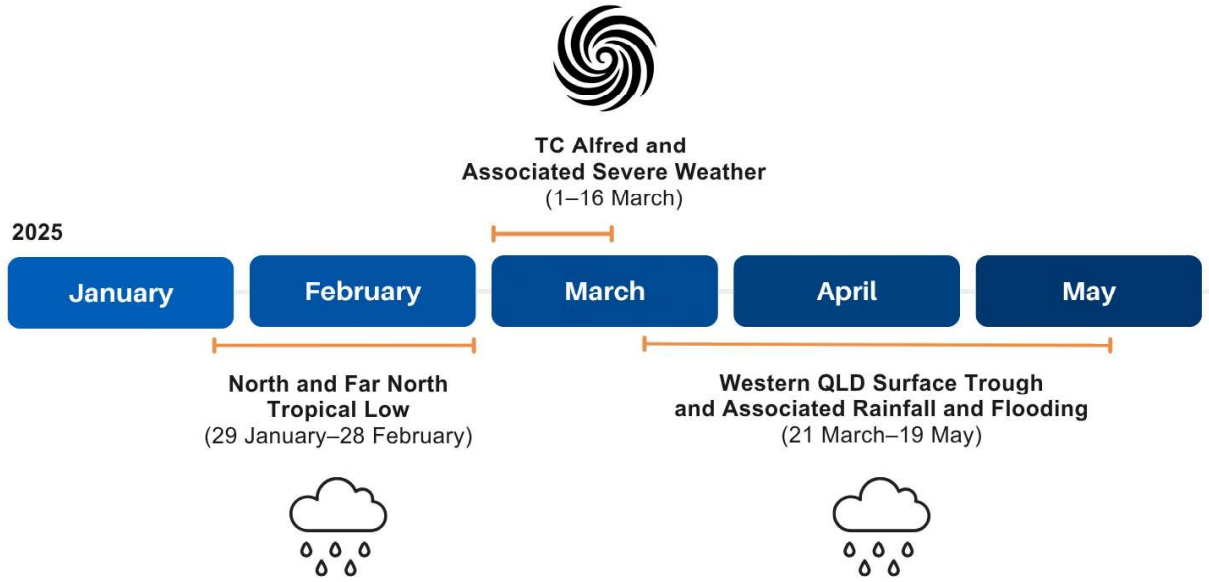

Figure 1: An overview of the Disaster Recovery Funding Arrangements-activated events. Response activities may have started before DRFA activation and continued after the activation period ended.

Methodology

In undertaking the review, consideration was given to the intent of the Queensland Disaster Management 2016 Strategic Policy Statement, and analysis was aligned to the Standard for Disaster Management in Queensland (the Standard) and terms of reference. The methodology outlines the minimum requirements for Office of the Inspector-General of Emergency Management (the Office) reviews.

The review was conducted according to Queensland's disaster management doctrine as it existed for the period of the three events in the first half of 2025.

This report contains observations, insights and recommendations from North Queensland Floods, as described below.

- **Observation:** a record of a noteworthy fact or occurrence that someone has heard, seen, noticed, or experienced as an opportunity for improvement or an example of good practice and shared with the review.
- **Insight:** A deduction drawn from the evidence collected (observations), which needs to be further considered. An insight defines the issue, not the solution.
- **Recommendation:** A proposed course of achievable action to either reinforce good practice or address an area identified for improvement.

Monitoring the implementation of accepted recommendations occurs through the Office's monitoring, evaluation and reporting program, discussed later in the report.

Lines of inquiry

From the terms of reference (Appendix A), the Office developed three lines of inquiry in relation to the three reviews:

1. **Pre-season planning activities**
   Including Pre-season planning activities undertaken by entities
2. **Integration of preparedness and response activities including information and data needs**
   Including a) Integration of preparedness and response activities between all levels of government; and b) Provision of information and data to inform and support planning decisions in the preparation and response phases.
3. **Opportunities to enhance community resilience including communications for the community to stay connected**
   Including a) Opportunities to enhance community resilience to better prepare for, and respond to future disasters; and b) Ensuring effective communications systems to enable the community to take necessary actions and to ensure connectedness within the community and with response entities

The data collection and analysis activities of the review were prioritised and coordinated through these lines of inquiry. Throughout the review process, it became clear that many of the issues raised were complex and overlapped across multiple lines of inquiry. In such instances, efforts have been made to acknowledge the overlap while including the discussion in the most relevant section or sections of the report.

Other reviews and reports

The reviews also considered other relevant available reviews and reports, such as:

- *Australia's National Climate Risk Assessment,* Australian Climate Service, Australian Government, 2025
- *From storm to study: Insights on resilience from Tropical Cyclone Alfred*, prepared by Dr Geoff Boughton, Dr David Henderson, and Dr Bruce Harper from James Cook University for Natural Hazards Research Australia, 6 May 2025
- *Brisbane City Council Tropical Cyclone Alfred Review*, prepared by The Hon Paul de Jersey for Brisbane City Council, 12 May 2025
- *Social media analytics to explore community experiences of Tropical Cyclone Alfred*, prepared by Julian Marx, Farnaz Pirasteh, and Rashika Bahl from The University of Melbourne for Natural Hazards Research Australia, 10 May 2025
- *Australian Transport Safety Bureau (ATSB) report AO-2025-016*

Timeline of weather warnings and information

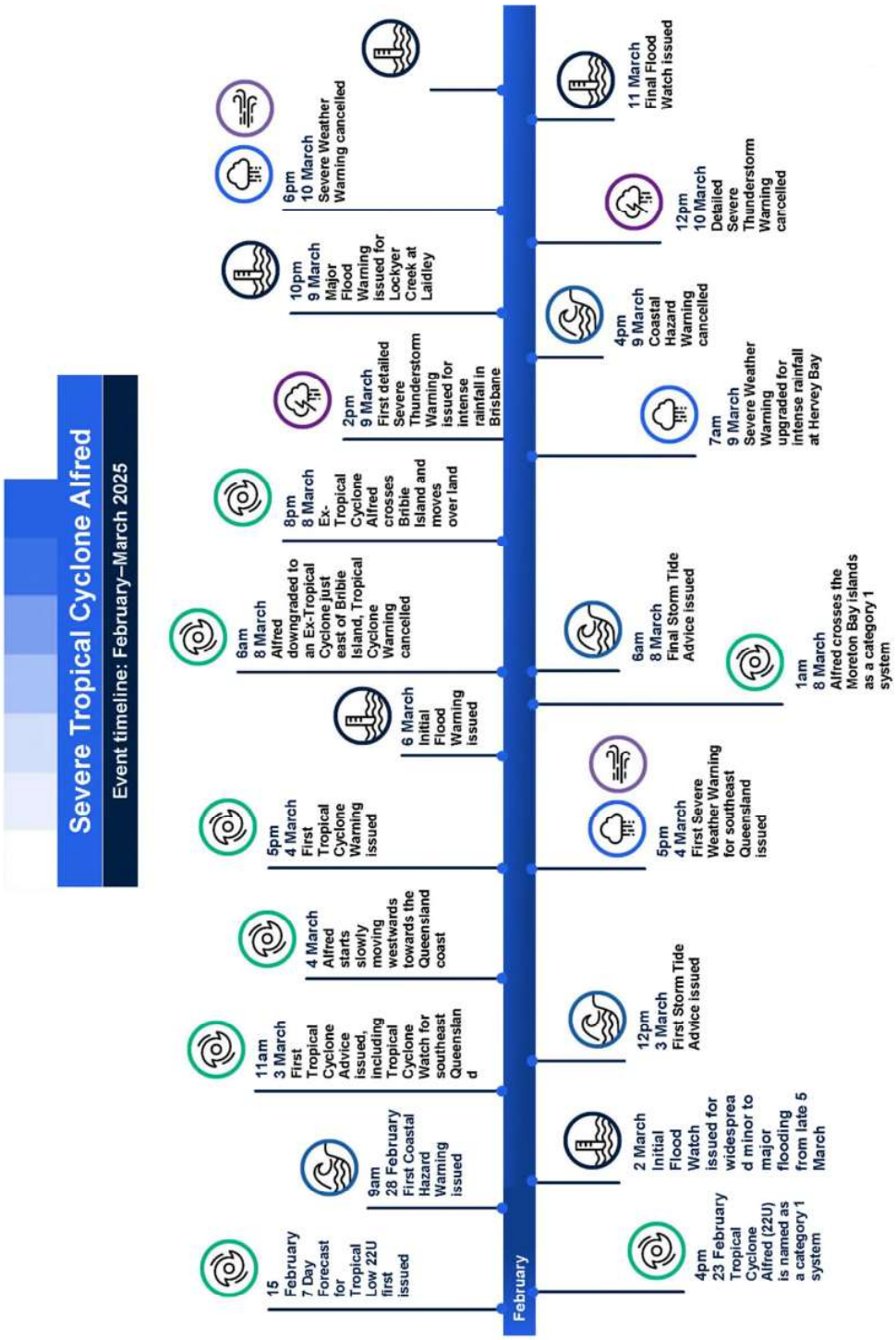

Figure 2: Tropical Cyclone Alfred, weather warnings and information timeline.
Source: Bureau of Meteorology

Overview

It has been 51 years since Southeast Queensland experienced a cyclone. Tropical Cyclone Wanda caused a significant flood event in 1974. Since that time, the population between Bundaberg and Coolangatta has grown substantially, and the collective memory of the experience has faded. While the southeast may have forgotten what it is like to go through a tropical cyclone, North Queensland communities experience tropical cyclones regularly and face them with a high level of resilience which comes from annual preparation and recovering and rebuilding when they pass. Their expertise in the face of TC Alfred helped the southeast prepare, and not just in the disaster management community, but the shared experiences from family, friends and colleagues in the north.

Had TC Alfred crossed the southeast as a Category 1 or 2, the winds would have caused significantly more damage, including damage to homes, higher storm surges along the coasts and injuries from flying debris[2]. In normal circumstances, a state capital brought to a standstill due to a natural disaster would have impacted the rest of the state in the form of supply chain issues and day-to-day governing.

In the context of the North Queensland Floods, more severe damage to the southeast – particularly Brisbane – may have diverted much-needed resources away from the north, potentially prolonging the north's recovery. The Australian Climate Service (ACS) released Australia's National Climate Risk Assessment 2025 in September which highlighted several key findings relevant to this review. Notably, the report confirms that Australia is already experiencing compounding and cascading hazards, with concurrent events and reduced intervals between severe events, and this is expected to become more frequent[3]. It also warns that the country is likely to experience more intense and extreme climate hazards, including in regions where such events have not been experienced before[4]. The ACS report underscores the very real possibility that, in future scenarios, Southeast Queensland could still be in recovery when another part of the state is struck by its own natural disaster.

When TC Alfred lost intensity as it crossed Moreton Island, and crossed the mainland as a tropical low, the southeast 'dodged a bullet'.[5] However, it could also be said the rest of Queensland also avoided the impact of TC Alfred.

Given the southeast had not experienced a cyclone in 51 years, there was a misconception by some members of the community that cyclones do not occur so far south. The concerning misconception led to the disaster management system having to address a level of complacency whilst preparing for and responding to the event. In the lead up to TC Alfred crossing the mainland, there was evidence on social media that some people thought TC Alfred was media hype. When TC Alfred idled off the coast longer than expected, comments from people on social media indicated they felt the crisis had passed. A review submission from a Hervey Bay resident, who had spent years in the Pilbara in Western Australia and was used to cyclonic weather and the associated

[2] TC Alfred, SE Queensland and NE NSW Damage to Buildings CTS Technical Report No 70, Boughton et al, James Cook University, 2025, p. 3
[3] Australia's National Climate Risk Assessment Report, Australian Climate Service, 2025, p. 5
[4] Australia's National Climate Risk Assessment Report, Australian Climate Service, 2025, p. 5
[5] TC Alfred, SE Queensland and NE NSW Damage to Buildings CTS Technical Report No 70, Boughton et al, James Cook University, 2025, p. 3

impact they have, was concerned locals around her were not taking the threat of a cyclone seriously and were not preparing. And when TC Alfred passed as a tropical low, some people on social media were 'underwhelmed' by the impacts.

Complacency wasn't restricted to individuals in the community. There is evidence of organisational complacency. A Queensland Health Area Health Service identified a lack of business continuity planning in the primary health care sector. For example, general practices closed but did not offer telehealth services despite having the technology to do so. Service providers, such as residential aged care homes, delayed activating emergency disaster plans. They further identified that residential aged care homes with business continuity plans often did not have input from other agencies including Queensland Health (QHealth), Queensland Ambulance Service (QAS), State Emergency Service (SES), Queensland Police Service (QPS), local government or Energex. As a result, they are dependent on other agencies being able to provide assistance. Aged care providers have a responsibility to provide care for their residents[6], including in times of natural disasters.

However, there is consistent evidence of good practice in the disaster management sector. For example, Flood Tuff, developed by the Department of Transport and Main Roads (TMR) to protect traffic signals from water egress during flooding (see Business continuity planning). There are also organisations which have participated in exercises and adjusted or developed business continuity plans which not only remove their dependence on police, ambulance and hospitals, but also continue to provide their services.

TC Alfred

TC Alfred formed in the Coral Sea in February and followed a long and complex track until it crossed the southeast 15 days later on 8 March 2025. Starting as a tropical low on 21 February 2025, it moved easterly for five days while gaining intensity. It tracked southeast over six days, coming as far south as Brisbane before heading towards the mainland as a category 2 system on 4 March 2025. It took a further five days for Alfred to move eastward towards the coast of Southeast Queensland and northern New South Wales before it crossed the mainland. TC Alfred's slow progress was a double-edged sword. On the one hand, it gave the approximately four million residents between Coolangatta and the Fraser Coast time to prepare for the first cyclone in the region for more than 50 years. However, the longer TC Alfred sat off the coast, the longer the system brought damaging wind gusts, heavy rainfall causing flooding, and severe coastal erosion to Queensland beaches.

The Bureau of Meteorology (Bureau) recorded wind gusts of 107km/h on 7 March 2025 at the Gold Coast Seaway, 104km/h on 8 March 2025 at Redcliffe and 109km/h at Cape Moreton Lighthouse on 9 May 2025. Even before TC Alfred crossed the coast, powerlines were taken down by falling trees and branches. Energy Queensland advised that between 6 and 16 March 2025 a record 500,000 households and businesses in the southeast (about two million people) lost power; some for up to 10 days. Energex and Ergon

[6] https://www.health.gov.au/topics/aged-care/providing-aged-care-services/responsibilities

deployed 2400 field crew personnel, focusing on the hardest hit areas of the Gold Coast (114,000 customers without power), Redland and Bay Islands (41,000), Brisbane City (53,000), Logan City (44,000), Moreton Bay (63,000) and Ipswich, Lockyer, Toowoomba and Fraser Coast (36,000 combined). Priority was given to critical infrastructure – hospitals, residential aged care, evacuation centres, water and sewerage plants and telecommunications sites.

The extended periods of power outages revealed a larger issue of dependence on telecommunications. Advice to the Office was that without power, mobile phone towers and NBN hubs could not operate. At its peak, NBN Australia estimated 239,000 customers in Southeast Queensland lost access to the internet through either damage to infrastructure or lack of power to node sites. Optus advised they recorded a loss of 420 of their almost 1200 mobile sites across Queensland and New South Wales to either water damage or due to a lack of power. Telstra reportedly lost 178 sites across Queensland and northern New South Wales, including around 6700 landline phone services.

With the rain came flash and riverine flooding, and almost 700km of state-controlled roads in the southeast were closed due to flooding or damage during the event, and some roads closed multiple times. Of the 1200 traffic signals in the southeast, 450 were damaged due to inundation.[7]

The Bureau advised that over the seven days between 3 and 10 March 2025, the Gold Coast Hinterland areas of Upper and Lower Springbrook, Binna Burra, Mount Tamborine and O'Reillys experienced rainfall records. Notably upper and lower Springbrook received more than a metre of rain over the seven-day period, setting new local records. The southeast recorded notable rainfall in the period after TC Alfred crossed the coastline, including K'gari (Fraser Island) which had 427mm on 9 March 2025 and Diamond Valley (433mm), Nambour (345mm) and Mt Glorious (322mm) on 10 March 2025.

Different types of flooding

Riverine flooding – occurs when rain falls where there is too much water and the capacity of a creek or river becomes overwhelmed and burst their banks.

Flash flooding – can be caused by severe storms with high volumes of rain over short periods of time. The pace or velocity of water can be very damaging.

Overland flow - Overland flow is water that runs across the land after rainfall, either before it enters a watercourse, after it leaves a watercourse as floodwater, or after it rises to the surface naturally from underground.

Storm surge – during a cyclone, when increased winds and low barometric pressure combine, it can lead to an increase in the sea level called a storm surge. Surface waves travelling with the system can further increase the sea level.

Storm tide – is the water level resulting from the combination of a storm surge and the normal tide. For example, a 3m storm surge on top of a high tide that is 2m will produce a storm tide of 5m. These can swamp low-lying areas, sometimes for kilometres inland.

(Source: Queensland Government)

[7] Estimates Hearing Hansard: State Development, Infrastructure and Works, Thursday, 31 July 2025, Queensland Parliament, 2025,p. 93

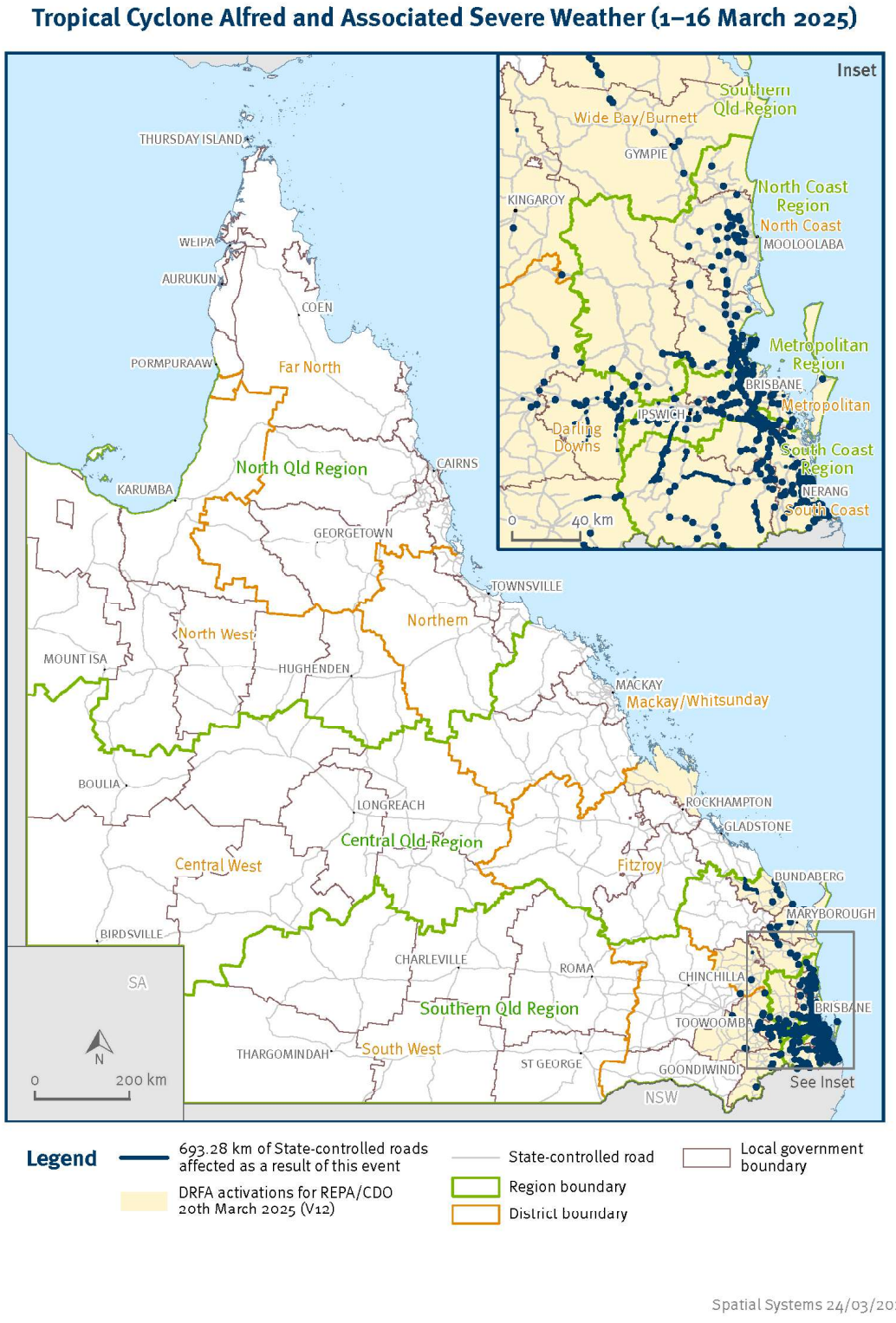

Figure 3: State road closures during Tropical Cyclone Alfred event
Source: Department of Transport and Main Roads

According to Queensland Reconstruction Authority (QRA) data, Hervey Bay, Logan, the Gold Coast and the Lockyer Valley communities were most affected. The Logan, Albert and Bremer rivers, and Warrill and Laidley creeks, reached major flood levels, causing inundation across extensive rural and urban areas during this time. In the system's final days, severe thunderstorms with heavy rain and wind developed across Queensland's southern and central interior, causing localised flooding. Areas from Wide Bay-Burnett to the border experienced flash flooding and inundation, damaging seas, wind gusts up to 150 kilometres per hour, torrential rain, storm tides and 10-metre waves. Around 300 homes and businesses were inundated at Hervey Bay.

Beaches and islands from K'gari to the Gold Coast suffered major erosion, including three-metre scarping and millions of tonnes of lost sand. Sand erosion at Main Beach, Surfers Paradise, exposed pipes and other infrastructure, and damaged beachside structures. A second breach in the northern tip of Bribie Island increased the threat of coastal inundation.

The prolonged heavy rainfall caused numerous landslips on Gold Coast and Sunshine Coast hinterland roads, including severe damage on:

- Tamborine Mountain Road, Witheren
- Tomewin Mountain Road, Currumbin Valley
- Beechmont Road, Lower Beechmont
- Gold Coast–Springbrook Road, Neranwood
- Gold Coast Highway, Burleigh.

The rainfall also exacerbated a significant landslip on the Centenary Highway at Springfield Central, which had been caused by heavy rainfall in January 2025. This closed entry and exit ramps.

Further inland, riverbanks were eroded and riparian habitats destroyed, with flooding facilitating the movement of invasive species. Primary producers also reported erosion and loss of topsoil, as well as damage to crops, farm equipment and buildings.

As communities waited for TC Alfred to pass, many of the region's 364,000 small and family businesses closed for several days, as did schools (1034 state, independent and catholic schools), universities, medical centres and community centres.

TC Alfred also caused major disruption to large-scale businesses and critical supply chains. Across impacted areas, shopping centres and major retailers such as Coles and Woolworths were disrupted and, in some cases, forced to close temporarily. According to the QRA, these closures, combined with energy supply issues, affected business continuity and contributed to reduced investment confidence across the region.

The tourism industry was also impacted, with 85 national parks, conservation parks and recreational areas closed for safety. Major events were cancelled, including AFL and NRL matches, golf tournaments and concerts. Theme parks shut their gates and 10 cruise ships were unable to dock.

No Queensland lives were lost during TC Alfred and damage sustained was significantly less than if it had passed as a category 1 or 2 cyclone[8].

[8] TC Alfred, SE Queensland and NE NSW Damage to Buildings CTS Technical Report No 70, Boughton et al, James Cook University, 2025

Community consultation

To gain insights from the community of the impact of TC Alfred, the Office invited public submissions, conducted community forums and met with mayors and local councillors. Community forums and mayor and local councillor meetings were targeted at local governments most impacted.

Mayor and councillor meetings

These meeting were conducted to gain community insights from the mayors and local councillors of the communities they represent. They also provided an opportunity to understand the unique challenges and strengths within each community as well as to identify good practices and areas for improvement in the operationalisation of disaster management arrangements.

Four meetings were held with City of Gold Coast, Fraser Coast Regional, Redland City, and City of Logan councils. These discussions yielded valuable information on community impacts, local response efforts and opportunities to enhance coordination and effectiveness across the disaster management system.

Community forums

Community forums provide an opportunity for community members from common impacted areas to participate in a structured engagement session hosted by the Office. These forums are supported by the Australian Red Cross (ARC), Community Recovery officers from the Department of Families, Seniors, Disability Services and Child Safety (DFSDSCS), and are facilitated by an experienced external facilitator. ARC assist through the provision of psychological first aid and Community Recovery officers assist with information and connection to available support services.

The primary purpose of the forums is to connect directly with community members affected by the disaster event, and to hear and document their lived experiences, perspectives, ideas, and suggestions. These firsthand accounts offer valuable insights into the social and operational impacts of the event.

The information gathered through these forums assisted the Office in developing a deeper understanding of how the event affected the community and the delivery of the QDMA, informing future improvements in relation to disaster preparedness and response.

On Sunday, 27 July 2025, the IGEM and staff visited Hervey Bay, and on Thursday, 7 August 2025, they travelled to Redland Bay to hold community forums. Thank you to the Fraser Coast Regional Council and Redland City Council for their advice and assistance in organising the events.

The Hervey Bay forum was attended by eight members of the community and one council representative. The Redland Bay forum was attended by 12 members of the community.

Participants were invited to share how the TC Alfred and associated events of 2025 impacted them as individuals and as communities. Participants also shared experiences and insights about:

- Community preparedness and the activities undertaken ahead of the disaster events.
- How effectively government communicated and shared information with communities and how consistent and timely was this communication.
- Community outcomes and resilience, including local strength and solutions that held during the events and how can communities be supported before and during disaster events.

For more information about how the Office promotes these forums, refer to the Summary Report.

> *"I attended the Redland Bay Community Consultation Session on 7 August along with about 20-30 others. I thought there would be more from the community. Nevertheless, it was a really good session, a hell of a lot of empathy from the organisers and I was very happy someone took the time to talk to those of us in the thick of it in early March. Well facilitated and good engagement. Thank you."*
> Public submission

Public submissions

The Office sought public submissions to hear directly from individuals, communities, and local organisations about their experiences of the event. The public shared their feedback by either:

- completing an online form from the IGEM website which had prompts to help them prepare their submission
- downloading the form, completing it offline and emailing it to the Office
- emailing their submission directly to the Office.

Individuals were also welcome to attach supporting materials, such as photos, videos or documents, to provide further context to their submission.

A total of 31 public submissions were received by the Office for TC Alfred. Public submissions were open from 13 June to the 27 August 2025.

Community insights

Drawing on the insights from mayor and councillor meetings, community forums and public submissions the following key themes reflect the prevailing community sentiment in relation to TC Alfred.

Preparedness and resilience

Preparedness emerged as the strongest theme during the TC Alfred event. There was a widespread perception that many community members felt ready for the unfolding situation. People reported being prepared for power outages and taking proactive steps, such as securing loose items that could cause damage.

> *"For me living through ex cyclone Oswald in 2013 meant that I personally was prepared for a loss of power for 6 days and had over the years cut down trees etc to reduce risk."*
> Community submission

Some community members advised that they understood their risks, preparing not only for heavy rain and wind but also for potential flooding. Others reported following preparedness advice from their local council or insurance provider to prepare for the event. One individual shared details of mitigation works they had undertaken to reduce the risk of flooding on their property.

> *"On purchase of our property 7 years ago, we realised it was in a low-lying area with a tidal waterway behind us that would rise if high tide coincided with heavy rain, and we raised the level of this at the back and sides of our property. Since that time, we had never had any water enter the property, so were not overly concerned about the potential of flood inundation to our property."*
> Community submission

Community members also shared that their experience of previous events contributed to a greater sense of resilience. Many had taken pro-active steps – such as purchasing generators or back-up power sources – to ensure they could operate essential appliances like refrigerators during power disruptions.

> *"I anticipated high likelihood we would lose power and sustain damage to the house from wind and rain. This happened Christmas 2023. Power loss can be lengthy, more than a week. Have installed a backup system to keep fridge running in power loss."*
> Community submission

This sense of resilience extended beyond individuals to community groups, with many communities working effectively together during the event. One community member shared that their area was well prepared, despite losing power for six days – resulting in a loss of telecommunications. Many residents in this area had generators. For those without, the local hall provided access to a generator. Strong local networks and being connected to their neighbours were key to getting them through the event.

In preparing for the event, many community members drew upon their experience of previous weather events. Their preparedness was shaped by what they had encountered before – such as heavy rain, strong winds and short term power outage – and they took similar precautions. However, the severity, complexity and duration of TC Alfred challenged these expectations, highlighting the limitations of relying solely on past experiences for future preparedness.

Conversely, some residents believed they were prepared but, due to the severity of the event, they were caught off guard as well. In these cases, submissions were made about a lack of broader community preparedness.

> *"We do not believe there was any community planning or preparation experience in the 12 months before these events."*
> Community submission

Attendees at Hervey Bay community forum stated many new locals, both homeowners and renters, were unaware of key disaster preparedness, response and recovery actions. This included limited knowledge of the council's disaster dashboard, the location of evacuation shelters, and how to access assistance during disaster events.

> *"I was unprepared for the extended loss of phone reception and internet, which left me isolated and without access to news or updates."*
> Public submission

It was raised that preparation in residential high rises was limited and that many of these buildings lacked back-up power systems, resulting in significant issues such as loss of lighting, non-functioning lifts and the inability to operate pumps to remove water from the basement. This led to flooding of storage areas and damage to vehicles.

Redland Bay and Hervey Bay forum participants identified activities they believed would improve community awareness and preparedness including:

- Localised education campaigns (schools, libraries, community centres)
- Neighbourhood initiatives to share knowledge
- Preparedness kits and checklists (to including radios, long-life food and batteries)
- Tailored messaging for diverse communities, including messaging to specific locations and to specific groups, such as people with disability and older people.

Warnings and public information

Significant concerns were raised about accuracy, timeliness and specificity of public warnings and information.

All participants at the Hervey Bay forum reported that they were unaware of any flood threat to their region. Many stated that they did not receive any warnings about the flash flooding that occurred on Sunday 9 March 2025 until after the flooding had already happened. Additionally, it was noted that the messaging received prior to the flooding contributed to a sense of complacency, as many community members believed Hervey Bay would not be impacted by the cyclone.

A submission from a council staff member in a neighbouring area told the Office it was their opinion that the local government area they lived in, issued warnings and public information during the cyclone which were severely delayed, insufficient and ineffective. In contrast, materials and information provided by other agencies and colleagues and friends working in other councils offered a clearer understanding of the unfamiliar cyclone hazard.

Submissions also raised concerns that public information was not sufficiently localised. For example, ABC Radio was reported to focus only on major centres, leaving smaller communities without timely or relevant updates. Similar concerns were echoed during meetings with mayors and councillors.

> *"The ABC emergency radio services were focused mostly on reporting the weather situation in the NSW northern rivers regions, just when I had limited battery life to wait for any news relevant to extreme conditions faced in the southern suburb outskirts around Tallebudgera. Much of what I heard wasted precious battery life."*
> Public submission

While some community members shared their concerns about the public information provided, others praised the role of ABC Radio during TC Alfred. One submission from Southeast Queensland specifically commended the local mayor's contributions on ABC Radio, which provided timely and helpful updates. Another told the Office the ABC broadcasts should include a regular schedule of region-specific updates, which would allow residents to know when to tune in for the most critical or relevant information.

At the Southeast Queensland forum, participants noted that initial messaging around TC Alfred was effective. However, it became difficult for residents to receive updates or communicate with neighbours, family and friends when the power went out. Despite this, Redland City Council was commended for its Disaster Dashboard and the quality of the information provided to the community.

In one of the meetings with mayors and councillors, they shared their belief that door knocking efforts and the information provided during the event provided real reassurance and comfort to residents.

Power and telecommunications

Power outages and the resulting loss of telecommunications were consistently raised as significant issues during the event. Participants at the Southeast Queensland and Wide Bay-Burnett forums expressed feelings of frustration and isolation due to prolonged electricity and telecommunications outages. While they were directed to disaster dashboards and other online sources of information, many were unable to access these resources without power or internet connectivity.

Community members reported having to dispose of spoiled food due to extended power outages, which led to a financial burden in replacing essential supplies. The Insurance Council of Australia advised many claims related to food spoilage.

The impact of power loss on critical infrastructure was also noted, with several submissions highlighting the need to strengthen power infrastructure to improve resilience during future events.

The impact of power loss on telecommunication was reported as significant. At the Southeast Queensland community forum, attendees noted that the lack of electricity severely limited access to internet and mobile phone services, which in-turn affected recovery efforts. This was particularly challenging for island communities, some of whom stated they were without power for up to 18 days.

> *"My major concerns relate to communications. We lost power on the Friday preceding the crossing and remained without for 10 days. Personally, the biggest impact from this was that voice and data cell towers went offline 12-24 hours later, which left the entire area unable to access weather forecasts as the system approached."*
> Public submission

Concerns were raised regarding the lack of redundancies for telecommunication systems when power was lost and the need for these to be improved. Attendees at the Southeast Queensland community forum highlighted the vulnerability of critical infrastructure on the islands, particularly where a single point of failure exists – meaning a power outage at one location results in widespread loss of electricity across multiple islands.

Further frustration was expressed at the Southeast Queensland community forum regarding back-up generators intended to support critical infrastructure. Attendees reported that fuel shortages and restrictive regulations prevented these generators from being refuelled, which undermined effectiveness during the event.

At the community level, some redundancies were reported through the installation of satellite devices, which helped maintain connectivity for some communities. One submission reported that their NBN service remained operational – despite failing in previous events – due to the installation of a generator. This highlighting the value of backup power to maintain connectivity.

Vegetation management

Tree management near power lines was a commonly reported theme. One submission highlighted that 'years' of inadequate tree maintenance exacerbated the damage during the cyclone. The Office also heard that forum attendees believed that unsuitable tree species planted near powerlines was considered a contributing factor. It was suggested that proactive trimming of trees could have significantly reduced costs and hardship to those impacted, while also accelerating recovery efforts. Vegetation management of waterways and drainage systems was also raised as an area requiring attention.

Drainage

Concerns were raised about insufficient drainage systems and the impact of changes to the landscape through public infrastructure changes, which were believed to have increased flooding risk. Additionally, unmaintained storm drains (suggested to have been blocked by silt) were also believed to have contributed to flooding.

The Standard reflects a shared responsibility in managing risk. Maintenance of personal properties and regular public infrastructure maintenance helps reduce risk.

At the Wide Bay-Burnett community forum attendees shared:

- Many of the big stormwater drains had debris in them, even before the flooding
- Some of the beach drains seemed to be completely blocked

- A combination of increased water in drains, high tide and the rainfall caused heavy flooding across the area
- The amount of urban development impacted the drainage system.

Community feedback acknowledged that, in some cases, the sheer volume of water exceeded the capacity of the infrastructure, resulting in unavoidable flooding despite maintenance efforts.

Insight: To help manage expectations and improve community understanding of flood mitigation efforts, councils are encouraged to regularly and clearly engage with its residents regarding planned and completed works programs.

People with disability and seniors

Attendees at one of the forums expressed concern about the mental health impacts of the event, particularly by those living with disability.

Two participants with disability expressed deep frustration over the prolonged loss of power and telecommunications – services essential to their wellbeing and daily functioning. Carers were unable to reach clients due to flooding and transport disruptions, leaving some individuals without critical support.

Community members highlighted a lack of co-ordinated disaster planning across disability service providers and called for greater interoperability between providers. They expressed an opinion that privacy rules prevented sharing personal information, and this prevented providers finding alternative care providers during disasters. There was also a call from forum participants that carers and family members be included in the development of individual disaster plans.

Meantime, concerns were raised during meeting with mayors and councillors regarding the lack of business continuity plans for aged care and retirement living facilities. These gaps were seen as particularly critical given the heightened vulnerability of some communities due to their aging populations. The discussions highlighted the importance of ensuring that aged care and retirement living providers have preparedness and response plans in place that are scalable to protect residents during disasters.

Community resilience

Spontaneous volunteering was highlighted by participants at a community forum, who shared how the bay island community rallied to support residents requiring disability support services, while their support workers could not reach the island due to ferry closures. Further, in the days after the cyclone local island-based businesses volunteered their time and resources, donating hours of work to assist with road clearing and other clean-up efforts.

"The local residents' associations were the strong network during the event, with locals working together to clear fallen trees in the absence of Council teams. The tree clearing efforts were limited by the presence of fallen wires through the fallen trees."
Public submission

In Hervey Bay, neighbours also came together to help one another. For example, one community member described how she assisted her elderly neighbour with their daily medication over a four day period until formal support services could be resumed.

Other sentiment

Additional themes raised at community forums and stakeholder meetings included:

- Local councillors play a vital role during disasters. Many community members relying on them for information, support and coordination
- Shelters and emergency facilities were seen as underutilised, with suggestions that they could be better advertised or located in more accessible areas
- Limited understanding of cyclones among some of the community highlighted a need for improved public education and awareness campaigns
- Volunteer shortages, particularly in communities with aging populations, which impacted response and recovery efforts
- Insufficient temporary and permanent accommodation for displaced residents, especially those awaiting home repairs, was a significant concern
- Rising costs of insurance and repairs, which were seen as compounding the financial pressure on affected households and communities.

Bureau of Meteorology

The Bureau of Meteorology (Bureau) is Australia's national agency for weather, climate, oceans and water. Its comprehensive suite of products and services supports informed decision making by governments, emergency services, industry and the community. They offer a wide range of observations, forecasts, warnings, analyses and advice, covering various aspects of Australia's atmosphere, water, ocean and space environments.

The *Meteorology Act 1955* (Cth) Sections 6(1) and (2) outline the Bureau's functions, including issuing warnings for gales, storms and other weather conditions that may endanger life or property, as well as conditions likely to lead to floods or bushfires.[9]

The roles and responsibilities of governments in delivering forecasts and warnings to the Australian community are specified in the Intergovernmental Agreement (IGA) on the provision of Bureau of Meteorology Hazard Services to the States and Territories.

Under the IGA, the Bureau's responsibilities include, but are not limited to the issue of warnings of:

- gales, storms and other weather conditions likely to endanger life or property
- weather conditions likely to give rise to floods
- riverine flooding where riverine flooding is defined as any flooding where the rain-to-flood delay time is relatively high and typically more than 6 hours but excludes flooding caused by elevated sea levels, storm surge, flash floods, failure of manmade infrastructure and urban overland flow.[10]

[9] *Meteorology Act 1955*
[10] Intergovernmental Agreement on the Provision of Bureau of Meteorology Hazard Services to the States and Territories, Council of Australian Governments, 2017

The IGA also states warning services for flash flooding are the responsibility of state and local governments where flash flooding is defined as any flooding of short duration with a relatively high peak discharge in which the time interval between the observable causative event and the flood is less than six hours.

The Interim State Disaster Management Plan 2024-25 (Interim SDMP) identifies the Bureau's role is to collect, coordinate and distribute environmental observation data in support of advice, community warnings and briefings. The role also includes providing seasonal climate outlooks for forward planning. The Bureau is an external representative on the Queensland Disaster Management Committee (QDMC) and an invitee of the State Disaster Coordination Group[11], A senior Bureau forecaster is permanently based at the State Disaster Coordination Centre (SDCC)[12]. The embedded meteorologist supports state-level operational response and works with the SDCC to ensure the effective dissemination and use of weather, flood and climate information. Significant warnings from the Bureau are a trigger, but not the only trigger, for the Stand Up activation level of the SDCC.[13]

Good practice

'Know your weather. Know your risk' is the Bureau's annual public safety campaign. Its overarching goal is to inform communities about severe weather and how it could affect them, giving them confidence to act when they need to. In 2024, the campaign ran from 9 September 2024 to 13 October 2024.

Source: Bureau of Meteorology

Bureau flood warning service assessment

The Bureau uses three performance indicators for its flood warning service:

- Timeliness: Percentage of flood watch and flood warning products issued on time, i.e. before or at the stated next issue time.
- Lead time: Percentage of river level forecasts that met or exceeded the target lead time. The lead time is essentially how much advance notice (time) is given ahead of exceedance of a specific river height trigger. Target lead time and the corresponding trigger height are defined in the Service Level Specification (SLS) for each forecast location.
- Peak accuracy: Percentage of predicted flood peaks that were within a specified water level range (as per the SLS) of the observed peak, typically +/- 0.3m. [14]

The Bureau acknowledges that internet and mobile phone network connectivity restrictions may prevent communities from accessing forecast and warning information.

The Bureau provides regular updates to ABC Emergency to support live emergency broadcasting. Responding to media enquiries and amplifying timely messaging through social media channels helps the Bureau deliver and amplify key messages, forecasts and warnings.

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[11] Interim State Disaster Management Plan 2024-25, Queensland Disaster Management Committee, 2024, p. 48
[12] Interim Queensland Prevention, Preparedness, Response and Recovery Disaster Management Guideline 2024-25, Emergency Management and Coordination Command, Queensland Police Service, 2024, p. 23
[13] Interim Queensland Prevention, Preparedness, Response and Recovery Disaster Management Guideline 2024-25, Emergency Management and Coordination Command, Queensland Police Service, 2024, p. 58
[14] Service Level Specification for Flood Forecasting and Warning Services for Queensland – Version 3.6, Bureau of Meteorology, 2024, p. 15

Leading up to and during TC Alfred, the Bureau advised that the following forecasts, warnings, briefings and media responses were issued:

Table 1: Number of products issued by the Bureau of Meteorology during TC Alfred.

Number of products by type issued during Tropical Cyclone Alfred	
Warning type	Total
Tropical cyclone advices	49
Severe weather warnings	52
Coastal hazard warning	38
Flood watches	10
Flood warnings	102
Briefings to emergency management sector via QDMA	331
Media Inquiries	436
Social Media posts	772

The accuracy of the forecast track position for TC Alfred was high. Flood warning peak accuracy and timeliness met or exceeded the targets as specified in the Queensland Flood Service Level Specification. The community was provided with significant lead time for flood warnings in the first flood watch product issued on 2 March.

Real-time observation network and associated disruptions

The Bureau maintains an extensive real-time observation network across Southeast Queensland. This includes radars, automatic weather stations, rainfall and river level gauges. Access to live observations, including satellite imagery, is available via the Bureau's website. Radar displays and weather observations are also available via the BOM Weather app.

During the response phase for TC Alfred, there were widespread outages to power and communications services. Despite this, the availability of the Bureau's observing systems and associated data feeds remained extremely high as the observation network is configured for resilience.

Observing assets have an auxiliary power source and secondary communication systems via satellite to enable independence from the cellular network during extreme weather events. Additionally, the majority of Bureau flood warning stations report via a multi-point Event Reporting Radio Telemetry System, which provides resilience and independence from mainstream communications services. Where observation outages occur, these were almost without exception in third-party owned networks.

Table 2: Bureau flood warning service assessment

Flood warning verification measures associated with TC Alfred		
Performance indicator	**Actual Performance (%)**	**Target (%)**
Lead time	68	70
Peak Accuracy	81	70
Timeliness	97	97

(Source: Bureau of Meteorology)

Flood warning peak accuracy and timeliness both met or exceeded the targets agreed with local and state government in the service level specification, whilst lead time was marginally below the 70 per cent target. For tropical cyclones, the forecasts and warnings issued publicly include tropical cyclone advice, providing tropical cyclone watches and warnings where relevant. Storm tide advice products are issued direct to the emergency management sector.

Overwhelming briefing demand

TC Alfred highlighted the need for increased efficiencies in the provision of briefing services. For example:

- alignment and consolidation of briefings to groups with common needs
- an improved, shared process for briefing requests
- visibility of briefing schedule across the QDMA.

The Bureau advised that there was an overwhelming demand for briefing requests directly from district and local disaster management groups and other public safety stakeholders was experienced by the Bureau. On 9 March 2025, the Bureau provided 29 briefings from 5.30am until 8.30pm. The Bureau indicated a coordination mechanism to triage disaster management group requests would be beneficial and would provide benefits to the whole of the QDMA.

Previous IGEM reviews

Previous reviews conducted by the Office including the 2023-24 Severe Weather Season Review have highlighted the limitations faced by the Bureau in providing comprehensive warnings about actual rainfall levels experienced during major events. These reviews noted that without the ability to access accurate and timely rainfall data, local decision makers were often left without the necessary information to plan and respond appropriately.[15]

[15] 2023–24 Severe Weather Season Review, Inspector-General Emergency Management, 2024, p. 43

Public information and warnings

"A warning provides point-in-time information about a hazard that is impacting or is expected to impact communities. It describes the impact and expected consequences for communities and includes advice on what people should do."[16]
Australian Institute of Disaster Resilience Public Information and Warnings Handbook

"Public information is information provided to the public immediately before, during and after an emergency to reduce the potential impact of an emergency or hazard."[17]
Queensland Warnings Manual

Under the QDMA and outlined in the Queensland Warnings Manual,[18] local governments are responsible for issuing community-focused warnings for severe weather (including severe storms with dangerous cells), flooding, cyclone, and storm tide. Councils can request warnings support from their QPS Emergency Management Coordinator (EMC) and the State Disaster Coordination Centre (SDCC) Watch Desk.

During SDCC activations, the QPS Public Information and Warnings Unit provides surge capacity (QPS PIWU).

The Queensland Fire Department (QFD) is responsible for all fire warnings and Queensland Health is responsible for extreme heatwave warnings.

A warning is only issued when some form of protective action is needed. If not, it considered public information.

Primary agencies responsible for issuing warnings in Queensland

Severe weather, flood, cyclone, and other warnings: Local governments, and Maritime Safety Queensland

Bushfires: QFD

Extreme heatwaves: Queensland Health

Australian Warning System

All community-focused warnings in Queensland follow the Australian Warning System (AWS) framework. It was implemented in Queensland in November 2023.

The AWS framework helps communities understand the hazard, their risk level for that hazard at that point in time, and what they need to do to be safe, regardless of where they are in the country. It has been applied across all hazards and across most warning distribution methods.[19]

AWS warnings are community-action focused and locally specific to the area being impacted. They can include suburbs or streets, evacuation centre locations or places of refuge, areas to avoid, sandbagging locations, recovery centres, and other relevant local details.

[16] Australian Disaster Resilience Handbook Collection: Public Information and Warnings, National Recovery and Resilience Agency & Australian Institute for Disaster Resilience, 2021
[17] Queensland Warnings Manual, Queensland Police Service, 2024, p. 8
[18] Queensland Warnings Manual, Queensland Police Service, 2024, p. 8
[19] https://www.disaster.qld.gov.au/watch-for-the-warnings

The national framework includes:

1. A nationally consistent set of triangular hazard icons
2. Three warning levels:
    a. **Advice** – an incident has started but there is no immediate danger
    b. **Watch and Act** – there is a higher level of risk and people should take some form of protective action to be safe.
    c. **Emergency Warning** – your life is in danger and people need to act immediately to be safe.
3. Colours that correspond to each warning level
    a. Advice is yellow
    b. Watch and Act is orange
    c. Emergency Warnings are red, and
    d. A suite of call-to-action statements – a succinct statement at the top of the warning product that tells people what they need to do to be safe (e.g., stay informed, move to higher ground, shelter indoors now etc.)

AWS community-focused warnings are not the same as, and do not replace Bureau weather warnings. Weather warnings include weather information, including, for example, expected rainfall, temperatures and wind speed.

Local governments use the Bureau's products to inform their decision making around AWS warnings, along with local understanding of the environment, demographics, community preparedness levels, routes in and out of certain areas, time of day, time of year, and other factors.

Emergency Alerts

EAs are a distribution method of warnings used with other platforms to get urgent community warnings and information out.

EAs can be sent via text message to mobile phones, or a recorded voice message to landlines. Text messages can be sent based on service address or geo-located to mobile phones in an area.

EAs are requested by council, or QFD for significant fires, and are sent by the QPS SDCC Watch Desk.

The EA system is a national system. Emergency Alerts are sent based on a triaged approach, which can impact the timing of EA delivery. For example, a life-threatening situation over a large area in South Australia (such as a fast and dangerous bushfire) can take precedence over a lower risk event in New South Wales (such as a slow riverine flood). This can sometimes cause a 'bottleneck' and may result in a delay in community members receiving the EA.

NEMA advised the EA system is due to be replaced with the National Messaging System (NMS), which aims to address the speed and geographic accuracy of Emergency Alerts.

Communication during events

Residents in the Fraser Coast area reported they were caught off guard by the sheer volume of rain that fell in a short period, overwhelming local drainage systems.

The Office acknowledges that issuing localised AWS warnings is not always possible or feasible for fast-onset events – such as severe storms, flash flooding, and some bushfires – due to their speed

and unpredictability. This challenge is particularly pronounced for smaller councils, during weekends, and overnight.

A further contributing factors is that the population has grown from both interstate and overseas migration. Many Queenslanders are now unfamiliar with the risks associated with living in the sub-tropics.

TC Alfred and Southeast Queensland

TC Alfred was the first cyclone to cross the southeast in 51 years. As a result, the collective memory of how to prepare for the impact of a cyclone has faded. Additionally, the cyclone itself had passed by the Fraser Coast without incident and the area had been removed from the expected impact zone.

Due to the slower nature of tropical cyclones, there was ample time for local governments and agencies to inform and warn people in Southeast Queensland about the event and how to prepare. Some considered it a 'beat up' and believed cyclones are an issue only for northern Queensland.

> *People in SEQ don't know what cyclones can do and the threat TCs can cause in an area not built for TCs. There's also a misbelief that cyclones don't come this far south so TC Alfred was 'a beat up' and overhyped.*
> Community submission

Public information and warnings delivered in the lead up to TC Alfred were considered accurate, timely, and helped some community members understand their risk and protective actions needed.

QPS advised during the response phase of TC Alfred, there were 229 AWS compliant warnings created by 19 local governments and published on the Disaster Management State Warnings Map. There were 27 EAs issued by 10 local governments.

However, large sections of Southeast Queensland lost power and telecommunications for a lot longer than they had anticipated, some for more than two weeks. This meant any public information being sent by local governments who were operating on generators were not received, creating community concern and confusion, especially during long black-out periods without information.

The Office has heard from people across the southeast how heavily they depended on their mobile phones for information before, during, and after the event to stay informed, connected to family members, and to be able to call for help. It should be noted that satellite devices do not receive EAs. Agencies and councils also relied heavily on telecommunications to get information out.

> *Massive loss of power in SEQ meant community were frustrated by agency spokespeople constantly referring people to websites. [All levels of government] need to do better with their public information and warning strategies to get information out during mass power outages. Suggest pop-up information stands in impacted areas.*
> Entity submission

The over-reliance on technology to issue public information and warnings, and little observed evidence of 'offline business continuity' options for communicating when power and phones are down, needs to be addressed.

It is expected that more complex and complicated disasters are going to happen[20], taking phones and power offline for longer periods. Planning to warn and inform communities without power or phones – and educating people where to go for this offline information during the pre-season – is vital and should be considered part of normal business practice. This is also important for regional and remote communities with unreliable phone coverage.

Inclusive emergency preparedness information

Accessible warning and public information, including preparedness information, remains inconsistent. Past reviews (e.g. the South East Queensland Rainfall and Flooding Review[21]) noted that messages were overly technical, sometimes inconsistent and failed to reach culturally and linguistically diverse (CALD) and First Nations communities.

A new project is underway to provide preparedness information in languages other than English through the Get Ready Queensland program. The Get Ready Queensland team (which is part of QRA), is producing a series of natural hazard information videos and 'Easy Read' resources for CALD communities and people with low literacy skills. There will be a toolkit for government and NGOs on how to use and adapt the resources for their communities.

> *"These inclusive and accessible resources are being developed for use across Australia and will focus on seven natural hazards: bushfires, floods, cyclones, storms, heatwaves, earthquakes and tsunamis. The resources will be translated into Arabic, Cantonese, Dari, Korean, Mandarin, Punjabi, Thai, and Vietnamese."*
> Get Ready Queensland

Hervey Bay flash-flooding

In the early hours of Sunday 9 March 2025, Hervey Bay experienced a flash flood event associated with TC Alfred. Between 4.30 and 7.30am, 220mm of rainfall was recorded at Hervey Bay Airport, reaching 312mm by 11.30am. This coincided with the Urangan high tide at 5.31am, increasing inundation of foreshore areas. Intensity–Frequency–Duration analysis indicated rainfall reached Annual Exceedance Probability (AEP) thresholds as low as 0.2% within three hours of onset. The Bureau describe AEP as "The probability that a given rainfall total accumulated over a given duration will be exceeded in any one year".[22]

The event occurred early on a Sunday morning, and many were unprepared for the scale and speed of the flooding. Fraser Coast had been removed from the cyclone warning area three days earlier, and messaging had been focused on impacts further south. At 5.15am, the Bureau issued a

[20] Australia's National Climate Risk Assessment Report, Australian Climate Service, 2025, p. iii
[21] South East Queensland Rainfall and Flooding February to March 2022 Review, Inspector-General Emergency Management, 2022
[22] https://www.bom.gov.au/water/awid/id-703.shtml

Severe Weather Warning for a large area, including the Wide Bay–Burnett District, after heavy rainfall had commenced.

At approximately 7am, the Fraser Coast Local Disaster Coordinator and the Bureau were in contact, and the Severe Weather Warning was upgraded to include the risk of intense rainfall for Hervey Bay. By then, the area had already received approximately 200mm of rainfall. Council issued an Emergency Warning to Hervey Bay and K'gari communities at 7.30am, advising residents to shelter indoors due to heavy, locally intense rainfall and flash flooding.

At 9.30am, an emergency situation was declared under the *Public Safety Preservation Act 1986 (Qld)* and at 10.38am an EA was requested by the LDMG and issued by the SDCC Watch Desk. Residents described water entering homes before receiving any warning message, with inundation reaching up to 1.2m in some cases. Some residents used ABC Radio for information as the situation evolved.

The rapid onset of flooding meant formal activation occurred after part of the community were impacted. The activation status of the Local Disaster Management Group (LDMG) remained at 'Alert' until the morning of 9 March and moved to Stand Up once flooding had occurred. Agencies responded to information they received via informal communication channels, with QPS, SES and QFD Fire and Swift-Water Rescue crews responding prior to formal coordination.

By 11am, there had been 13 swift-water rescues and numerous SES tasks completed despite resource constraints resulting from deployments of personnel further south. Residents reported assisting neighbours with support and welfare checks during the event. They also expressed concerns about vehicles creating damaging bow waves by driving through floodwaters before roads were closed and reported difficulty locating sandbag sites.

The consequences of the event were widespread, affecting homes, businesses and essential services. Residents reported sewerage and stormwater backflow, and water that did not recede until the tide dropped. QPS reported 59 houses and 16 vehicles inundated, as well as 26 rescues. More than 2400 customers were impacted by power outages that evening, increasing to more than 5800 the following day. Significant damage occurred at Pialba Woolworths and 10 high-rise residence basement electrical switchboards were submerged.

Storm tide

Tropical cyclones are a part of life for people living in Queensland's coastal areas. In North and Far North Queensland, communities prepare each year for a cyclone season, officially between 1 November through to 30 April (however, cyclones do develop at other times nit he year). At times, the impacts of storm tide inundation can potentially be the most dangerous tropical cyclone-related hazard.

To better understand the risks associated with storm tide, it is important to increase public awareness of how cyclones are classified and how these classifications relate to storm tide impacts.

The severity of a cyclone is described using a five-category system, based on the strongest wind speeds generated near the centre of the cyclone.

A tropical cyclone can produce very strong winds, heavy rainfall, flooding and elevated sea levels well above the highest tide levels of the year. This rise in sea level is caused mainly by strong onshore winds and reduced atmospheric pressure.

The rising height of the sea level associated with a tropical cyclone is made up of three components: the height of the tide, storm surge and wave setup. Storm tide is the term used to define the total water level of these components.[23]

In addition to the height of the storm tide, individual waves associated with the cyclone may run up the foreshore. The height of the wave runup depends on the wave height, wave period, beach slope and the nature of the foreshore.[24]

Table 3: Category wind gusts (km/h) and typical impact[25]

Category	Strongest Gust	Typical effects
1 - Tropical Cyclone	Less than 125 km/h Gales	Minimal house damage. Damage to some crops, trees and caravans. Boats may drag moorings.
2 - Tropical Cyclone	126-164 km/h destructive winds	Minor house damage. Significant damage to signs, trees and caravans. Heavy damage to some crops. Risk of power failure. Small boats may break moorings.
3 - Severe Tropical Cyclone	165-224 km/h very destructive winds	Some roof and structural damage. Some caravans destroyed. Power failure likely.
4 - Severe Tropical Cyclone	225-279 km/h very destructive winds	Significant roofing and structural damage. Many caravans destroyed and blown away. Dangerous airborne debris. Widespread power failures.
5 - Severe Tropical Cyclone	More than 280 km/h extremely destructive winds	Extremely dangerous with widespread destruction.

[23] Tropical Cyclone Storm Tide Warning Response System Handbook, Queensland Fire and Emergency Services & Bureau of Meteorology, 2016, p. 6 1.10
[24] Tropical Cyclone Storm Tide Warning Response System Handbook, Queensland Fire and Emergency Services & Bureau of Meteorology, 2016, p. 14 3.25
[25] https://www.getready.qld.gov.au/getting-ready/understand-your-risk/types-disasters/cyclone-and-storm-surge

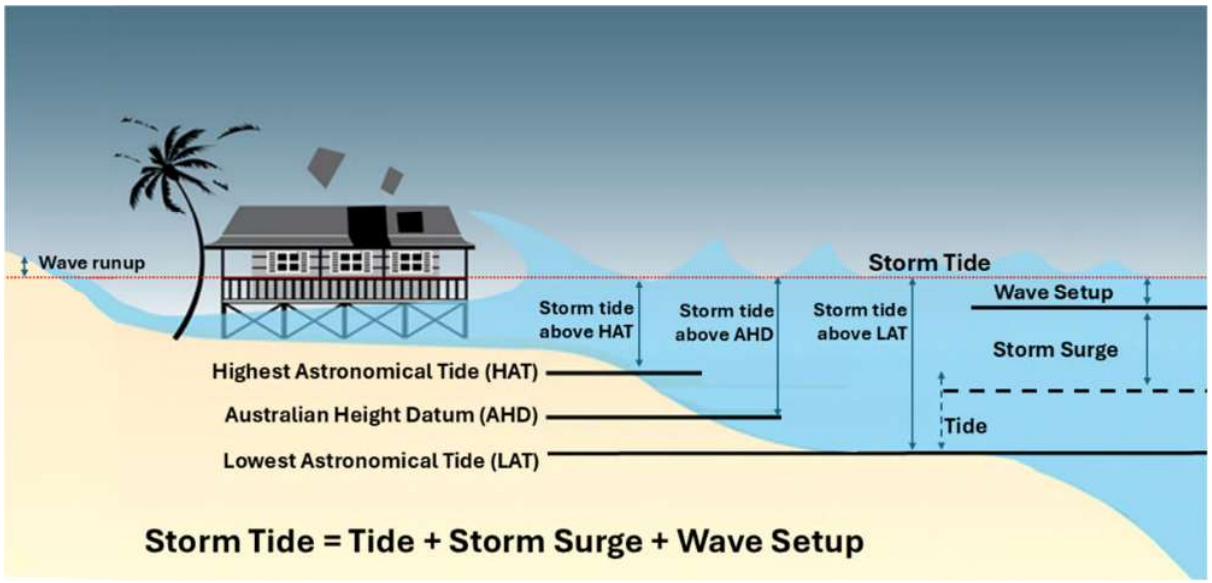

Figure 4: Depiction of the components of storm tide.

The height of the storm tide can be referenced against different data, primarily lowest astronomical tide (LAT), Highest Astronomical Tide (HAT) and the Australian Height Datum (AHD).

In Southeast Queensland, direct landfalls of tropical cyclones are historically rare. Most cyclone-related impacts are the result of weakening systems that track through the region, with flooding being the most common hazard. However, this does not mean Southeast Queensland is not at risk of other cyclone hazards.

In 1974, the southeast was hit by three cyclones – Tropical Cyclone Wanda (21-25 January) and Tropical Cyclone Pam (3-6 February), and Tropical Cyclone Zoe (6-13 March)TC Wanda crossed the coast as a category 2, just north of Double Island Point, and weakened to a rain depression sitting just north of Dalby. The flood rains which followed were the most disastrous the Moreton region had at the time.[26] Just nine days later, TC Pam passed 500km east of Brisbane, causing further damage to already-eroded beaches. The combination of a 0.68m storm surge and king tide saw seawater breech 6.2m boulder walls at Palm Beach, which forced residents to evacuate their flooded homes[27].

In 1954, before cyclones were named, a tropical cyclone crossed at Coolangatta on 20 February. Unofficially it was named the Great Gold Coast Cyclone, and it caused serious structural damage to buildings in Brisbane, Gold Coast and the Sunshine Coast.[28] A 0.64m storm surge was recorded in Moreton Bay, while at Beachmere the surge was much higher. Waves at Kirra brought 3m of water onto the highway washing cars from the road.[29] As a result of heavy rain, flooding combined with the storm surge in the Nerang River caused evacuations in the area.[30] Severe flooding also occurred in

[26] https://www.bom.gov.au/cyclone/history/wanda1974.shtml
[27] https://www.bom.gov.au/cyclone/history/pam.shtml
[28] https://knowledge.aidr.org.au/resources/cyclone-the-great-gold-coast-cyclone-queensland/
[29] https://knowledge.aidr.org.au/resources/cyclone-the-great-gold-coast-cyclone-queensland/
[30] https://knowledge.aidr.org.au/resources/cyclone-the-great-gold-coast-cyclone-queensland/

the Northern Rivers area of New South Wales. It was reported between 26 to 30 people died because of the flooding, severe winds and storm tide.[31]

Considering the Southeast Queensland coast is vulnerable to tropical cyclones and has experienced them, communities should be ready and prepared for them.

Sheltering during storm tide

Due to uncertainty surrounding both the location and timing of a cyclone's landfall – and any associated storm tide – evacuations and sheltering of at-risk populations are likely to occur more frequently and across a broader area than the actual storm tide zone of inundation. This degree of uncertainty, combined with the imperative to prioritise safety, often leads emergency planners to adopt a precautionary approach.

It is important to note that storm tide inundation is not comparable with riverine flooding. Storm tides are typically accompanied by gale force winds, and successive waves of seawater rapidly moving across the foreshore. These waves can carry debris such as trees and building material, significantly increasing the danger. For this reason, evacuations should be completed before the onset of these hazardous conditions.[32]

The Evacuation: Responsibilities, Arrangements and Management Manual[33] (Evacuation Manual) states that areas exposed to the impact of a hazard such as storm tide should be categorised into four different evacuation zones based on severity of impact, categorised as:[34]

- Minor (Blue zone)
- Moderate (Yellow zone)
- Major (Orange zone)
- Extreme (Red zone).

The evacuation zones are intended to be mapped and readily accessible by the community, so they understand areas vulnerable to hazards in this case storm tide.

An analysis of many coastal local government websites was conducted to assess the development and presentation of storm tide evacuation zones. Among the councils north of Bundaberg - that are most susceptible to storm tide - most have developed and published evacuation plans aligned with the Queensland Evacuation Planning manual. However, there appear to be inconsistencies. While some councils adopted the recommended four-zone approach, others used three zones, and one council implemented five. Terminology also varied. Most referred to 'storm tide', while one used 'storm surge', and another used a combination of both 'storm tide' and 'storm surge'.

The City of Townsville serves as a positive example of alignment with the Evacuation Manual. Their website provides a clear overview of the evacuation zones across the local government area, with the ability for users to access detailed maps for specific locations.

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[31] https://knowledge.aidr.org.au/resources/cyclone-the-great-gold-coast-cyclone-queensland/
[32] Evacuation: Responsibilities, Arrangements and Management Manual, Emergency Management and Coordination Command, Queensland Police Service, 2024
[33]Evacuation: Responsibilities, Arrangements and Management Manual, Emergency Management and Coordination Command, Queensland Police Service, 2024
[34] Evacuation: Responsibilities, Arrangements and Management Manual, Emergency Management and Coordination Command, Queensland Police Service, 2024, p13 section 5

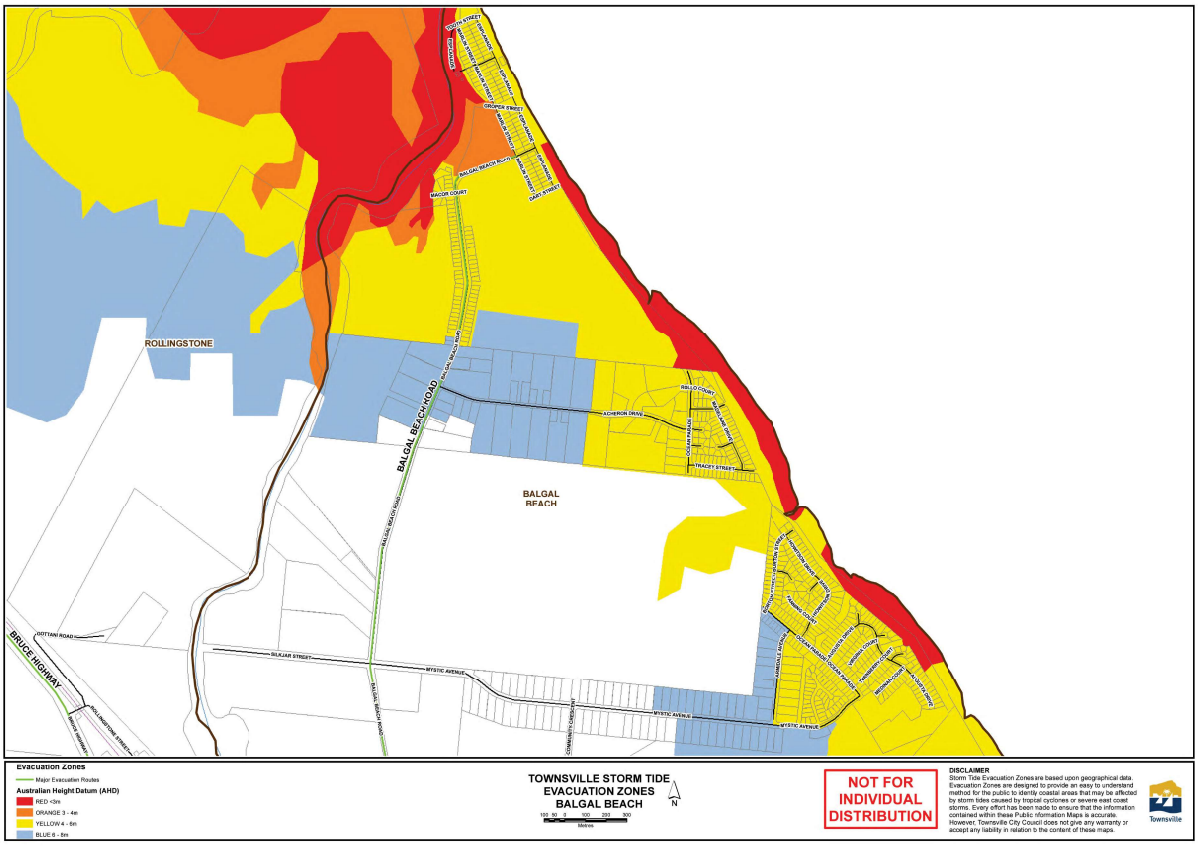

Figure 5: Storm tide evacuation zone, Townsville

For the coastal local governments impacted by TC Alfred there was no evidence of agency adherence to the Evacuation Guide's predefined storm tide evacuation maps. However, examples could be found of storm tide inundation mapping at various levels or risk[i].

One council, for example, based its risk assessment on 1% Annual Exceedance Probability (AEP) of a storm tide event for both the years 2016 and 2100. This approach was intended to help the community understand which areas may be affected by a 1% AEP storm tide event under current and future climatic conditions.[ii]

Insight: There is an opportunity for coastal councils in Southeast Queensland to adopt storm tide evacuation zones as per the Evacuation Manual, which many northern, coastal local governments have adopted.

Storm tide forecasting

The Tropical Cyclone Storm Tide Warning Response System Handbook[35] assists with preparation and execution of plans for risks to the community from storm tide generated by tropical cyclones in Queensland.

[35] Tropical Cyclone Storm Tide Warning Response System Handbook, Queensland Fire and Emergency Services & Bureau of Meteorology, 2016

During the TC Alfred, the Bureau provided twice daily storm tide updates to members of the QDMC and the SDCG written in a table format. The table contained in the Bureau's storm tide provided advice for two scenarios – forecast track and worst case (2% probability of exceedance) across 10 locations. These were updated and issued at six- hourly intervals.

Location	Tide (m above LAT)	Storm Surge (m)	Wave Setup (m)	Storm tide (m above LAT)	Storm Tide (m above AHD)	Storm Tide (m above HAT)

Figure 6: Information provided in the Bureau's storm tide advice.

It is noted that Bureau forecasts are limited to storm tide heights, not areas to be inundated or evacuated. Responsibility for understanding what areas will be inundated and what areas would need to evacuate based on these heights and locations resides with the relevant Local Disaster Management Groups (LDMGs).

During TC Alfred, LDMGs were using the Bureau's storm tide height data to model inundation areas. Each LDMG used the Bureau's data to map the potential inundation based on their risk appetite. What datum they used (LAT, AHD or HAT) to inform their modelling was based on their local needs.

Insight: Information about the potential inundation of the storm tide should be obtained from the LDMGs who have the data and modelling capabilities.

Prior to TC Alfred crossing the coast, LDMGs were asked to provide specific inundation mapping to the State based on specific levels above HAT. This request presented two key challenges for the affected local governments.

First, councils that do not typically work in HAT and were unfamiliar with converting it to the standard datum (usually AHD) found the request confusing and difficult to action. A more effective approach may have been to provide the Bureau's storm tide advice (Figure 6 above), which includes the storm tide heights referenced across the three different datums: LAT, AHD and HAT.

Second, many councils were basing their risk assessments on the forecast track probability, which reflected a more moderate risk appetite. In contrast, the State appeared to be seeking details of worst case scenarios. This misalignment in risk interpretation created further challenges in coordinating preparedness and response efforts.

Insight: Planning for an imminent tropical cyclone event should include a shared understanding of the risk appetite of the relevant disaster management groups that support locally led disaster response operations.

The Department of Environment Tourism, Science and Innovation (DETSI) provides Storm Tide Advisors (STAs) who are physically located 24 hours per day at the SDCC once activated. Their responsibilities are outlined in the *Tropical Cyclone Storm Tide Warning Response System*

Handbook (2016) and the *Interim State Disaster Management Plan* (2024-25). Some of their capabilities are as follows:

- Monitoring water levels using a network of storm tide gauges
- Monitoring wave conditions using a network of wave buoys
- Liaising with the Bureau to confirm information in Storm Tide Advices
- Being available to provide technical advice on storm tide to the local, district and state groups, before and during a storm tide event that is expected to exceed HAT
- Managing the Storm Tide Reference Landmarks mapping tool.

It is noted that under these arrangements STAs *do not* provide advice about inundation or subsequent evacuation advice. LDMGs are responsible for identifying storm tide inundation and communicating with their communities.

The Office understood there was limited awareness of the availability of STAs to provide technical advice on storm tide to disaster management groups, before and during a storm tide event.

Insight: Greater awareness of the services offered by storm tide advisors could be promoted to assist coastal disaster management groups.

Clarity of terminology

Through analysis of stakeholder feedback, doctrine and publicly available information, it was identified that there was inconsistent use of terminology across entities in Queensland. Specifically, some organisations refer to ‘storm tide’ while others use ‘storm surge’ where they are referring to impacts of coastal inundation. Sometimes these terms are used interchangeably by entities across Queensland.

Common language is a shared responsibility of the Standard, which requires common language to be used by all entities within Queensland's disaster management arrangements, which did not happen in this case. The interchangeable use of these terms can lead to confusion, especially in public messaging and disaster planning—highlighting the importance of consistent terminology across agencies.

Insight: The terminology ‘storm tide’ and ‘storm surge’ are used inconsistently in doctrine, public information and by disaster management practitioners.

Other risks for consideration

One local government advised that when it came to risks of storm tide, the focus was primarily storm tide inundation only. They referred to the Storm Tide Resilient Building Guidance for Queensland Homes[36] as a resource, which identifies the following risks:

- Exposure I (Inundation) – homes located further from the beach front or close to tidal creeks that are likely to be inundated by storm tide.

[36] Storm Tide Resilient Building Guidance for Queensland Homes, Get Ready Queensland, Queensland Reconstruction Authority, 2019

- Exposure W (Waves) – homes located closer to the beach front that are likely to be both inundated by storm tide and affected by waves.

The resource also states, “Most storm tide damage is experienced by properties directly exposed to incoming ocean waves, which is typically those within 100 to 200 metres of the open shoreline.”

The local government that raised the risk of ocean waves urged that, from a disaster management perspective, it is important that State and Local Disaster Management agencies understand the risk to communities of Storm Tide Exposure W (Waves).

There is a risk that a sole focus on storm tide inundation will underestimate community exposure to the hazards of a storm tide event and consequently may lead to poor disaster management outcomes in relation to evacuation preparedness.

Evacuation

Evacuation is a risk management strategy that can mitigate the adverse effects of a disaster on a community. Local governments plan for evacuation operations prior to the onset of disaster events with assistance from their LDMG, leveraging local knowledge, experience, and existing community relationships.[37] Evacuation involves the movement of people to a safer location and their return. For an evacuation to be effective, it should be planned and implemented appropriately and communicated clearly to affected community members.

The DM Guideline[38] describes three approaches to evacuation:

- Self-initiated: movement to a safer place prior to, or in the absence of, official advice or warning.
- Voluntary evacuation: evacuation advice has been issued, with people strongly encouraged to consider enacting their evacuation plans
- Directed evacuation: evacuation where a relevant government agency has exercised a legislated power that requires people to evacuate.

Central to evacuation planning is understanding the risks posed by the hazard and balancing the need to evacuate with that of sheltering in place.

Different types of shelter options are described in the DM Guideline as:

- Shelter in place – if evacuation is not directed, residents are encouraged to seek refuge in their own homes or others who may live in a safer building or location.
- Evacuation centres – located beyond a hazard to provide temporary accommodation, food and water until it is safe for evacuees to return to their homes or alternative accommodation.
- Public cyclone shelters – buildings designed, constructed and maintained in accordance with government requirements which provides protection to evacuees during a cyclone.
- Places of refuge – buildings assessed as suitable to provide protection to evacuees during a cyclone, but is not a public cyclone shelter. These are typically opened when the capacities of other evacuation facilities have been exceeded.

[37] Evacuation: Responsibilities, Arrangements and Management Manual, Emergency Management and Coordination Command, Queensland Police Service, 2024

[38] Interim Queensland Prevention, Preparedness, Response and Recovery Disaster Management Guideline 2024-25, Emergency Management and Coordination Command, Queensland Police Service, 2024

- Neighbourhood safer places – buildings or open spaces where people may gather as a last resort to seek shelter from bushfire.
- Assembly points – temporary designated locations specifically selected as a point which is not anticipated to be adversely affected by the hazard.[39]

During this event review, the Office found inconsistencies in shelter option definitions in the doctrine. There is an existing active recommendation from the 2023-24 Severe Weather Season Review report for the QPS, by October 2025, to provide clarity in evacuation terminology and procedure in the Interim SDMP and the DM Guideline.[40] The recommendation is currently being monitored through the Office's monitoring, evaluation and reporting program.

In the preparation of TC Alfred residents in Southeast Queensland were neither directed or recommended to evacuate because of the expected high winds or storm tide. Many Southeast Queensland LDMGs opened places of refuge for community members who were seeking a shelter option other than their usual place of residence. The Office was advised that the communication of this shelter option caused confusion across the community.

> *"Saw and heard across events and season, agencies/LGs confused terms for evacuation centres and places of refuge = community confusion. Evacs weren't opened "until the very last minute", locations weren't published or made public until TC was here. Entities need to be consistent in understand and use of these terms and teach the community about them."*
> Radio listener

> *"During TC Alfred there was some confusion created due to the use of Refuge Centre or places of refuge instead of Evacuation Centres. This created confusion and barriers around some agency's response and support."*
> Disaster management practitioner

The review heard at the community forum that residents could not easily access evacuation facilities during the events. Many residents advised they were unaware of where evacuation facilities were, and others did not know how to access them safely due to road closures from flooding.

Insight: When preparing evacuation sub-plans local governments need to include clear triggers for the activation of shelter options, communication strategies informing the community of the risks, the requested courses of action, and shelter options available.

[39] Interim Queensland Prevention, Preparedness, Response and Recovery Disaster Management Guideline 2024-25, Emergency Management and Coordination Command, Queensland Police Service, 2024
[40] 2023–24 Severe Weather Season Review, Inspector-General Emergency Management, 2024

Pre-season preparedness

Ahead of the 2024-25 severe weather season, many local governments carried out disaster preparedness exercises, which included evacuation planning discussions. These exercises brought disaster management groups and partner agencies together to assess the effectiveness of the councils' disaster management plans. These exercises provide essential opportunities to test interoperability, identify capability gaps, and refine processes, all of which supports coordinated and confident response efforts.

Despite this preparation, the Office heard that still more training and practice is required by evacuation planners and personnel staffing facilities.

> *"Many local governments have a limited pool of staff formally trained in evacuation centre operations, and those who are trained are often required to complete other duties. In several cases, council officers who could support evacuation centre establishment and management were themselves impacted by flooding, leaving them unavailable. Similarly, the availability of trained Red Cross volunteers was limited due to access or the competing events."*
> Local government employee

The review also heard the places of refuge were criticised by some people who attended for not being resourced to a high standard.

> *"There is an increased community expectation that emergency shelters be established, available at multiple locations, and resourced to a high standard. It is becoming increasingly challenging to resource evacuation centres with sufficient trained personnel."*
> Local council submission

> *"During TC Alfred, the [LGA] experienced a growing complexity in the needs of evacuees, reflecting broader shifts in health and social care systems. More residents are now supported at home through programs such as the National Disability Insurance Scheme (NDIS), aged care in the home and hospital-in-the-home services. When these services are disrupted during disaster events, vulnerable individuals often present to evacuation centres, not because they need shelter in the traditional sense, but because they require ongoing care and support that cannot be safely delivered at home."*
> Southeast Queensland mayor

Insight: Shelter personnel should be appropriately trained, available, and well-practiced within fit-for-purpose facilities with a considered business continuity plan.

Underpinning disaster management in Queensland is that of shared responsibility amongst all stakeholders, and is characterised by consultation, collaboration, and participation. The

responsibility for the personnel operating in a shelter option is not local governments alone, but that of numerous agencies. The need to triage people as they register at a shelter option is provided in the ARC's Queensland Evacuation Centre Field Guide[41]. The triage process involving multiple agencies is considered good practice and is implemented by most LDMGs.

Sheltering for people experiencing homelessness

The Office heard three different examples of proactive coordinated multi-agency approaches to supporting and providing safe shelter to people sleeping rough during TC Alfred:

- Gold Coast LDMG: City of Gold Coast, Australian Red Cross, and state agencies engaged with more than 210 rough sleepers. They were offered accommodation at places of refuge and were spoken to daily before, during and after the event to ensure they were safe.
- Brisbane LDMG: Brisbane City Council (BCC) and Department of Housing and Public Works engaged with people experiencing homelessness to explore accommodation options. BCC then funded Micah Projects and Emmanuel City Mission to provide food and shelter approximately 272 people over six days.
- Moreton LDMG: The QPS Vulnerable Persons Unit supported by various State agencies engaged with homeless persons providing referral options for accommodation as well as medical support.

These proactive, multi-agency approaches demonstrate the value of targeted engagement and welfare checks. However, such efforts remain ad hoc and event-specific, with no systematic approach or data collection process to capture the scale or needs of people experiencing homelessness during disasters, which has increased significantly in recent years. This cohort remains among the most exposed during disaster events, lacking safe shelter and access to communication resources, and support networks. People experiencing homelessness are not consistently integrated into disaster planning.

The doctrines, including the Queensland Strategy for Disaster Resilience, Interim SDMP, and the DM Guideline, emphasise inclusive resilience, connected communities, and support for 'vulnerable populations'. Yet, practice remains fragmented. The presence of informal homelessness camps in high-risk areas during TC Alfred further highlights the need for tailored evacuation planning and risk mitigation.

The University of Sydney was engaged by the Queensland Government to develop a toolkit for reducing disaster risk of people experiencing homelessness. The *Person-Centred Emergency Preparedness (P-CEP): Homelessness Outreach Guide* was designed to be used by emergency services and disaster managers and provides guidance on collaborating with homelessness services to ensure people experiencing homelessness have access to safe shelter and emergency information in disaster.[42]

[41] Queensland Evacuation Centre Field Guide, Australian Red Cross, 2017
[42] https://collaborating4inclusion.org/homelessness-and-disaster/

Business continuity planning

This year's disaster events exposed significant vulnerabilities in redundancies and business continuity planning across multiple areas, including essential services such as telecommunications, major food producers, and care services. Major disruptions were experienced at various times, highlighting critical interdependences and an overreliance on the restoration of supply chains, energy supply, and telecommunication services.

Disruption impacts across sectors, services, and communities need to be understood and mitigated. Organisations should take a proactive approach to recognising the risks that could disrupt their operations, assessing the potential consequences for the people and organisations dependent on their services, and plan to continue to deliver essential goods and services when disruptions occur.

Industry bodies are increasingly recognising the need to deliver industry-specific guidance on business continuity planning and user-friendly tools.

Business continuity planning is a mandatory requirement for Queensland Government departments and statutory bodies to ensure they continue to operate during a disaster event.[43] However, the Interim SDMP states businesses and not-for-profits undertake business continuity planning *where possible* and, if they have a business continuity plan, it should be integrated with disaster management planning at local, district and state levels.

Did you know?

"Business continuity planning (BCP) enhances community resilience by ensuring disaster management stakeholders (government, NGOs, and businesses) can continue their core business following any critical incident or disruption. The process of BCP assists organisations to:

- stabilise disruptive effects to service delivery during events
- identify, prevent and manage risks
- adopt an all-hazards approach
- expedite response and recovery if an incident or crisis occurs."

Source: Interim Disaster Management Guideline

Residual risks need to be documented, and risk controls need to be agreed by those who own them to ensure roles and responsibilities are understood. Business continuity plans should be informed by the relevant local, district, and state disaster management plans, and goes a long way to meet the values of a shared responsibility as outlined in the Standard for Disaster Management.[44]

Insight: Entities which provide critical services in disasters should have business continuity plans integrated with disaster management plans.

Business continuity planning for essential services

Businesses, not-for-profits, and government agencies especially need contingencies and redundancies for scenarios involving extended electricity and telecommunication outages and situations where fuel supply and logistic avenues may be restricted.

[43] Performance Management Framework Specific Purpose Planning Requirements Mandatory and discretionary planning, Department of the Premier and Cabinet, Queensland Government, 2025, p. 6
[44] Standard for Disaster Management in Queensland, Inspector-General of Emergency Management, 2021

Business Queensland provides guidance for businesses about the importance of business continuity planning and how to prepare a plan to help businesses be more resilient and continue operating with minimal disruption. Their website refers to the Prevention, Preparedness, Response and Recovery model as best practice in managing disaster risk and encourages businesses to consider the model for their business continuity planning.[45]

The Small Business Disaster Hub features tailored advice in relation to managing businesses before a flood, cyclone, bushfire, severe storm or drought.[46] Cyclone planning advice includes consideration of alternatives for loss of power, access, communications and operations.[47] Although reference is made to 'extended power outages' there is no guidance regarding what could be considered 'extended'. There is no mention of disruption to telecommunication disruption and extended power outages.

Businesses Queensland provides a guide on how to conduct a business impact assessment as part of their business continuity planning to prepare for supply chain disruptions. The business impact assessment and business continuity plan are closely linked to business risk management planning. The severity and length of supply chain disruption determines the level of business impact.[48]

Likewise, organisations need to plan for their staff and suppliers' ability to travel in a disaster event. The Office heard of instances during TC Alfred where staff were not able to get to their place of work, having severe consequences on essential services such as council operations, aged care and disability services.

> *"…receiving in-person supports during the North Queensland floods, Western Queensland floods, and Tropical Cyclone Alfred was challenging as many NDIS support workers were unable to travel to their participants' homes because of road closures or flooding or needing to help their own families prepare during the events. This highlights the need for NDIS providers to have a disaster management plan so that they have systems and processes in place when an emergency event does occur. "*
> Disability advocacy organisation

Insight: Communities and entities should plan for three days of self sufficiency, in line with advice already provided in the QRA's Get Ready Queensland program.

Business continuity in aged care and disability sectors

More people need assistance to live in their own homes and receive in-home aged care or through support through the NDIS and My Aged Care. Individual providers are responsible for maintaining and activating their own business continuity plans. However, current arrangements offer limited

[45] https://www.business.qld.gov.au/running-business/risk/continuity-plan
[46] https://www.business.qld.gov.au/running-business/natural-disaster/disaster-hub
[47] https://www.business.qld.gov.au/running-business/natural-disaster/disaster-hub/cyclone
[48] https://www.business.qld.gov.au/running-business/suppliers-stock/supply-chains

assurance mechanisms to test or validate these plans. This could contribute to providers not being suitably prepared and, potentially, a risk to clients' physical, mental, and emotional wellbeing.

Both private and public disability and aged-care providers are also accountable for developing hazard-specific business continuity plans to help ensure continuity-of-care during disruptions. However, the Office heard some community members who receive at-home support were not prepared for the coming severe weather event.

The Australian Government has strengthened its quality and safety standards in reforms in the *Aged Care Act 2024* which come into effect on 1 November 2025[49]. The quality standard Outcome 2.10 – Emergency and Disaster Management emphasises the importance of providers preparing for a wide range of emergency and disaster situations.[50] Providers are encouraged to embed these arrangements into their broader business continuity planning, supporting the health, safety, and wellbeing of older people and workers by ensuring continuity of essential care and services during disruptive events. These updates also present an opportunity to strengthen sector-wide consistency in business continuity planning and enhance alignment with disaster management doctrine, which prioritises the protection of vulnerable people and the continuity of essential services.

Similarly, having a disaster management plan is an expectation for registered providers under the NDIS Quality and Safeguards Commission.[51]

> *"Under the Emergency and Disaster Management Practice Standard and Quality Indicators, emergency and disaster management includes planning to ensure the continuity of supports critical to health, safety and wellbeing of participants in an emergency or disaster."*[52]

Of the 165,000 NDIS service providers, only 15,000 NDIS providers are registered and therefore required to comply with the NDIS Practice Standards; The remaining 150,000 unregistered providers and not required to meet those Practice Standards, despite delivering critical services to people with disability.[53]

In the context of disaster preparedness and response, both registered and unregistered providers play a vital role. Queensland's disaster management sector – and the communities it serves – should expect all NDIS service providers to uphold their responsibilities through effective business continuity planning. This is essential to ensure continuity of care and safety for people with disability during disaster events.

Where aged care and disability service providers do not plan to continue to provide essential health and daily care services throughout a disaster, other essential public systems are seriously impacted. As described in the Evacuation section of this report, local governments raised the issue of people

[49] https://www.health.gov.au/our-work/aged-care-act/about
[50] https://www.agedcarequality.gov.au/strengthened-quality-standards/organisation/emergency-and-disaster-management
[51] https://www.ndiscommission.gov.au/rules-and-standards/ndis-practice-standards
[52] Emergency Management Provider Alert – Emergency Management, NDIS Quality and Safeguards Commission, 2024
[53] https://www.ndisreview.gov.au/news/supporting-you-be-safe-choice-and-control

presenting to evacuation centres during TC Alfred not because they required shelter, but because they could not have their basic needs met at home because their service providers were absent.

Council staff and other evacuation centre workers such as ARC volunteers are not trained to provide care needs such as assisting people with toileting. One hospital and health service (HHS) reported an increase in emergency department presentations and calls to the Health Contact Centre (13Health) throughout TC Alfred from people with disability seeking assistance because their NDIS services were not being provided.

Disaster management and health systems should not be relied upon to fill gaps left by service providers who fail to adequately plan for the health and safety of needs of the people they serve. Likewise, people with disabilities and older people should not be left behind during disaster events. Ensuring inclusive and proactive planning across all service sectors is essential to safeguarding those most at risk. For more detail about business continuity planning, refer to the Summary Report.

Business continuity in retirement living

Emergency preparedness gaps were identified in some retirement villages and other residential settings. For example, residents of one multi-story retirement village advised the Office of the impacts of a prolonged power outage during TC Alfred. They reported being without power for four days, which significantly restricted use of elevators, lighting and car garage access. Residents expressed feeling isolated and unable to access food or medical supplies.

> *"In one retirement village, my team and I visited residents in the days leading up to the event where it became clear that several residents were not able to adequately prepare due to illness, disability, or mobility issues."*
> State member of parliament

Electricity

The Critical Infrastructure Disaster Risk Assessment Report 2024[54], identifies the electricity network a vital service but one that is vulnerable in disaster events and can pose community safety risks.

Electricity companies are well-prepared and resourced ahead of forecast natural disaster events to restore connections as soon as possible when it is safe to do so.

Electricity distributors work in partnership with LDMGs and agencies to conduct pre-season planning, participate in multi-agency disaster exercises, and attend state and district-level disaster management group meetings. They also carry out ongoing rolling maintenance and upgrades of their existing assets.

[54] Queensland Critical Infrastructure Disaster Risk Assessment, Queensland Fire and Emergency Services, 2024, p. 36

> *"At one point I estimated towards 100 pieces of equipment, trucks, cherry pickers etc from Energex and Ergon at a staging point being dispatched to perform repairs shortly after the cyclone passed and it was safe. That was not a last-minute thought. It would have had to be planned ahead of time to mobilise resources of that scale. Congratulations are in order."*
> Member of the community

Queensland's energy report that they operate an ongoing asset inspection and maintenance program on the network to prepare for the severe summer season which complies with the *Electrical Safety Act 2002* (Qld) and the Electrical Safety Code of Practice 2020 – Works[55].

The Office heard that TC Alfred caused largest impact on the electricity network from a severe weather event in Queensland's history. One electricity distributor said it was an incredibly challenging large-scale event, with many customers impacted twice during the cyclone.

> *"Tropical Cyclone Alfred caused widespread damage across Southeast Queensland from 6 to 16 March 2025, impacting more than 500,000 electricity households and businesses; the equivalent of more than two million people."*
> *Electrical distribution company*

Maintaining a resilient power network of this magnitude, over vastly different and some difficult landscapes, and in a complex disaster environment, is challenging. Landslips, bushfires, and lightning strikes happen, and regularly record-breaking flood heights also challenge the network.

Both energy distributors and local governments reported that vegetation management, which is essential for network maintenance, is a difficult and sometimes complex issue.

One government-owned company summarised the concerns of several local governments:

> *"Several local councils in the cyclone-impacted area expressed ongoing frustration with the current policies and practices guiding clearance of vegetation, mainly trees, along power line easements. They suggest a reluctance from official tree trimming operations to undertake 'proper' cut-back of large trees that represent an obvious threat to power lines due to time and cost to do so, as well as sensitivity about environmental impact."*

As mentioned previously in this report, community members mirrored this sentiment, voicing frustration that a 'lack of adequate tree maintenance for many years' and 'a bare minimum model'

[55] Electrical Safety Code of Practice 2020 – Works, Electrical Safety Office, 2020

exacerbated damage to the power network far beyond what would have happened if vegetation did not interfere with infrastructure, including powerlines.

Insight: Improving vegetation management around electricity infrastructure assets may improve access to, and the resilience of the network.

There are also some instances where critical substations need to be pre-emptively shut down for safety reasons, to protect the substation, and allow faster restoration when it is safe to do so.

Communities reported that they expect to lose power during significant weather events. Those with more lived experience with resilience measures in place were prepared, with generators, spare fuel, batteries, torches, candles, tinned food, and cooking options. However, for several parts of the state, community members, agencies, and entities struggled with the significant length of time they were without power.

> *"While I anticipated some loss of power, I was unprepared for an outage that lasted seven days."*
> Member of the public

Get Ready Queensland's website recommends community members pack their kit for "three days after bad weather, even if the power (electricity), water or internet are not working".[56] However, some local governments and entities suggested preparedness planning and messaging should be expanded to include longer periods without power.

This could encourage better planning and resilience when mains power is lost for longer periods of time. This is especially true for supermarkets and small businesses to protect produce and establish offline transaction methods for extended power outages.

Building resilience and shifting community expectations about power restoration would also support LDMG and agency efforts in delivering public information and warnings in offline formats during power and telecommunication outages.

Did you know?

Electricity is supplied to most Queensland customers via an electricity distribution system, which connects the high-voltage system to homes and businesses.
The state's electricity distribution networks are extensive, with a total line length of about 232,000km.

Energy Queensland is the largest power company in the state with 2.3 million consumers.

Ergon Energy operates in rural and regional Queensland. Its network covers more than 1 million km2 with:
• 178,000km of powerlines and underground cables
• 1 million power poles.

Powerlink manages the state's high-voltage powerlines. Its transmission network runs 1700 kilometres from Cairns to the New South Wales border. It comprises 15,449 circuit kilometres of transmission lines and 152 substations.

[56] Get Ready QLD – Protect what's most important: Pack a kit (Council Hub), Get Ready Queensland, Queensland Reconstruction Authority, 2022

The Office acknowledges the work done by Energy Queensland staff, including Ergon and Energex, and their dedication to reconnecting communities during natural disaster events, including approximately 3500 staff who worked more than 41,000 hours statewide, as follows:

- 300 field staff and 100 support staff during North Queensland Floods
- 2400 field staff and 500 support staff to reconnect after TC Alfred
- 100 field staff and 20 support staff during the Western Queensland Floods.

Fuel

When mains power fails, generators are a common backup to maintain essential services. However, their effectiveness depends on reliable access to fuel – either through sufficient on-site storage or the ability to procure and transport additional supplies. Planning should ensure that entities not only have fuel reserves but also the means, access and logistical arrangements to refuel generators during extended outages. This is critical to maintaining continuity of operations in disaster events.

Without operational generators, critical infrastructure ceases to function, including sewerage systems, reticulated water supply, and telecommunications. One Southeast Queensland community reported relying on generators for more than five days and had to request State assistance to support generator operations at the local service station, enabling residents, including a nearby aged care facility, to refuel and maintain essential services.

This scenario was repeated in other parts of the state, involving emergency services, a major water company, and aviation operations. These examples highlight the strategic importance of fuel access and generator support as part of coordinated disaster response.

During the impacts of TC Alfred, fuel resupply was a significant challenge – primarily due to power outages lasting longer than anticipated. Stored fuel supplies were quickly exhausted as many individuals and organisations relying on generator power were not prepared for extended isolated or prolonged outages. This affected a wide range of users including emergency services, airports, telecommunications infrastructure, and private households.

Challenging scenarios included petrol stations being unable to operate due to power outages (preventing fuel pumps and payment systems from functioning), and fuel supplies being physically inaccessible due to road damage and floodwaters. These challenges resulted in heightened feelings of isolation and distress amongst community members with notable impacts on their mental health.

> *"After the back-up batteries went flat and the generators ran out of fuel, communications were extremely limited."*
> Southeast Queensland disaster district coordinator

It should be noted that communities who shared their fuel with others to keep other generators running demonstrated stronger resilience.

It is apparent that fuel-powered generators are a major back-up system for when mains power is lost. If these can't be refuelled, there is no second-level redundancy. After TC Alfred, one Queensland district said they would develop an emergency fuel strategy to identify agency fuel

needs and fuel storage plans before the next severe weather season that would support the delivery of essential services during extended power outages.

> *"[This community] regularly experience power outages and isolation due to severe weather. While the community are maturing their resilience to such events… a generator at the local fuel supplier may support community resilience in maintaining back-up generation."*
> Southeast council employee

Telecommunications

The *Telecommunications Act 1997* (Cth) establishes a regulatory framework for the telecommunications industry in Australia promoting efficiency, competition, and accessibility of services[57]. Sections 313 and 344 place obligations on carriers and carriage service providers to provide reasonable assistance to authorities during emergencies. The two sections describe obligations to telecommunications carriers to support disaster planning, to ensure continuity of communication services in a disaster, maintain network survivability, and manage outages.[58][59]

The *Security of Critical Infrastructure Act 2018* also places obligations on telecommunications entities to protect their assets from all hazards. [60]

Telecommunication companies provided online briefings to the QDMC and SDCG, however, collaboration and addressing issues quickly is more easily achieved when entities are co-located at the SDCC with key agencies and entities during significant and complex disaster events.

The Office understands telecommunication companies are well prepared, staffed, resourced, and practised in responding and reconnecting communities after a disaster event. Providers emphasised that restoration efforts are swift and effective when access is possible and it is safe to do so.

Telecommunication companies also engage in multiagency pre-season planning, working with electricity providers and other critical partners to share information, update emergency contacts and ensure communication channels remain open and functional.

Despite these efforts, loss of telecommunications – including phone, internet services, and the Government Wireless Network (GWN) – was a significant challenge for communities, local governments, agencies, and their partners.

The widespread loss of communications presented a significant challenge – not only for LDMGs but for the entire Queensland disaster management sector. The inability to access mobile networks, internet services and the GWN severely impacted the ability of agencies and communities to operationalise disaster plans, issue timely warnings and respond to calls for assistance.

For LDMGs, the communication breakdown hindered efforts to gather local intelligence, coordinate partner agencies and inform communities about unfolding risks. However, the impact extended well

[57] *Telecommunications Act 1997* (Cth)
[58] *Telecommunications Act 1997* (Cth), s313
[59] *Telecommunications Act 1997* (Cth), s314
[60] *Security of Critical Infrastructure Act* 2018 (Cth)

beyond local coordination. State-level agencies, emergency services and community organisations were similarly constrained, with disrupted communications affecting strategic decision making, resource deployment and situation awareness.

Further access constraints significantly impacted the speed and effectiveness of telecommunications reconnection efforts. Restoration was often delayed due to limited access to damaged sites. In seeking to carry out repair works and restore services, the safety of staff and the surrounding community is paramount. This requires the sites to be assessed to understand the coming weather, identifying issues, and the extent of the damage. Once assessed, the appropriately skilled staff need to attend to carry out repairs. In some cases, new parts are needed to be brought in from outside the region, and the extent of the damage needs to be identified. These factors all need to be addressed prior to deploying staff to the site to carry out repairs.

This highlights the critical vulnerability in Queensland's disaster resilience. There is a need for robust, redundant and interoperable communication systems that can withstand prolonged outages and support coordinated response efforts across all levels of the QMDA.

> *"The shutdown of mobile and internet services, which resulted from the power outage, created a complete communications blackout. This breakdown severely limited the ability of emergency services, local authorities, and residents to coordinate, report incidents, or seek assistance. The lack of reliable communications not only delayed response efforts but also increased risk to the public and made it extremely difficult to distribute critical information. Strengthening telecommunications resilience in regional areas must be a key focus of future disaster management improvements."*
> State member of parliament

Community members in some locations reported that they could not call Triple Zero (000), receive warnings or EA, or find information, despite many councils scrambling in the early hours of the morning to respond to the rapid, dynamic flooding. As one council member said, "A town where nobody has power, gets no info, and zero phone reception in a flood, is just a disaster waiting to happen."

> *"We work with emergency authorities to get facilitated access, to be escorted in (a badly impacted area). If it's a major site that has priority over others, we let the LDMG and DDMG know, and we get priority access to those sites."*
> Telecommunication company

This highlights a critical vulnerability: the need for robust, redundant, and interoperable communication systems that can withstand prolonged outages and support coordinated response efforts across all levels of the QDMA.

Insight: Communities increasingly rely on telecommunications to remain connected and access disaster related information.

Satellite devices are becoming increasingly more common in regional and rural areas where mobile phone coverage is sporadic or not available, particularly among local governments and emergency service agencies. Several local governments across the state have also invested in satellite devices at community facilities to better support their displaced community members during the disaster.

However, while satellite devices make communication possible when telecommunications are down, satellite devices need power and are not able to receive EAs. It is acknowledged that the National Emergency Management Agency (NEMA) is aware of this.

Interconnectivity of electricity and telecommunications

Power and telecommunications are both critical for disaster response and recovery, yet they operate under different priorities, constraints and safety considerations. While both sectors aim to restore services quickly and as safely as possible, their restoration pathways are shaped by factors such as prioritisation of preservation of life, extent of infrastructure damage, accessibility, workforce safety and population impacts.

The restoration priorities between these two critical infrastructure providers are not always aligned. While power companies offer support where possible, decisions about operations are made after considering all relevant factors.

Telecommunications providers reported that loss of power beyond 24 hours was a key driver of service disruption. Conversely, concerns were raised about the over-reliance on power providers as a redundancy strategy within the telecommunications sector. This approach does not reflect the future disaster risk environment of high impact, low probability events. Strengthening the resilience of telecommunications infrastructure– across metropolitan, regional and remote areas – should be a priority.

> *"It is [this company's] broad experience that power companies – across Australia – do not prioritise the restoration of telecommunications facilities at the level that is expected by communities. This can lead to inefficient deployment of resources, longer restoration times and poorer outcomes for customers and communities that are now more reliant than ever on mobile devices to provide safety information."*
> Telecommunications company

Batteries and generators are a well-used and established back-up for telecommunications companies when mains power is lost. One telecommunications company alone has more than 200 permanent fixed generator sites in Queensland in high priority locations (sites with large numbers of dependencies or network-critical), as well as sites that are difficult to access due to isolation during weather events.

> *"(It's an) Agreement with LG authorities because they can get there quicker than I can. We're prioritising areas in higher risk areas. The work will continue and will take a good couple of years to roll out and finalise. "*
> Telecommunications company

Improving access to co-located infrastructure sites – such as those shared between telecommunications and power providers – could support more resilient back-up arrangements, particularly when company personnel are unable to undertake restoration work themselves. This is especially relevant in situations where commercial agreements currently limit cross-sector access to shares sites.

Recognising the importance of safety, operational protocols, and differing priorities across sectors, there is value in exploring collaborative frameworks or negotiated arrangements that enable safe and timely access to critical infrastructure during disaster events. Such approaches would enhance continuity of essential services while respecting the operational boundaries and responsibilities of each provider.

The extended loss of telecommunications also signifies the importance of entities providing public information across multiple platforms - including 'offline' options - as part of standard business practice. Printed materials such as newsletters, flyers and community noticeboards can play a vital role when digital systems are unavailable.

Those responsible for public information and warnings should ensure offline communication channels are embedded within business continuity planning, and that staff are trained and exercised in their use. This approach supports more inclusive and resilient communication, particularly in high risk or isolated communities.

Improved pre-season community preparedness messaging should also include being ready to lose phone and internet for several days as standard and education about where and how to find offline information in their area. This starts to set the expectation that telecommunications, including the internet, will be lost for extended periods of time during disaster events and the onus is on community members to stay informed.

Flood Tuff – enhancing infrastructure resilience

TC Alfred saw the first operational deployment of TMR Flood Tuff units, and according to TMR, these proved effective in protecting critical traffic infrastructure. The bright yellow, durable plastic covers are designed to safeguard electrical cabinets that control traffic signals, road lighting and other systems essential for safe transport operations.
The units are secured with ground anchors and feature an open base airlock system. As floodwaters rise, a compressed air cylinder

with a float valve equalises the air lock internal pressure with the surrounding water pressure, preventing water ingress and ensuring continued cabinets functionality.
In preparation for expected heavy rainfall associated with TC Alfred, TMR deployed 25 units to flood-prone locations across Southeast Queensland, and post-event inspections confirmed their effectiveness in maintaining operational continuity.

Beyond their immediate success, TMR found Flood Tuff units not only provided an immediate solution during TC Alfred, but represent a long-term investment in resilience. By protecting critical traffic management systems during future disasters, this initiative will minimise disruption and support Queensland's recovery efforts.

TMR has identified potential applications across other sectors, including rail, utilities and energy – where protecting critical infrastructure from inundation is essential to maintaining service continuity. This initiative was delivered through the 2021–22 Betterment Program, with extraordinary disaster assistance provided through the jointly funded Commonwealth-State Disaster Recovery Funding Arrangements (DRFA).

Community resilience

TC Alfred significantly impacted pockets of Queensland's south-east corner, from Hervey Bay through to the state's southern border. The southern part of this region had not experienced a cyclone in more than 50 years, and the combination of increased population, high-density living, and the influx of new residents from interstate and overseas meant that community resilience was tested. Many residents were unfamiliar with cyclone risks, and the scale of the event challenged existing preparedness and response systems.

The lasting impact of TC Alfred highlights the urgent need to adapt resilience strategies to suit evolving demographic and environmental conditions. The event highlighted the vulnerabilities of the region while also showcasing the strength and adaptability of its people.

Key drivers of community resilience

The cyclone tested the capacity of individuals, neighbourhoods, and local systems to respond effectively. From spontaneous acts of mutual support to the mobilisation of local knowledge and adaptive planning, the response to TC Alfred revealed critical insights into what enables communities to withstand and recover from extreme events.

Social connections and local networks

Strong social ties played a pivotal role in the community's ability to respond to and recover from TC Alfred. Across Southeast Queensland, neighbours checked in on one another, shared resources, and provided emotional and practical support—often stepping in where formal services were disrupted.

Examples of community-led support were widespread:

- Communities pooled fuel supplies to keep generators running, ensuring continuity of care for residents at higher risk.
- Individuals provided hands-on assistance to those with high needs, filling critical gaps when formal support services were temporarily unavailable.

These examples highlight the importance of fostering strong local networks and recognising the role of informal carers and volunteers in disaster response. Strengthening these connections through community engagement, preparedness activities, and recognition programs can significantly enhance resilience in future events.

Preparedness and resourcefulness

Communities that had taken steps to prepare for severe weather were noticeably better equipped to cope with the impacts of TC Alfred. In several towns, local halls fitted with generators became vital hubs for residents who lost power, offering shelter, warmth, and access to essential services. Many households had emergency supplies on hand, including food, water, and medical items, which helped them remain self-sufficient during the initial response phase.

However, the scale and intensity of the cyclone revealed critical gaps in preparedness—particularly for worst-case scenarios that exceeded previous experience. Some residents were caught off guard by the duration of outages, the extent of flooding, and the disruption to support services.

Strengthening preparedness requires a shift from planning for “typical” events to anticipating extreme and unfamiliar conditions. This includes promoting household readiness, investing in community infrastructure, and encouraging scenario-based planning that accounts for prolonged disruptions and complex recovery needs.

Volunteerism and community leadership

Volunteerism and local leadership played a pivotal role in the community response to TC Alfred. Across Southeast Queensland, trained disaster management teams and spontaneous volunteers worked tirelessly to support affected residents.

One council in Southeast Queensland has implemented a proactive approach by regularly training volunteer ‘champions’. These individuals are equipped with the skills and knowledge to assist during emergencies, helping coordinate local responses, and maintain communication between their communities and the LDMG.

The success of these efforts highlights the importance of investing in volunteer capacity and recognising the value of community leadership. By providing ongoing training, resources, and formal integration into disaster management frameworks, local governments can strengthen the effectiveness and reach of community-led response efforts.

Learning from past events

The lived experiences of long-term residents proved invaluable during TC Alfred, helping to build generational resilience across communities. These individuals shared practical knowledge gained from previous cyclones and severe weather events—offering insights into property protection, evacuation strategies, and emotional preparedness.

Knowledge transfer occurred in both formal and informal ways, for example:

- Informal conversations between neighbours helped newer residents understand local flood behaviours and response strategies.
- Organised community education days (e.g. supported through the Get Ready Queensland program) provided structured opportunities to share lessons learned and promote preparedness.

This exchange of experience not only strengthened individual readiness but also fostered a sense of continuity and collective wisdom. Encouraging intergenerational dialogue and embedding local knowledge into disaster education programs can significantly enhance community resilience in regions facing evolving climate risks.

Insight: Communities plan and prepare for what they know. Communities now need to think about preparing for the type of events they have yet to experience.

Recommendation (4)
The Inspector-General of Emergency Management recommends that the Queensland Reconstruction Authority lead a multi-agency discussion on the appropriate duration of community self-sufficiency in the context of emerging disaster risks.

Inclusive and tailored engagement

Inclusive approaches to disaster management were critical during TC Alfred, ensuring that people at higher risk (including seniors, people with disability, and culturally and linguistically diverse communities) received appropriate support. Tailored engagement strategies helped bridge communication gaps and ensured that preparedness and response efforts were accessible and relevant to all residents.

The *Fostering Culturally Inclusive and Future-Prepared Emergency Management Project* demonstrated how targeted engagement can enhance resilience in diverse communities. By incorporating culturally appropriate messaging, multilingual resources, and trusted community leaders, the project helped ensure that no one was left behind during the cyclone response.

To build truly resilient communities, disaster management frameworks should ideally embed inclusive practices at every stage—from planning and preparedness to response and recovery. This includes co-designing solutions with community representatives, adapting communication methods to suit different needs, and ensuring that support services are accessible to all Queenslanders.

Shared responsibility

The Standard emphasises the principle of shared responsibility, recognising that effective disaster preparedness and response is not solely the domain of government agencies – it requires active participation from individuals, households, and communities. TC Alfred reinforced the importance of this approach, as many residents found themselves needing to act quickly and independently in the face of rapidly changing conditions.

To strengthen resilience, communities should be aware of their role in the disaster cycle, particularly in the preparedness and response phases. This includes understanding local risks, preparing emergency kits, developing household plans, and staying informed through trusted sources. When individuals take ownership of their preparedness, they not only reduce their own vulnerability but also contribute to the overall strength and adaptability of their community.

TC Alfred was a stark reminder of the increasing frequency and severity of extreme weather events in Queensland. While the cyclone caused significant damage and disruption, it also highlighted the resilience of the southeast corner of Queensland and the importance of community-driven solutions.

By strengthening social connections, investing in preparedness, and embedding resilience into disaster management, Queenslanders can emerge stronger and better equipped to face future challenges.

Conclusion

Tropical Cyclone Alfred and the associated severe weather presented significant challenges to Queensland's disaster management arrangements, testing its capacity to respond to events of unprecedented scale and complexity. Despite these challenges, the QDMA demonstrated the value of the principles of a locally led, regionally co-ordinated and state and commonwealth supported approach to managing disasters in Queensland. This framework reflects a scalable, flexible and cross agency approach, ensuring that responses are tailored to the severity and complexity of each event whilst also maintaining strong coordination across all levels of government and community.

The collective efforts of government agencies, local governments, non-government organisations, volunteers, and communities showcased the resilience and dedication of all involved. Under immense pressure, all stakeholders worked tirelessly and collaboratively to deliver the best possible outcomes.

While the QDMA has proven its value, it is acknowledged that the system is undergoing a period of adjustment. Queensland has been subject to major disaster events in 2022, across 2023–24, and 2025. These events have placed sustained pressure on Queensland's disaster management system. The Office has undertaken a number of reviews and make a suite of recommendations aimed at enhancing the QDMA, improving resilience and operational effectiveness.

In undertaking this review, regard has been given to the recommendations from previous IGEM reviews in 2022, 2023 and 2024-25. It is evident that the QDMA is undergoing a period of transition with adjustments still being embedded across the sector. This transition will take time, but those changes and the small but meaningful enhancements identified in this review reflect a shift towards more adaptive, integrated, and future-focused approaches to disaster preparedness and response, informed by lessons learned and evolving risk landscapes. These enhancements are essential to ensure the system continues to evolve and improve. The focus remains on continuous improvement, with a commitment to refining processes, improving doctrine, strengthening coordination, and enhancing community resilience through a shared responsibility.

Looking ahead, the lessons to be learned from this event by all aspects of the system, coupled with the insights from the recently released National Climate Risk Assessment, will guide future preparedness and response efforts. The QDMA will continue to adapt to the changing nature of disasters, ensuring Queensland is ready to face future challenges with confidence and capability. By building on the progress made and fostering a culture of learning and collaboration, Queensland's disaster management system will remain a cornerstone of community safety and resilience.

This review reaffirms the importance of ongoing reflection, adaptation, and preparation to meet the needs of a dynamic and evolving risk environment. Together, we will continue to strengthen our disaster management arrangements and ensure Queenslanders are well-prepared for whatever lies ahead.

Appendix A

Terms of Reference

Terms of Reference for the reviews of:

- North Queensland Floods (late January to early February 2025)
- Tropical Cyclone Alfred's impact on South-East Queensland (late February to early March 2025)
- The Western Queensland Floods (late March to early April).

Functions of the Office

The Office of the Inspector-General of Emergency Management (IGEM) is to provide the Queensland Government and the community with assurance of the State's disaster management arrangements.

Section 16C of the *Disaster Management Act 2003* outlines the following functions for the office of the Inspector-General of Emergency Management, including:

- to regularly review and assess the effectiveness of disaster management by the State, including the State disaster management plan and its implementation;
- to regularly review and assess the effectiveness of disaster management by district groups and local groups, including district and local disaster management plans;
- to regularly review and assess cooperation between entities responsible for disaster management in the State, including whether the disaster management systems and procedures employed by those entities are compatible and consistent;
- to review, assess and report on performance by entities responsible for disaster management in the State against the disaster management standards;
- to identify opportunities for cooperative partnerships to improve disaster management outcomes;
- to report to, and advise, the Minister about issues relating to the functions above; and
- to make all necessary inquiries to fulfil the functions above.

Guiding principles and methodology

The Reviews will be guided by the following principles:

- The Standard for Disaster Management (the standard) establishes the outcomes to be achieved for all entities involved in disaster management. It consists of Shared Responsibilities, Outcomes, Accountabilities, and Indicators. The standard focuses on outcomes rather than setting a minimum standard that must be met.
- As described by the standard, the focus is on outcomes, the standard provides the parameters within which disaster management should be conducted across Queensland, without being prescriptive about how it should be done.

- The standard is to be used by all entities in Queensland with a responsibility to contribute to disaster management. This includes those with legislated roles, as well as entities acting on behalf of or under an arrangement with those that do.
- The term 'entity' is defined in the *Acts Interpretation Act 1954*, at Schedule 1 Meaning of commonly used words and expressions. It determines that an entity includes both a person and an unincorporated body. Consistent with the *Disaster Management Act 2003*, the standard uses the term entity to describe those with roles or responsibilities in disaster management in Queensland. This includes all tiers of government, non-government organisations, not-for-profit organisations, disaster management groups, and others with legislated roles in disaster management.

In conducting the Reviews, the Office will engage with:

- relevant entities impacted by these events where DRFA has been activated,
- any other entities providing critical infrastructure support in the preparation and response phase,
- relevant entities engaged in preparation and response activities,
- industry,
- community,
- relevant disaster management doctrine, and
- other relevant reviews previously conducted, or which may have commenced, relevant to this review.

The Reviews will be guided and informed by consideration of various sources of evidence, not limited to submissions (written or oral), interviews, official reports, data, case studies, public consultation and the views of experts.

Scope

For the associated events, the IGEM will deliver a separate report, for each identified event. The reports will identify enhancements and good practices to inform and ensure continuous improvement of Queensland's Disaster Management Arrangements (QDMA).

In relation to the associated events, the reports will focus on the following:

- pre-season planning activities undertaken by entities,
- integration of preparedness and response activities between all levels of government,
- opportunities to enhance community resilience to better prepare for, and respond to future disasters,
- ensuring effective communications systems to enable the community to take necessary actions and to ensure connectedness within the community and with response entities,
- provision of information and data to inform and support planning decisions in the preparation and response phases, and
- any other matters that the IGEM considers necessary related to preparation and response.

Out of Scope

These reviews will not consider matters relating to:

- activities solely related to recovery,
- areas outside of the event areas previously identified,
- land use planning, and
- building design, codes and construction.

Deliverables and timeframe

The review reports will include an analysis of the preparedness and response related to each event. Based on the evidence, the reports may include identified good practice as well as recommendations for improvements in the QDMA and opportunities for strengthening future preparedness and response mechanisms.

Before finalising the review reports, the IGEM will consult with relevant entities on draft findings and recommendations.

The three reports will be delivered to the Minister for Police and Emergency Services by Tuesday 14 October 2025 for consideration of tabling in Cabinet.

Appendix B

Insights

Insight	Location
Community safety may be enhanced with increased understanding and communication between disaster management groups and the Bureau regarding the relationship between Bureau warnings and planned disaster response triggers. The solution lies in strengthening collaboration and information-sharing across jurisdictions and between levels of disaster management groups.	Summary Report, p. 24
Complementary flood monitoring assets such as flood markers and flood cameras can contribute to the accuracy, timeliness and resilience of flood warning intelligence.	Summary Report, p. 31 North Queensland Floods Event Report, p. 34 Western Queensland Floods Event Report, p. 33
Improving vegetation management around electricity infrastructure assets may improve access to, and the resilience of the network.	Summary Report, p. 33 Tropical Cyclone Alfred Event Report, p. 55
Communities plan and prepare for what they know. Communities now need to think about preparing for the type of events they have yet to experience.	Summary Report, p. 34 North Queensland Floods Event Report, p. 53 Tropical Cyclone Alfred Event Report, p. 63
Disaster management entities should have resilient business continuity plans that account for communication disruptions.	Summary Report, p. 37
All entities with warning responsibilities should include offline messaging as part of their business continuity planning.	Summary Report, p. 39
It is not always possible to issue local, community-focused warnings for some events. If community warnings are issued, they may not be seen by all members of the community. There is a shared responsibility between entities and the community to understand local risks and be informed and prepared.	Summary Report, p. 44
There is an opportunity for coastal councils in Southeast Queensland to adopt storm tide evacuation zones as per the	Summary Report, p. 48

Evacuation Manual, which many northern, coastal local governments have adopted.	Tropical Cyclone Alfred Event Report, p. 43
Information about the potential inundation of the storm tide should be obtained from the responsible LDMGs who have the data and modelling capabilities.	Summary Report, p. 49 Tropical Cyclone Alfred Event Report, p. 44
Planning for an imminent tropical cyclone event should include a shared understanding of the risk appetite of the relevant disaster management groups that support locally led disaster response operations.	Summary Report, p. 49 Tropical Cyclone Alfred Event Report, p. 44
Greater awareness of the services offered by storm tide advisors could be promoted to assist coastal disaster management groups.	Summary Report, p. 50 Tropical Cyclone Alfred Event Report, p. 45
The terminology ‘storm tide’ and ‘storm surge’ are used inconsistently in doctrine, public information and by disaster management practitioners.	Summary Report, p. 50 Tropical Cyclone Alfred Event Report, p. 45
Evacuation sub-plans should include clear activation triggers, shelter options available, communication strategies to inform the community of the risks and request clear courses of action.	Summary Report, p. 52
Shelter personnel should be appropriately trained, available, and well-practiced within fit-for-purpose facilities with a considered business continuity plan.	Summary Report, p. 53 Tropical Cyclone Alfred Event Report, p. 48
When preparing evacuation sub-plans, consideration should be given to evacuation arrangements for persons external to their LGA and include communication strategies for informing the community of the evacuation stages.	Summary Report, p. 54
Proactive fatigue management planning supports staff wellbeing and helps sustain continuity of operations.	Summary Report, p. 57
Strengthening the professional capability and mobility of council officers to support the LGAQ’s C2C program within Queensland’s disaster management arrangements may effectively assist disaster-impacted councils and their communities.	Summary Report, p. 58
There is an opportunity to better use personnel experienced in specific types of disasters in future such events.	Summary Report, p. 59
Use of common systems between local governments promotes information sharing and situational awareness.	Summary Report, p. 59

Systems that are interoperable enable information sharing and decision making between entities.	Summary Report, p. 60
There is a need to work towards interoperability between all systems to enable sharing of a common operation picture.	Summary Report, p. 60
Use of liaison officers is an effective strategy to support inter-agency information sharing and situational awareness.	Summary Report, p. 62
Having an established reporting protocol and a workforce planning strategy may assist to plan for requests for information.	Summary Report, p. 62
Clear reporting requirements between all levels of the QDMA supports improved information sharing and situational awareness.	Summary Report, p. 62
Entities which provide critical services in disasters should have business continuity plans integrated with disaster management plans.	Summary Report, p. 63 Tropical Cyclone Alfred Event Report, p. 50
Business continuity plans and disaster management plans need to outline redundancies and contingencies to deal with widespread or prolonged, critical infrastructure disruptions.	Summary Report, p. 64
Any shortcomings of business continuity planning by service providers may place undue pressure on hospitals and the disaster management systems.	Summary Report, p. 66
Disruption to Queensland's limited freight corridors constrains the movement of goods, heightens supply chain vulnerability and complicates prioritisation decisions during periods when transport capacity is reduced.	Summary Report, p. 67
Local Disaster Management Plans should include supply chain continuity for communities at risk of being isolated, including defined triggers for resupply when supply routes are compromised.	Summary Report, p. 69
Clarity in roles and responsibilities in fodder provision decreases the risk of parallel effort, delays and supports timeliness of tasking and delivery.	Summary Report, p. 70 Western Queensland Floods Event Report, p. 39
Improved guidance in key doctrine and establishment of clear roles and responsibilities for entities deploying aviation resources pre-season would strengthen communication, improve coordination, and enhance operational efficiency.	Summary Report, p. 73 Western Queensland Floods Event Report, p. 41
Strengthening aviation capability nationally for an all-hazards approach would be beneficial to Queensland.	Summary Report, p. 78

Queenslanders are resilient, but this review process has indicated this can be relative to where they live, and their interdependencies with infrastructure and systems.	Summary Report, p. 81
Research shows connected communities are more resilient.	Summary Report, p. 81
Local disaster management groups having clear understanding of the Bureau's role, responsibilities and capabilities could improve preparedness, manage expectations, support more effective local planning and decision making during events.	North Queensland Floods Event Report, p. 32
Communities increasingly rely on telecommunications to remain connected and access disaster related information.	North Queensland Floods Event Report, p. 44 Tropical Cyclone Alfred Event Report, p. 59
Communities and entities should plan for three days of self sufficiency, in line with advice already provided in the QRA's Get Ready Queensland program.	North Queensland Floods Event Report, p. 53 Tropical Cyclone Alfred Event Report, p. 51
To help manage expectations and improve community understanding of flood mitigation efforts, councils are encouraged to regularly and clearly engage with its residents regarding planned and completed works programs.	Tropical Cyclone Alfred Event Report, p. 30
When preparing evacuation sub-plans local governments need to include clear triggers for the activation of shelter options, communication strategies informing the community of the risks, the requested courses of action, and shelter options available.	Tropical Cyclone Alfred Event Report, p. 47

Appendix C

Glossary of abbreviations

Term	Meaning
ABC	Australian Broadcasting Corporation
ARC	Australian Red Cross
AWS	Australian Warning System
Bureau	Bureau of Meteorology
CALD	Culturally and linguistically diverse
CASP	Crisis Appreciation and Strategic Planning (CASP) Guidebook
DDMG	District Disaster Management Group
DFSDSCS	Department of Families, Seniors, Disasbility Services and Child Safety
DM Guideline	Interim Queensland Prevention, Preparedness, Response and Recovery Disaster Management Guideline 2024-25
DPI	Department of Primary Industries
DRFA	Disaster Recovery Funding Arrangements
EAs	Emergency Alerts
EMS	Event Management System
ERF	Emergency Response Fund
ERWG	Emergency Relief Working Group
Evacuation Manual	Evacuation: Responsibilities, Arrangements and Management Manual
FWIN	Flood Warning Infrastructure Network
GWN	Government Wireless Network
IGA	Intergovernmental agreement, Bureau of Meteorology
IGEM	Inspector-General of Emergency Management
Interim SDMP	Interim State Disaster Management Plan 2024-25
LDMG	Local Disaster Management Group
LGA	Local Government Area
NEMA	National Emergency Management Agency
NFWINP	National Flood Warning Infrastructure Network Program
NMS	National Messaging System
Office	Office of the Inspector-General of Emergency Management
QDMA	Queensland Disaster Management Arrangements
QDMC	Queensland Disaster Management Committee
QFD	Queensland Fire Department
QPS	Queensland Police Service
QPS PIWU	Queensland Police Service, Public Information and Warnings Unit
QRA	Queensland Reconstruction Authority

QSDR	Queensland Strategy for Disaster Resilience
RFAs	Requests for Assistance
SDCC	State Disaster Coordination Centre
SES	State Emergency Service
SLS	Service Level Specification for Flood Forecasting and Warning Services, Bureau of Meteorology
SRRG	State Recovery and Resilience Group
Standard	Standard for Disaster Management in Queensland
TC	Tropical Cyclone
TMR	Department of Transport and Main Roads

Appendix D

Reference list

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Disaster Management Regulation 2014 (Qld)

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