Vital information you need to know during an emergency is a simple click away, including:

- Road conditions
- Power outages
- Weather warnings
- BoM weather radar
- River heights
- Evacuation zones
- Emergency Action Guide

Check out the new Emergency Dashboard on our website: mackay.qld.gov.au/emergencydashboard
What is it?
Tropical cyclones are intense low-pressure systems that form over warm tropical waters. Cyclones are dangerous for three main reasons:

- **Destructive winds** can cause extensive damage and can turn debris into dangerous missiles.
- **Heavy rainfall** can produce extensive flooding and landslides.
- **Storm tide** can increase sea levels above king tide level (highest astronomical tide) and cause damaging waves.

What are the local risks?
The Mackay region has a high risk of being impacted by cyclones during the “wet season” or “cyclone season”, which officially runs from November 1 to May (although some have formed in the Coral Sea as late as early July).

What should I do?
The following information has been prepared in consultation with emergency services to help protect you, your family and your property.

**Before The Cyclone Season:**
- Check to see if your home has been built to cyclone standards (generally houses constructed since 1982).
- Know your Evacuation Zone [Storm Tide].
- Check that the walls, roof and eaves of your home are secure.
- Trim treetops and branches well clear of your home.
- Preferably fit shutters, or at least metal screens, to all glass areas.
- Clear your property of loose material that could blow about and possibly cause injury or damage during extreme winds.
- In case of a storm surge/tide warning, or other flooding, know your nearest safe high ground and the safest access route to it.
- Prepare an emergency kit.
- Keep a list of emergency phone numbers on display.
- Check neighbours, especially if elderly or recent arrivals, to make sure they are prepared.
- Monitor cyclone potential throughout the season. [bom.gov.au].
When a cyclone watch is issued:
• Re-check your property for any loose material and tie down (or fill with water as last resort) all large, relatively light items, such as boats and rubbish bins.
• Re-fuel vehicles and jerry cans (service stations may be unable to distribute fuel after the event).
• Check your emergency kit, fill water containers and ensure you have some cash.
• Ensure household members know which is the strongest part of the house and what to do in the event of a cyclone warning or an evacuation.
• Tune to your local radio/TV/internet for further information and warnings.
• Check that neighbours are aware of the situation and are preparing.

When a cyclone warning is issued:
Depending on official advice provided by your local authorities as the event evolves; the following actions may be warranted.
• If requested by local authorities, collect children from school or childcare and go home.
• Park vehicles under solid shelter (hand brake on and in gear).
• Put wooden or plastic outdoor furniture in your pool or inside with other loose items.
• Close shutters or board up or heavily tape all windows (tape does not strengthen windows, but minimises the glass shatter if broken). Draw curtains and lock doors.
• Pack an evacuation kit of warm clothes, essential medications, baby formula, nappies, valuables, important papers, photos and mementos in waterproof bags to be taken with your emergency kit. Large/heavy valuables could be protected in a strong cupboard.
• Remain indoors (with your pets). Stay tuned to your local radio/TV/internet for further information.

On warning of local evacuation:
Based on predicted wind speeds and storm surge heights, evacuation may be necessary. Official advice will be given on local radio/TV/internet regarding safe routes and when evacuation should occur.
• If evacuating to a public cyclone shelter in Northern Beaches (place of last resort with very limited numbers) or a higher location, follow police and emergency services directions.
• If going to a public cyclone shelter, take your own food, water and essential only.
• Leave pets protected and with food and water (pets are NOT allowed into the cyclone shelter or evacuation centres).
• Wear enclosed shoes and durable clothing for protection.
• Lock doors, turn off power, gas, and water and take your evacuation and emergency kits.
• If evacuating inland (out of town), take pets and leave early to avoid heavy traffic, flooding and wind hazards.

As the cyclone approaches
• Disconnect all electrical appliances. Listen to your battery radio for updates.
• Stay inside and shelter in the strongest part of the building (such as internal hallway or bathroom) and keep well clear of windows. Keep evacuation and emergency kits with you.
• If the building starts to break up, protect yourself with mattresses, rugs or blankets, under a strong table or bench, or hold onto a solid fixture (such as a water pipe).
• Beware the calm “eye”. If the wind drops, don’t assume the cyclone is over; violent winds will soon resume from another direction. Wait for the official “all clear”.

After the cyclone
• Don’t go outside until officially advised it is safe.
• Check for fallen power lines. Don’t use electric appliances if wet.
• Listen to local radio for official warnings and advice.
• If you have to evacuate, or did so earlier, don’t return until advised. Use a recommended route and don’t rush.
• Be aware of damaged power lines, bridges, buildings, trees, and do not enter floodwaters.
• Heed all warnings and don’t go sightseeing. Instead, check and offer help to neighbours and other friends and family.
• Don’t make unnecessary telephone calls.

USEFUL LINKS:
Mackay Regional Council Emergency Dashboard (including Evacuation Maps)
mackay.qld.gov.au/emergency
Bureau of Meteorology
bom.gov.au/cyclone
CYCLONE ADVICES

Cyclone advisories can be issued as a “watch” or “warning”. These advisories provide information on where the cyclone is, its movement, how strong it is and identify the areas that could be affected.

A cyclone watch is issued every six hours when there are indications that strong winds are expected to affect coastal or island communities within 48 hours.

A cyclone warning is generally issued every three hours (however, in some cases it’s every hour) as soon as gales or stronger winds are expected to affect coastal or island communities within 24 hours. Forecasts of heavy rainfall, flooding and abnormally high tides are included where necessary.

The severity of a tropical cyclone is described in terms of categories, ranging from 1 (weakest) to 5 (strongest), related to the maximum mean wind speed. See below table:

Tropical cyclones are referred to as “severe tropical cyclones” when they are producing “very destructive winds”, which corresponds to category 3, 4 and 5. This is also the trigger point for opening of public cyclone shelters.

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>CENTRAL PRESSURE IN HECTOPASCALS</th>
<th>STRONGEST WIND GUST</th>
<th>TYPICAL EFFECT (INDICATIVE ONLY)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>&gt;985 hPa</td>
<td>100-125 km/hour</td>
<td>Minor house damage</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Damage to some crops, trees and caravans</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Small craft may drag moorings</td>
</tr>
<tr>
<td>2</td>
<td>985-970 hPa</td>
<td>125-170 km/hour</td>
<td>Minor house damage</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Significant damage to signs, trees and caravans</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Heavy damage to crops</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Risk of power failure</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Small craft may break moorings</td>
</tr>
<tr>
<td>3</td>
<td>970-945 hPa</td>
<td>170-225 km/hour</td>
<td>Some roof and structural damage</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Some caravan destruction</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Power failure likely</td>
</tr>
<tr>
<td>4</td>
<td>945-920 hPa</td>
<td>225-280 km/hour</td>
<td>Significant roof loss and structural damage to buildings</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Caravans destroyed</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dangerous airborne debris</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Widespread power failure</td>
</tr>
<tr>
<td>5</td>
<td>&lt;920 hPa</td>
<td>Greater than 280 km/hour</td>
<td>Extremely dangerous with widespread destruction</td>
</tr>
</tbody>
</table>

PREVIOUS CYCLONES IN OUR REGION

- **Cyclone Debbie, Category 4**: Crossed near Airlie Beach in March, 2017. Mackay received damage to housing from winds, torrential flooding and causing significant coastal erosion.

- **Cyclone Marcia, Category 4 in February, 2015**, came within 110km of Mackay before moving away to the south and crossing the coast north of Yeppoon as a Category 5 cyclone.

- **Cyclone Dylan, Category 1**: Crossed near Hydeaway Bay in January, 2014. Mackay received a storm tide slightly higher (0.33 metres) than king tide level, damaging some homes and causing significant coastal erosion.

- **Cyclone Yasi, Category 5**: Crossed near Innisfail in February, 2011, causing a five-metre storm surge on a falling tide, and 2.3 metre inundation above...
The cyclone season extends from November to May.

When a cyclone advice is issued, the position of the cyclone is given as a longitude and latitude reading. You can track the cyclone’s route by plotting the longitude (vertical lines) and latitude (horizontal lines) on this map.

• Cyclone Anthony, Category 1: Crossed in the Whitsundays in January, 2011, causing minor damage.
• Cyclone Ului, Category 3: Crossed near Proserpine in March, 2010, causing major damage to the Mackay region. Power was lost in residential areas for up to three days and in some rural areas for more than a week.
• Cyclone Hamish, Category 5: Narrowly missed Mackay in March, 2009.
• Cyclone 1918: Mackay experienced a devastating cyclone (with a 3.6-metre storm surge causing inundation of 1.8 metres above king tide), which resulted in widespread destruction that claimed 30 lives.
**What is it?**
A storm tide is the rise of the ocean water level, combined with the tide at the time and strong onshore winds and/or reduced atmospheric pressure.

This combination of effects, especially if it occurs on a high tide or king tide, can force sea water and pounding waves into areas that would normally be well above sea level and sometimes several kilometres inland if the land is low lying. The more intense the cyclone is, the higher the storm tide risk is.

**What are the local risks?**
The Mackay region has a very high risk of being impacted by cyclones, including storm tide, during the “cyclone season”, which officially runs from November 1 to May. The Mackay region has several low-lying areas at significant risk from storm tide.

**What should I do?**
You need to plan well ahead of time.
- Know your Evacuation Zone (Storm Tide).
- Be ready to evacuate and have an Evacuation Kit.
- Consider and identify your evacuation and shelter options.

When a cyclone threat develops, keep listening to official warnings issued by the Bureau of Meteorology. These will advise if high tides and coastal flooding are expected.

Listen to official warnings from the Mackay Local Disaster Management Group (LDMG), which will advise of the evacuation of any storm tide colour zones.
**KING TIDE**

- King tide [Highest Astronomical Tide]
- Mean sea level [Equals 0 Australian Height Datum]
- Low tide [Lowest Astronomical Tide]

**CYCLONE STORM TIDE**

- Storm tide
- King tide
- High tide
- Mean sea level
- Low tide

**USEFUL LINKS:**

Mackay Regional Council Emergency Dashboard (including Evacuation Maps)
mackay.qld.gov.au/emergency

Bureau of Meteorology
bom.gov.au
What is it?

There are two types of flooding that affect our region. Firstly, riverine flooding from the Pioneer River, creeks and other tributaries and, secondly, localised flash flooding, which is overland water that exceeds the capacity of drainage structures.

Riverine flooding occurs during periods of heavy rainfall within the various catchments. The Pioneer River catchment of about 1500 square kilometres is the largest catchment within the region.

Localised flash flooding occurs during heavy rainfall in excess of drainage capabilities set by community expectations and economic sustainability. Other factors include natural blockages and human interference to drainage systems.

What are the local risks?

The region has a high risk of being impacted by flooding primarily during the “wet season”, which officially runs from November 1 to May. Flooding may or may not be associated with cyclones or severe weather events and can occur at any time of the year.

The CBD and North Mackay are protected by a river levee to a height of about 9.2m (LAT or gauge height). However, if the levee is either overtopped or fails, there would be significant inundation through the CBD and/or North Mackay. Please refer to the inundation maps for gauge heights above 9.5m.

Roads

Regularly during the wet season and other significant rainfall events, there are many roads throughout the region which are subject to flooding.

Prepare for your decision to affect others and know the dangers. All Queenslanders should be aware of the dangers connected to floodwater or swift flowing water. No-one can predict what lies underneath the surface.

USEFUL LINKS:

Official road closures are listed on the State Government website 131940.qld.gov.au or on council’s Emergency Dashboard mackay.qld.gov.au/emergency
Pioneer River flooding and evacuation zones in Mackay

One of the largest risks of flooding in Mackay is from catchment flooding in the Pioneer River. This type of flooding is caused by prolonged or intense rainfall from severe storms, such as monsoonal rain and tropical cyclones. Coastal flooding due to storm tide events is addressed in other sections of this guide.

The Pioneer River is the largest drainage feature in the Mackay region with a catchment area of about 1560 square metres. The Pioneer River flows in an easterly direction from the Clarke and Connors Ranges to the sea at Mackay. Major creeks within the catchment include Cattle Creek, Teemburra Creek, Blacks Creek, Goosepond Creek, and Fursden Creek.

Flood levees are currently in place to protect much of the Mackay CBD and North Mackay areas. The Bureau of Meteorology issues flood warnings and river height bulletins for the Pioneer River catchment regularly during floods. When the flood level at the Forgan Bridge gauge is expected to exceed seven metres LAT, the Bureau issues predictions of flood heights for the Pioneer River at Mackay. The objective is to provide at least three to nine hours warning of flood heights above seven metres. These forecasts are updated every three hours while the river is rising.

Significant flooding in Mackay is expected when the Forgan Bridge gauge exceeds nine metres. The largest flood recorded in the Pioneer River occurred in February, 1958, and had a gauge height of 9.14 metres. Further information about the Pioneer River Catchment is available from the Bureau of Meteorology’s website.
SEVERE THUNDERSTORM / WEATHER WARNINGS

What is it?
Severe Thunderstorm and Severe Weather warnings are issued by the Bureau of Meteorology. In active months, especially November to May, many of these warnings are issued for parts of the Mackay region, often multiple times each day. Although these events can be dangerous and it is important that the community is warned and aware of the risks and take the necessary precautions, they rarely result in a large-scale disaster event that requires a significant coordinated response and recovery effort.

What are the local risks?

Severe Thunderstorms
Although the region experiences many thunderstorms, more intense thunderstorms are referred to as severe thunderstorms. Severe thunderstorms can cause significant localised damage due to damaging wind gusts, possible large hail, heavy rainfall and flash flooding. The Bureau of Meteorology issues Severe Thunderstorm Warnings to alert communities of the threat of these more dangerous thunderstorms.

Severe Weather
Severe Weather Warnings are provided for potentially hazardous or dangerous weather that is not solely related to severe thunderstorms, tropical cyclones or bushfires. The Bureau of Meteorology issues Severe Weather Warnings whenever severe weather is occurring in an area, or is expected to develop or move into an area. The warnings describe the area under threat and the expected hazards. Warnings are issued with varying lead times, depending on the weather situation, and range from just an hour or two up to about 24 hours.

What should I do?
If weather conditions indicate the possibility of storms, make sure you’ve completed the following precautions:

- Ensure your Emergency Kit is fully stocked.
- Check that your insurance is up-to-date and covers damage to home and contents in case of severe storm.
- Trim overhanging branches, clean out gutters and ensure roof is in good condition.
- Ensure your yard and outdoor areas are free from...
loose items, such as patio furniture, garden tools and rubbish.
• Move vehicles under shelter.

When you hear a severe storm or severe weather warning:
• Stay tuned to warnings.
• Contact family to make sure everyone is aware of the warning.
• Shelter and secure animals.
• Disconnect all electrical items, aerials and computer modems.

During a severe storm or severe weather warning:
• Stay tuned to warnings.
• Stay inside and shelter well clear of windows, doors and skylights.
• If driving, stop clear of trees, power lines and streams.
• Move vehicles under shelter.

Preparing your boat for severe weather
Severe weather season in Queensland is from November to May. In Queensland, severe weather includes tropical cyclones, severe storms and flooding.

Boat operators need to make all possible preparations for severe weather. Boat owners are responsible for maintaining their boat and property to survive severe weather.

USEFUL LINKS:
Bureau of Meteorology
bom.gov.au/qld

Maritime Safety Queensland
msq.qld.gov.au/Safety/Preparing-for-severe-weather
**What is it?**
Tsunami is a Japanese word “tsu”, meaning harbour and “nami”, meaning wave. The phenomenon is usually associated with earthquakes, landslides or volcanic eruptions in, or adjacent to, oceans, and results in sudden movement of the water column. Until recently, tsunamis were called tidal waves, even though the event has nothing to do with tides.

**What are the local risks?**
There is little recorded history of tsunami in Australia, possibly because Australia has a relatively short history. There is evidence the Australian coast may have experienced large tsunamis during the past few thousand years, even within areas of the Great Barrier Reef. The Great Barrier Reef, however, is expected to act as its name suggests for tsunami effects from the Pacific Ocean, and provide at least some barrier and protection to the region.

The Mackay Local Disaster Management Group (LDMG) regularly receives information about undersea earthquakes and tsunamis around the world.

The recent 5.8 magnitude earthquake in August, 2016, just off the coast of the Whitsundays (the second-largest on record in Queensland) was not large enough
to trigger a tsunami warning. Tsunami warnings are generally only considered for earthquakes above 6.5 magnitude.

(Some of this information has been provided by GeoScience Australia.)

What should I do?

What are the warning signs of a tsunami?
The number one warning sign of a tsunami in Australia is the advice you may receive from the media (on radio, television or internet) or from police and other emergency services. Follow their instructions immediately.

The following are natural signs of a tsunami that you may, but not always, experience when you are near the coast in Australia or overseas. If you notice any of these three warning signs take action.

- A shaking of the ground in coastal regions may reflect the occurrence of a large undersea earthquake nearby that may generate a tsunami.
- As a tsunami approaches shorelines, the sea may, but not always, withdraw from the beach (like a very low and fast tide) before returning as a fast-moving tsunami.
- A roaring sound may precede the arrival of a tsunami.

What should I do if I notice the warning signs or hear a warning from my local emergency services?

- If you are at the beach, immediately move inland or to higher ground.
- If your boat is in deep water and offshore, maintain your position.
- If your boat is berthed or in shallow water, secure your vessel and move inland or to higher ground.
- If you are on the coast and cannot move inland, seek shelter in the upper levels of a stable building.
- Do not return to the coast until you receive official clearance.
- Continue to follow emergency services instructions.

(Information provided by the Joint Australian Tsunami Warning Centre.)

USEFUL LINKS:

Geoscience Australia
ga.gov.au/scientific-topics/hazards/tsunami

Bureau of Meteorology
bom.gov.au/tsunami
**What is it?**
Bushfires and grassfires are common throughout Australia. Grassfires are fast moving, passing in five to 10 seconds and smouldering for minutes. They have a low to medium intensity and primarily damage crops, livestock and farming infrastructure, such as fences. Bushfires are generally slower moving, but have a higher heat output. This means they pass in two to five minutes, but they can smoulder for days. Fire in the crown of the tree canopy can move rapidly. *(Definition from Geoscience Australia).*

**What are the local risks?**
Wildfires can happen here although we live in the tropics with humid conditions. They may be started through arson (deliberately lit), carelessness (such as discarded cigarettes, sparks from machinery or unattended fires), as the result of an accident or, rarely, as the result of a controlled/prescribed burn. If you light a fire, on purpose or accidentally, you are responsible for controlling it.

If there is a long spell of hot, dry weather and it’s windy, the fire risk increases. Generally, the fire season in Central Queensland is through the winter (“dry” season) and spring months. Information about fire risk and fire danger periods will be issued by fire authorities as required. In the region, there are extensive areas of medium bushfire hazard and several smaller areas or high bushfire hazard. You don’t have to live in the bush to be threatened by bushfire, just close enough to be affected by burning material, embers and smoke.

There are lightly timbered but heavily grassed nature reserves and open space which back up to residential housing and pose a threat to life and property.

**What should I do?**
- It is important to include wildfire in your household emergency plan and consider completing a wildfire survival plan as part of your household preparations.
- Keep an eye on the Rural Fire Service website ruralfire.qld.gov.au when hot, dry conditions exist.
- Keep grass cut and vegetation clear of the property.
- Don’t dump garden rubbish in neighbouring reserves or bush areas.
- Move flammable items away from the house (such as woodpiles, boxes, hanging baskets, garden furniture).
- Keep access ways to the property clear for fire trucks.
- When warnings are given, act immediately on the instructions provided. Don’t wait. Leave when advised, even if it feels safe where you are at the time. Take your household emergency kit with you. Go in the direction advised for your location.

**USEFUL LINKS:**
For more information, visit ruralfire.qld.gov.au or qfes.qld.gov.au
Warning levels and action-oriented messages

In Australia, there are three levels of bushfire warnings. New Queensland bushfire community warnings focus on action-oriented messages. During a bushfire, different people will turn to different agencies for information. However, official bushfire warnings can change quickly and it is imperative that the most current warning is available to the community across all information channels.

It is important that QFES remains the central point for current bushfire warnings.

For more information, visit ruralfire.qld.gov.au or qfes.qld.gov.au.
What is it?
The Bureau of Meteorology defines a heatwave as three days or more of high maximum and minimum temperatures that is unusual for that location.

What are the local risks?
Every location across Australia has its own unique climatology of heat. The bulk of heatwaves at each location are low intensity, with local communities expected to have adequate adaptation strategies for this level of thermal stress. Less frequent, higher intensity heatwaves are classified as severe and will challenge some adaptation strategies, especially for vulnerable sectors, such as aged or the chronically ill. Even rarer and exceptionally intense heatwaves are classed as extreme and will challenge many normally reliable sectors, including power and transport infrastructure and anyone who does not adopt protective adaptation strategies.

What should I do?
It is prudent to prepare and modify your behaviour when extreme heat occurs.

Drink water regularly
- Ensure that you drink at least two to three litres of water a day at regular intervals, even if you do not feel thirsty. If your fluid intake is limited on medical advice, ask your doctor how much you should drink during hot weather.
- Don’t drink alcohol, soft drinks, tea or coffee - they worsen dehydration.
- Eat as you normally would but do try to eat cold foods, particularly salads and fruit.
- Avoid heavy protein foods (such as meat, dairy products) which raise body heat and increase fluid loss.
Keep out of the heat as much as possible

- Plan your day to keep activity to a minimum during the hottest part of the day.
- If you can, avoid going out in the hottest part of the day (11am to 3pm).
- Avoid strenuous activities and gardening.
- Do not leave children, adults or animals in parked cars.

If you go out

- Wear lightweight, light-coloured, loose, porous clothes.
- Wear a wide-brimmed hat and sunscreen.
- Regularly rest in the shade.
- Drink plenty of water.

Stay as cool as possible

- Wear appropriate clothing to suit the hot weather.
- Stay inside in the coolest rooms in your home.
- Block out the sun during the day by closing curtains and blinds and keep windows closed while the room is cooler than it is outside.
- Open up windows and doors when there is a cool breeze, when the temperature inside rises and at night for ventilation.
- Use fans and air-conditioners at home to keep cool, or spend time in an air-conditioned library, community centre, shopping centre or cinema.

- Take frequent cool showers or baths and splash yourself several times a day with cold water, particularly your face and the back of your neck.

Look after your animals

Animals can also be affected by heat-related illness. If you’re in charge of an animal, you have a duty of care to provide it with food, water and appropriate shelter.

Caring for children in heat

Babies and young children are more susceptible to heat-related illness than adults because their bodies cannot easily adapt to changing temperatures.

For information on who is at risk, how you can prepare for and cope during a heat event and what to do for heat-related illnesses, please visit qld.gov.au/emergency/dealing-disasters/heatwave (Information provided by Queensland Health)

USEFUL LINKS:

Queensland Health
qld.gov.au/emergency/dealing-disasters/heatwave

Bureau of Meteorology
bom.gov.au/australia/heatwave/about.shtml
Earthquakes are the vibrations caused by rocks breaking under stress. The underground surface along which the rock breaks and moves is called a fault plane. Earthquakes in Australia are usually caused by movements along faults as a result of compression in the Earth’s crust.

The size or magnitude of earthquakes is determined by measuring the amplitude of the seismic waves recorded on a seismograph and the distance of the seismograph from the earthquake. These are put into a formula which converts them to a magnitude, which is a measure of the energy released by the earthquake.

For every unit increase in magnitude there is roughly a 30-fold increase in the energy released. For instance, a magnitude 6.0 earthquake releases about 30 times more energy than a magnitude 5.0 earthquake, while a magnitude 7.0 earthquake releases about 900 times (30 x 30) more energy than a magnitude 5.0. Earthquake magnitude was traditionally measured on the Richter Scale. It is often now calculated from seismic movement, which is proportional to the fault area multiplied by the average displacement on the fault.

The focus of an earthquake is the point where it originated within the earth. The earthquake epicentre is the point on the Earth’s surface directly above the focus. (Information provided by GeoScience Australia.)

What are the local risks?
Earthquake hazard in the region is high in Queensland terms, moderate in Australian terms and low in global terms.
On August 18, 2016, at 2.30pm the second largest earthquake on record in Queensland of 5.8 magnitude occurred just offshore within the Whitsunday region, about 50km from Bowen. This earthquake was felt across the entire region and large amounts of Queensland, and was followed by more than 50 aftershocks.

What should I do?

Before an earthquake (now)
• Find out how and where to turn off power, gas and water.
• Plan with your family (or household) where you will meet if separated.
• Know your safe areas during an earthquake.
• Check your insurance policy to make sure it is adequate and that you are covered for damage caused by earthquakes.

During an earthquake
• If indoors—stay there (clear of falling debris outside).
• If in a vehicle—stop in an open area until the shaking stops.
• Keep clear of windows, chimneys and overhead fittings. Shelter under and hold onto a door frame, strong table or bench.
• In high-rise buildings, stay clear of windows and outer walls. Shelter under a desk near a pillar or internal wall.
• In crowded buildings, do not rush for doors, but move clear of overhead fittings and shelves.
• Do not use elevators.
• On a city street, shelter from falling debris under strong archways or doorways of buildings. Don’t go under awnings as they may collapse.

• If outside, keep well clear of buildings, overhead structures, walls, bridges, power lines and trees.
• Beware of downed power lines and road damage, including overpasses and bridges.
• Listen to your car radio for warnings before moving.

After an earthquake
• Turn off electricity, gas, and water. Do not light matches until after you have checked for gas or fuel leaks.
• Check for injuries and apply first aid. Do not move seriously injured people unless they are in immediate danger.
• Check for broken water, sewerage or electrical mains.
• Do not use the telephone immediately (to avoid congestion) unless there is a life-threatening situation.
• Check for cracks and damage to your building.
• Evacuate the building if it is badly damaged and be prepared for aftershocks.
• Do not waste food and water as supplies may be interrupted.
• Listen to your local radio station and heed warnings and advice on damage and service disruptions.
• Try to avoid driving unless in an emergency (to keep the streets free for emergency services).
• Do not go sightseeing or enter damaged buildings.
• Try to stay calm and help others if possible.

USEFUL LINKS:
Geoscience Australia
ga.gov.au - and search “earthquake”
What is it?
A landslide is the movement of rock, debris or earth down a slope. Landslides result from the failure of the materials which make up the hill slope and are driven by the force of gravity. Landslides can be triggered by natural causes or by human activity. In general, the factors which influence whether a landslide will occur typically include slope angle, climate, weathering, water content, vegetation, geology, slope stability and the amount of loading on the slope (overloading).

What are the local risks?
Landslides are not a common occurrence, nor a major threat in the region. However, there are some areas of the region which could be susceptible to landslides under certain conditions, including Mt Pleasant, Mt Oscar, Blacks Beach, Dolphin Heads, Rural View, Golflink Heights, Nindaroo, Habana, Eungella, Sarina, Eton Range and Sarina Range.

What should I do?
• Monitor environmental conditions that could increase the risk of landslides, such as rainfall, erosion and earthquakes.
• Monitor other conditions, such as movement of ancillary structures like decks and patios in relation to your house, sticking doors or windows, tilting or cracking of concrete floors and foundations, leaning poles, trees, retaining walls or fences.

(Some information has been provided by GeoScience Australia.)

USEFUL LINKS:
Geoscience Australia
ga.gov.au/scientific-topics/hazards/landslide