

Queensland Fire and Emergency Services

City of Gold Coast Bushfire Planning & Mitigation

Date: 26 March 2021
Contact: Bushfire Planning & Assessment
Phone: 07 5582 8803
Our Ref: MIN/2020/683

Burleigh Heads Estate Pty Ltd
C/- Gassman Development Perspective
Po Box 392, BEENLEIGH QLD 4207

Dear Sir/Madam



QUEENSLAND FIRE AND EMERGENCY SERVICES COVER SHEET FOR BUSHFIRE MANAGEMENT PLAN

Application type: Bushfire Management Plan (BMP)
Application number: MIN/2020/683
Property description: Lot 117 Pacific Highway, Burleigh Heads Qld 4220
Property location: Lot 117 SP316001

This cover sheet contains the endorsed BMP that has been assessed as part of a development application approval, the assessment was concluded by Queensland Fire and Emergency Services (QFES) bushfire planning and assessment officers seconded to Council of the City of Gold Coast (Council). It is intended that this QFES cover sheet and attached documents is to be regarded as forming an integral part of the approved development application.

A BMP is associated with a property to ensure protection from a potential bushfire risk is reduced as far as practicable through mitigation and maintenance measures.

The submitted BMP being, Bushfire Hazard Assessment & Management Plan for Burleigh Heads Estate Pty Ltd RFA21-004, MIN/2020/683, dated 8 March 2021 and prepared by Rob Friend & Associates Pty Ltd is accepted and that the development is to maintain the reduced bushfire risk in perpetuity for the life of the development along with additional conditions outlined within Council's decision notice.

QUEENSLAND FIRE AND EMERGENCY SERVICES



All new purchasers/occupants (including community title/body corporate) must be provided a copy of the QFES cover sheet along with the stamped approved BMP. All conditions and recommendations must be complied with throughout the life of the development and any changes to the development will need to be reassessed for compliance against the approved BMP.

Should any changes to the development or site parameters occur, the land owner is responsible for advising a suitably qualified and experienced bushfire management consultant to confirm that the approved BMP is not affected by the changes and any specific fire mitigation measures are imposed to increase the protection to life, property and the environment. These changes could also require amendment of condition/s within Council's decision notice, for further information please contact Council's Planning Enquiries Centre (PEC) on **P: 07 5582 8708**.

Where the BMP has triggered the requirements of *Australian Standards AS3959 – Construction of buildings in bushfire prone areas*, QFES does not accept any responsibility or liability for, or give approval as to the accuracy of the Bushfire Attack Levels (BAL) that is contained within the bushfire management plan, QFES only assesses the development's compliance with the applicable performance outcomes from the Council's planning scheme.

It is the responsibility of the landowner/occupier to check if additional approvals are required for any ongoing vegetation management outside the parameters of the stamped approved BMP and all development approvals for the site. Discussions should be held with State and Local government agencies prior to any vegetation being damaged.

Contacting us

Should you wish to clarify any issues contained in this letter, please do not hesitate to contact Council's Bushfire Planning & Assessment Team on **P: 07 5582 8803**.

Yours faithfully

Tina Saren
BUSHFIRE PLANNING AND ASSESSMENT OFFICER
QUEENSLAND FIRE AND EMERGENCY SERVICES

Seconded to Planning Assessment
ECONOMY, PLANNING & ENVIRONMENT DIRECTORATE
CITY OF GOLD COAST

WHAT IF I AM A LANDLORD?

From 1 January 2017

- You are required by law to install and maintain smoke alarms in your rental property.
- The minimum legal requirement for all existing dwellings is a 9-volt battery operated smoke alarm that complies with Australian Standards.
- A good quality non-removable 10-year battery powered smoke alarm, or a hardwired alarm, is more reliable and effective.
- You must test and clean each smoke alarm within 30 days before the start of a tenancy agreement.
- In addition you must replace, in accordance with the manufacturer's instructions, each battery in the smoke alarm that is flat, or almost flat, within 30 days before the start of a tenancy.
- The owner must replace smoke alarms when:
 - They reach 10 years after the date of manufacture; or
 - They do not work (including during a tenancy).
- Owner's requirements can be fulfilled by an agent acting for the owner.

From 1 January 2022

- As above except:
- All smoke alarms must be photoelectric, hardwired or 10-year tamper proof battery powered and all interconnected.
- Smoke alarms must be installed on each storey:
 - in each bedroom; and
 - in hallways which connect bedrooms and the rest of the dwelling; or
 - if there is no hallway, between the bedrooms and other parts of the storey; and
 - if there are no bedrooms on a storey at least one smoke alarm must be installed in the most likely path of travel to exit the dwelling.

How will compliance be achieved?

On the sale of a property, the vendor must lodge a form with the Queensland Land Registry (www.dnrm.qld.gov.au) stating whether or not compliant smoke alarms are installed in the property and the purchaser has been informed of the fact. Fire Officers will also investigate complaints received. Fines apply for failing to install or interfering with the operation of smoke alarms.

Insurance – property owners

- Industry figures show that people underinsure.
- Adequate insurance cover can provide peace of mind if your home and belongings are damaged or lost to fire.
- Most insurance companies offer specific landlord policies.
- As a property owner your home insurance policy could be affected by whether you have a smoke alarm installed.
- Check with your specific insurance provider.

WHAT IF I AM A TENANT?

- You are required by law to test and clean each smoke alarm in the dwelling at least once every 12 months. QFES recommends smoke alarms are tested once a month.
- You are required by law to replace, in accordance with the information statement (RTA Form 17a) provided to you, each battery that is flat or is almost flat during your tenancy.
- If you become aware that a smoke alarm in the rental property is not working, other than because the removable battery is flat or 'chirping', you must advise the landlord or agent as soon as practicable.
- Your landlord is required to test and clean smoke alarms within 30 days prior to the start of a new tenancy or when a tenancy is renewed. If the property is managed by an agent, they may arrange for this to be done.
- Please note that for public housing tenants the Queensland Government has already installed hardwired smoke alarms in all public housing dwellings.

Insurance – tenants

- Research indicates that nearly half of all renters do not have insurance of any kind.
- To protect your personal possessions you should have your own contents insurance.

safehome

Safehome is a FREE service provided by Queensland Fire and Emergency Services to householders in an urban fire service area. Local firefighters will come to your home to assist you to recognise fire and safety hazards in and around the home. Once the hazards are identified you can then take steps to eliminate them. A visit should take no longer than 45 minutes.

You will receive advice on correct positioning and installation of smoke alarms, a safety pack and checklist.

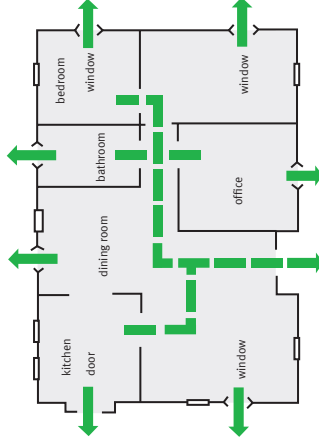
Call 13 QGOV (13 74 68) for a Safehome visit.

Do I need a fire escape plan?

Queensland Fire and Emergency Services recommends that you have a fire escape plan.

A smoke alarm will alert you to a fire, but what you do next is a matter of life and death. To survive it is essential you know how to escape.

- Draw your escape plan on a sheet of paper or visit www.qfes.qld.gov.au.
- Plan two ways out of every room (if possible).
- Pick a meeting place outside the home, such as the letterbox.
- Call the fire service on 000 (Triple Zero).
- Practise your fire escape plan regularly, at night, with the lights off.
- Practise your escape on hands and knees.
- Consider how your security (e.g. locked doors and windows) may stop your escape.



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Smoke alarms in Queensland



New smoke alarm legislation

From 1 January 2027

- Smoke alarms in all dwellings must:
- » be photoelectric (AS 3786-2014); and
 - » not also contain an ionisation sensor; and
 - » be less than 10 years old; and
 - » operate when tested; and
 - » be interconnected with every other required smoke alarm in the dwelling so all activate together.
- Smoke alarms must be installed on each storey:
- » in each bedroom; and
 - » in hallways which connect bedrooms and the rest of the dwelling; or
 - » if there is no hallway, between the bedrooms and other parts of the storey; and
 - » if there are no bedrooms on a storey at least one smoke alarm must be installed in the most likely path of travel to exit the dwelling.
- Smoke alarms must be either hardwired or powered by a non-removable ten year battery.

Prescribed locations for installing smoke alarms

Where practicable smoke alarms must be placed on the ceiling. Smoke alarms must not be placed:

- » within 300mm of a corner of a ceiling and a wall;
- » within 300mm of a light fitting;
- » within 400mm of an air-conditioning vent;
- » within 400mm of the blades of a ceiling fan.

There are special requirements for stairwells, sloping ceilings, and ceilings with exposed beams. Specific requirements are explained in the *Building Fire Safety Regulation 2008*.

If it is impracticable for the prescribed location requirements to be met, the owner may put the alarm at another location that will provide a warning to occupants of the dwelling. For example, a smoke alarm that is regularly activated by steam from a bathroom or smoke from fumes from a kitchen may be moved to another appropriate location.

2017 2022 2027

The staged approach

Existing dwellings

From 1 January 2017

- » All required smoke alarms that are replaced must be photoelectric and comply with AS3786-2014.
- » Existing smoke alarms manufactured more than 10 years ago must be replaced. (Note: Smoke alarms should have the date of manufacture stamped on them).
- » Smoke alarms that do not operate when tested must be replaced immediately.
- » Existing hardwired smoke alarms that need replacement must be replaced with hardwired smoke alarms.

Dwellings sold, leased or an existing lease renewed

From 1 January 2017

- » Requirements as for existing dwellings.
- » Existing landlord's and tenant's obligations regarding the installation and testing of smoke alarms continue.

From 1 January 2022

- » From this date, the new legislative requirements apply when a new lease for a dwelling starts, or an existing lease is renewed.

New dwellings and those being substantially renovated

From 1 January 2017

- » The development approval process for new dwellings and substantial renovations will ensure that applications for building works made after this date will bring dwellings into compliance with legislation.
- » For substantial renovations, a building certifier will determine the smoke alarm requirements as a part of the development approval process.

What else do I need to know?

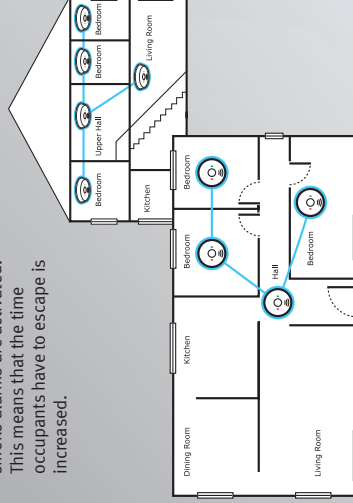
Instead of waking you, smoke and toxic gases from a fire can quickly numb your senses and put you into an even deeper sleep.

Photoelectric smoke alarms

Research by the Australian Fire and Emergency Service Authorities Council indicates that photoelectric smoke alarms provide the best detection across a wider range of fires and are more likely to alert occupants in time to escape safely.

Interconnected

When one smoke alarm is activated, all interconnected smoke alarms are activated. This means that the time occupants have to escape is increased.



Unwanted activations

Some reasons that smoke alarms would activate for no apparent reason include:

1. They have a build-up of dust, insects or other particulates.
2. They are in the wrong location (e.g. too close to cooking fumes from the kitchen or steam from the shower).
3. They are near or past their ten year life.
4. The battery requires replacement.
5. If the alarm is hardwired:
 - there is an issue with how the alarm is installed;
 - there is an issue with the power supply to the dwelling.

Smoke Alarm Certification

Smoke alarms compliant with the Australian Standard may, but are not required to, display these symbols.



Smoke alarms for the Deaf and hard of hearing community

QFES provides a subsidy scheme to assist people who are deaf or hard of hearing to purchase special smoke alarms. This initiative is managed by Deaf Services Queensland.

Email: smokealarms@deafsq.org.au

Phone: (07) 3892 8500

TTY: (07) 3892 8501



What about maintenance?

- ❑ Test smoke alarms once a month using the test button.
- ❑ Check that the battery is working once a month. A 'chirping' sound from the smoke alarm may indicate a flat battery. Replace batteries as required.
- ❑ Clean the grill of your smoke alarm once a month using a vacuum cleaner or soft brush (or as per the manufacturer's instructions).
- ❑ Do not hinder the device (e.g. smoke alarms must never be painted).
- ❑ If activated from cooking/steam, use the 'hush' button (if fitted) or disperse the smoke/steam (e.g. wave a towel near the alarm).
- ❑ All types of smoke alarms have a limited life-span and must be replaced every 10 years. Look for the year of manufacture sticker or stamp.

For more information

Additional information on smoke alarms is available at www.qfes.qld.gov.au/smokealarms/.

Practical tips for a **safer home**



Including your

- home escape plan
- emergency phone list.



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Queensland Fire and Emergency Services – making Queensland a safer place

This booklet is an initiative of the Queensland Fire and Emergency Services, produced with the assistance of the Queensland Ambulance Service.

For details of all community programs and initiatives phone 13 QGOV (13 74 68) or go to www.qld.gov.au.



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Welcome to the front yard

The advice in this home safety booklet, designed to reduce the risk of injury to yourself, loved ones and visitors, begins at the front gate. For example, a wet path, covered with grass clippings or with a hose lying across it, has the potential to cause a fall. Check these safety tips:

- Make sure your street number can be clearly identified day and night.
- Keep pathways clear of obstructions such as hoses and plant material.
- Check branches overhanging power lines. Ask for advice from relevant electricity authorities; seek help in cutting back the branches.
- At night, make sure the outside lighting on your house is bright enough so occupants and visitors can see. If necessary, install sensor lighting along well-used pathways.
- Make sure pets can be secured during an emergency.

Entry to your home

While a security door may keep intruders out, it can also trap occupants during an emergency and prevent access by emergency services. Check these safety tips:

- Make sure the location of the security door key is known and accessible to all occupants so people inside can leave quickly or allow swift access by emergency services.
- Check that steps to the house are in good order with handrails on both sides. Fix non-slip strips to the steps to reduce the risk of falls.
- Minimise clutter on the front verandah, patio or porch for ease of access or exit.

In the entry area, shiny, slippery floors, wrinkled carpet runners or dim lighting can cause a fall. Therefore, consider your family, emergency services personnel and others who make regular house calls, such as delivered meals or other home support services so they are not at risk.



Making living areas safe

Reducing clutter in the living area goes a long way towards creating a safer place. Check these safety tips:

- Rearrange furniture so pathways are clear.
- Secure top-heavy items such as entertainment units to the wall so they do not topple onto someone.
- Check for sharp corners or edges on furniture (senior people's skin is very vulnerable and easily torn, or the body can be bruised more easily).
- Remove small lightweight mats and place anti-slip strips on the back of heavier mats or rugs on polished floors.
- Place a metal firescreen in front of an open fireplace to contain burning embers.
- Carefully stub out cigarette butts in a solid ashtray to reduce the risk of fire.
- Check the furniture for cigarette butts and ashes before going to bed. Cigarette embers can smoulder unnoticed and later burst into flame.
- Keep furniture and curtains at least one metre from heaters.
- Dry clothes in a clothes dryer, not in front of a heater.
- Allow plenty of ventilation around home entertainment equipment so heat can escape and turn off electrical appliances when not in use.
- Never run electrical cords under mats or carpets or across a room.
- Maintain electrical appliances as per manufacturers' instructions; always have repairs carried out by an authorised agent or electrician.
- Do not load up power points with double adaptors – use power boards; those with an overload switch that meets Australian Standards are recommended.
- Do not use appliances with frayed, taped or damaged cords.

Reduce electrical shocks

To reduce the risk of electrical shocks or fire, make arrangements for an electrician to fit an earth leakage safety switch (these are already fitted in homes built after 1992). Ask your electrician to make sure any extra needs, such as air conditioners, do not overload the mains power board.



Greater fire risk in the kitchen

The kitchen, the heart of a home, can become an area of potential fire risk. In fact, Queensland Fire and Emergency Services reports that one third of all house fires begin in the kitchen.

However, there are some simple solutions to minimise the risk of both fire and injury – check these safety tips:

- Plan a clutter-free kitchen – make sure frequently-used items are within easy reach.
- Do not allow curtains, blinds or other combustibles near cooking appliances.
- When cooking, avoid wearing garments with long, loose-fitting sleeves.
- Make sure frying pan/saucepan handles are turned away from the stove's front edge.
- Turn off hotplates when you leave the kitchen or when the phone rings. When all cooking is finished, turn off the stove safety switch (where fitted).
- Wipe up spilt water and food immediately to avoid slipping.
- Turn off electrical appliances at the wall before cleaning.
- Make sure you have a fully stocked and regularly maintained first aid kit (see page 22).
- Have a fire blanket and extinguisher available and know how to use them.
- In case of fire, ALWAYS have a clear escape route.

Learn to use fire safety equipment



Place fire safety equipment* (e.g. extinguisher or fire blanket) in the kitchen between the stove and exit so you can reach them without getting too close to the fire, while ALWAYS being in a position to escape. Learn how to use an extinguisher/fire blanket before an emergency occurs.

** This equipment can be purchased from most hardware stores or through 'Fire Protection Equipment and Consultants' in the Yellow Pages.*

Stovetop oil or fat fires

Stovetop fires are often the start of a blaze that destroys homes. If the fire has spread beyond the stovetop, evacuate immediately. Phone Triple Zero (000) from a mobile or from a neighbour's house.

If oil or fat catches fire in a pot or pan, turn off the heat (if possible) and use a correctly fitted lid to smother the flames. If the lid is not available, a fire blanket (the larger the size the better) can be used. A domestic fire extinguisher can also be effective if you follow the manufacturer's instructions. Under no circumstances remove the lid or fire blanket or move the pot, until the pot has fully cooled down. NEVER put water on a oil/fat fire.

Before fighting any fire, always consider the size of the fire, the tools you have available to fight it and your physical capabilities. ALWAYS have a clear escape route behind you.

Don't forget to regularly clean the filter/s in the rangehood above the stove as these may ignite and take the flames through the flue into the ceiling.



First aid for burns and scalds

Contact with any excessive heat source may lead to a burn or scald. Prompt first aid will help the healing process and assist in a full recovery. Check these safety tips:

- Cool the affected area immediately with cold running water from a tap or shower and continue for at least 20 minutes.
- Do not remove any clothing that is sticking to the skin or wound at the burn site. Remove any rings, watches or other jewellery as quickly as possible due to likely swelling of the affected area.
- After cooling the injured area, apply a sterile non-stick dressing.
- If the burn is larger than the palm of the hand, phone Triple Zero (000).

Remember:

- Do not apply ice directly to the burn
- Cool the burn area only with water for 20 minutes
- Do not break blisters or remove peeled skin
- Do not try to remove any clothing that is stuck to a burn
- Do not apply creams, ointments, lotions or gels to a burn injury
- Elevate burned limbs where possible
- Maintain the injured person's body temperature
- Rest and reassure the injured person
- Monitor breathing until medical help arrives.

Bedrooms – plan a safe sleeping area

Injuries can occur in bedrooms so it is important to plan for future physical needs.

Not all measures require a huge outlay. Changes may include simply reducing clutter on the bedroom floor or making sure there is space for reading glasses on the bedside table. Check these safety tips:

- Install a telephone wall socket beside the bed for convenience and emergency calls (remember, cordless phones do not work if the power fails).
- Keep a torch handy if you cannot reach a light switch from your bed. If you have bedside lights, make sure you can reach them from the bed.
- Have a battery-powered radio nearby in case of power failure.
- Turn off the electric blanket before getting into bed.
- Never smoke in bed.
- Turn off and unplug electric blankets when not in use. When storing electric blankets roll them up – do not fold them.
- Keep the bedroom floor free of electrical cords and general clutter.
- Make sure your glasses are within easy reach for when you get out of bed.
- When getting out of bed, sit up and place both feet firmly on the floor before standing up.
- If you have a personal alarm pendant, sleep with it on.

safehome

*Individual households may receive free in-home safety advice from local firefighters.
Find out more about smoke alarms, escape plans and other key safety issues.*

For Safehome bookings, phone 13 QGOV (13 74 68).

Laundry – keep the path clear

Always keep laundries tidy because they are often used as an emergency exit or entry. Check these safety tips:



- Reduce clutter – set up a storage area for the ironing board, brooms etc
- Clean the clothes dryer filter after each use to reduce fire risk.
- Look after appliances and electrical leads such as the iron cord because these can fray and cause an electrical fire.
- Always have electrical repairs carried out by an authorised agent or electrician.
- Avoid the risk of chemical poisoning or misuse: do not transfer chemicals from their original container to another.
- Store chemicals in a locked cupboard which is inaccessible to children.
- Turning off the tap to the washing machine can reduce the risk of a burst hose causing an internal flood and a dangerously slippery floor.

Bathroom – a high risk fall area

Slippery surfaces or difficulties getting in or out of the bath or shower can cause slips, trips or falls in the bathroom or toilet. Plan NOW for your future needs in these areas. Check these safety tips:

- If the bathroom floor becomes particularly slippery when wet, investigate ways to reduce its slippery nature.
- Even if you are not currently frail, consider planning for the future by installing grab rails over the bath, in the shower recess and beside the toilet to reduce the risk of falls.
- Use non-slip strips in the bottom of the shower or bath.
- Where possible, avoid using the bath if you are unsteady on your feet.
- Make sure items such as hair dryers, radios and electric razors are not used in any damp areas and are out of the reach of children.
- Store medication and cleaning agents separately in locked cupboards.
- Re-fit bathroom/toilet doors or fit lift hinges so doors open outwards (a person may become trapped if they collapse against an inward-opening door).
- Most personal alarm pendants are water-proof. If you have one, wear it when you shower.

Scalds

To protect children and seniors, check the water temperature when running a bath or shower. Turn on the cold first, then add hot water and finish with cold. (The hot water temperature in most Australian homes is about 60°C, 10°C more than the ideal maximum safe temperature of 50°C.)

Steps to safety in a residential fire

If fire strikes your home, the air is much cleaner, cooler and clearer near the floor. When making your escape, keep as low as possible. Check these safety tips:

- Respond immediately. If survival means crawling on your hands and knees, 'Get down low and go, go, go'.
- Don't waste time investigating what's happened or trying to save valuables.
- After leaving the home, gather everyone at a suitable, safe location such as the letterbox.
- Once everyone is out, DO NOT GO BACK INSIDE THE HOUSE, not even for family pets or treasured belongings.
- Go to a neighbour's house and phone Triple Zero (000). For mobile phones see details in the Emergency Information List (on page 24).
- Wait outside for firefighters. Tell them where the fire started and whether anyone is still inside the house.
- Always make sure your house number is clearly visible to emergency vehicles.

If living in a high density building also consider...

- Know where the fire exits, fire stairs and firefighting equipment are located.
- Close all windows and doors to stop smoke entering your apartment.
- Don't use lifts in a fire. Use emergency exists or fire stairs. Fire stairs provide a path leading you to a safe place away from the building. If you cannot escape by the fire stairs, call Triple Zero, provide your unit number and follow the Operator's instructions.
- NEVER prop open fire doors or leave anything in fire stairs.

First aid for smoke inhalation

If a person has been exposed to smoke from a fire they may be suffering from smoke inhalation. The treatment for smoke inhalation is:

1. Assess the situation for danger.
2. Phone Triple Zero (000) and ask for the ambulance service.
3. Check the person for a response.
4. If the person is unconscious and not breathing normally, begin cardiopulmonary resuscitation (CPR).
5. If the person is conscious, reassure them and make them comfortable, sitting them upright often helps.
6. Monitor breathing until paramedics arrive.



Working photoelectric smoke alarms save lives

Fires start quietly and can spread very quickly. Smoke is a silent killer and when people are asleep they are unlikely to smell smoke.

Photoelectric smoke alarms give earlier warning of smouldering fires which maximises a person's escape time. As they are less prone to nuisance alarms, it's less likely that occupants will tamper with them which means they are ready to work when needed.

Smoke alarms help save lives by producing a loud warning sound that can give you time to get out of the house.

For your safety and peace of mind, correctly install smoke alarms on each level of your home, fitting them in living areas and outside bedrooms.

Advantages of interconnecting your smoke alarms

- When one smoke alarm is activated, all interconnected smoke alarms operate.
- When you close your door, the sound of the smoke alarm in the hallway or downstairs may not be loud enough to wake you.
- A Victoria University study indicates that 50% of deaths in house fires may have been prevented by interconnected smoke alarms.

Maintaining your smoke alarms

- Test your smoke alarms regularly and follow the manufacturer's instructions.
- Change the batteries of battery-operated alarms at least once a year – decide on a memorable day (e.g. April 1) or an anniversary, birthday or public holiday.
- Test and clean smoke alarms monthly using the nozzle of a vacuum cleaner or soft brush.
- Check the manufacturer's instructions for mains-powered smoke alarms as the back-up battery may require changing every 12 months.

QFES recommends...

All residential accommodation be fitted with photoelectric type smoke alarms.

- Smoke alarms be either hard-wired or powered by a non-removable 10-year lithium battery.
- Smoke alarms be located -
 - in every bedroom;
 - in hallways that serve bedrooms; and
 - between bedrooms and living space.
- All smoke alarms should be interconnected.



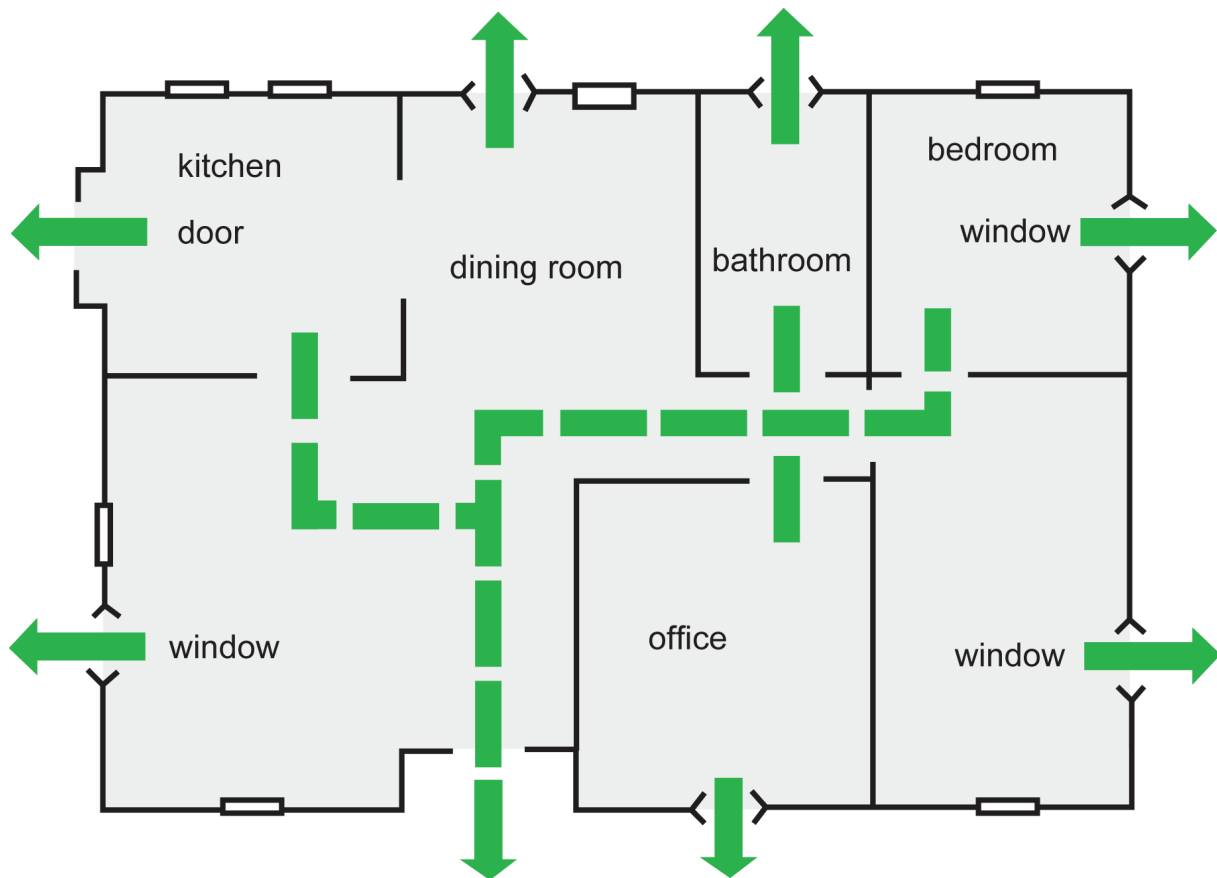
Home escape plan

When fire breaks out in the home it's far too late to start planning how to get out. That is why it is essential to prepare an escape plan in advance (see page 10).

First, draw a floor plan of the house showing two ways out of every room – particularly bedrooms – and make sure everyone knows the plan, even your guests.

Secondly, practise your escape, especially at night, first with the lights on and then with the lights off. This is a sensible method because distances are difficult to judge in the dark. In addition, during a fire, heavy smoke could add to the pressure of locating an exit point.

See 'Steps to safety in a residential fire' on page 7.



Overcrowding

Do not overcrowd a residence. Too many people living in one room increases the risk of fire and the additional clutter may impede escape.

Draw your home escape plan

A large grid of graph paper for drawing a home escape plan.

Balancing security against safety

Home security measures, such as deadlocks on doors and windows, may be necessary, however it is important not to let these precautions trap you inside your home in an emergency. Check these safety tips:

- Have one common key for all door locks.
- Keep a spare key where it cannot be seen or reached by intruders. For example, hang it in the middle of the back of a door.
- Choose window security screens that can be opened from the inside.
- Show all occupants, including overnight visitors, how to escape through security doors or windows if an emergency occurs.
- A spare key can be kept outside in a secure key safe.



Using barbecues on balconies

- Always store gas bottles outside, upright and away from sources of heat.
- When using a barbecue maintain a safe distance of 50cm from exterior walls, anything else that could burn, as well as any electrical ignition sources.
- Smokers should use heavy, high-sided ashtrays (made of glass, ceramic or metal) to prevent them tipping over. Always fully extinguish cigarettes.
- Remove rubbish, clutter and flammable items from balconies and keep furniture away from exterior walls.
- Keep goods, materials and clothes a safe distance of 1 metre clear of air conditioner units
- QFES recommends keeping a dry powder fire extinguisher easily accessible. Use only in case of a small fire and if you feel physically and mentally able.
- Never leave your cooking unattended.

The backyard – simple steps for safety

While the backyard is a natural retreat, as with many other areas of the home, there are a number of risky situations which may cause an injury. Check these safety tips:



- Clear out gutters regularly to prevent fire or storm damage (safety authorities recommend professional home maintenance people be engaged for this task).
- During the storm season, clean up and secure all loose items around the house.
- When moving a vehicle, know exactly where children are so they are not at risk. A safe method is to place them in the vehicle with you or ask an adult to supervise them.
- If operating electric garage doors, be extra careful when young children are around.
- Secure tools in a shed, particularly if there are children around.
- Store chemicals securely (see page 13).
- Keep pathways clear of slippery items and beware of uneven paving.
- Tidy up dog food and water bowls. Make sure dry dog food is not scattered on a path – the pellets can have the effect of ball bearings and lead to a serious fall.
- Remove poisonous or irritating plants or weeds (for further information call 13 11 26).
- Mow your lawn wearing closed-in footwear, long pants, a hat and ear protectors.
- Wear protective gloves when hands are likely to come into contact with venomous spiders (e.g. under pot plants, in wood pile).



Care with flammable items and household chemicals

Chemicals used every day around the home have the potential to harm people, the environment and can either cause or fuel a fire. Check these safety tips:

- Do not transfer chemicals from one container to another.
- Remove flammable materials such as oily rags, old newspapers and timber from under the house, in the shed or carport.
- Never store flammable materials near heat sources such as portable heaters and BBQs.
- When using chemicals, follow the directions on the label for storage and disposal and check the manufacturer's advice for recommended protective equipment and clothing.
- Avoid mixing common household chemicals; stored chemicals should be clearly marked.

For enquiries about chemicals: phone Smart Service Queensland on 13 QGOV (13 74 68).



Learn first aid

A first aid course with Queensland Ambulance Service (QAS) provides practical hands-on training so the public can gain the necessary skills and confidence to respond to an emergency. To enrol in a course or to find out more about any QAS product, phone 13 QGOV (13 74 68) or visit www.ambulance.qld.gov.au

Fire safety for caravans or mobile homes

Caravans and mobile homes can be used for recreational purposes or occupied as permanent dwellings in caravan parks.

Whatever the purpose, check these safety tips:



- Fit gas cylinders on the outside of the van or mobile home, or install them in a storage cabinet approved to Australian Standards.
- Make sure the relief valve of the gas cylinder is pointed away from the van in case the cylinder overheats.
- Turn off gas cylinders before towing your van or starting the engine of a mobile home.
- If your van or mobile home has been driven on rough roads, arrange for a qualified person to check gas cylinders, pipes and fittings.
- Make sure the power lead for your van or mobile home is a suitable size for the power load and is in good condition. Damaged cords must be replaced.
- Store clothes and linen away from the kitchen.
- Never leave cooking unattended.
- Know where the escape windows and hatches are located and how they work.
- Keep doors, windows and hatches clear of obstructions.
- Fit and maintain a smoke alarm.
- Make sure fire extinguishers are inspected and regularly serviced.
- For added safety, install a fire blanket near the caravan door.
- Store all flammable liquids outside the van but not under it.
- Have a first aid kit in your van or mobile home (see page 22).



Natural disasters

Nature reminds everyone from time to time not to take it for granted. Although storms, lightning, cyclones, floods, heatwaves and bushfires are some of the most common threats, tidal surges, landslides and earthquakes may also occur. You can help prepare your family and your home by developing an Emergency Plan, preparing your home and preparing an Emergency Kit (see page 22).



If you decide to evacuate or are requested to evacuate by a government agency, do so as soon as possible. Do not delay your departure until the last moment, especially if you are older or caring for young children. If you are instructed to evacuate, check these safety tips:

- Follow all instructions from emergency services personnel.
- Before an emergency situation develops, if time permits, telephone an out-of-town relative or friend to let them know where you are likely to be.
- Use travel routes specified by emergency services. Do not travel via a shortcut because certain areas may be impassable or dangerous.
- Allow for the special needs of infants, the aged and people with disabilities.
- Turn off the electricity, gas and water, unplug appliances, and lock doors and windows.
- Make sure all people in the household are wearing long-sleeved shirts, long pants, a hat and sturdy shoes for their protection.
- Take your emergency kit.
- Take important documents, as many as you can safely manage.
- Stay away from fallen power lines.
- If you go to an evacuation centre, notify the registration desk so others can find you.
- If you go to the home of a relative or friend, advise the evacuation centre.
- When told it is safe, return to your home and open windows to provide ventilation.

Signal sounds a warning

During major emergencies, Queensland residents are alerted by the sound of the Standard Emergency Warning Signal (SEWS) on radio or television, along with a message. To hear the signal, check the website www.emergencyalert.gov.au/frequently-asked-questions.html

If you decide to stay in your home during a natural disaster, make sure your home has been well prepared in advance. Check the following safety tips:

- Tune into your local radio and TV station to listen out for warnings, weather updates and local community safety announcements.
- Log onto the Bureau of Meteorology www.bom.gov.au (phone 1300 659 219- Qld only) for weather warnings and www.disaster.qld.gov.au for further information on disaster events.
- Have your emergency kit ready.
- Prepare a supply of medications for children and seniors with special needs.
- Have sufficient quantities of food (plus can opener) and water for at least three days.
- Pack sturdy footwear/clothing, strong plastic bags for documents, clothing and rubbish.

Natural disaster action guide

Storm and lightning

Severe storms can produce large hail, damaging wind, lightning and heavy rainfall and cause more damage than any other event. Preventative action, both outdoors and indoors, can reduce the risk from storms and lightning strikes. For example, check with your local electrical contractor for advice on surge protectors and lightning conductors. Check these safety tips on preparations you should take to minimise the risk to you and your property:



Before the storm

- Tune into your local radio station to listen for storm updates (portable radio).
- Disconnect computers, televisions and other electrical/electronic appliances.
- Keep guttering and downpipes clear; secure loose items in your yard.
- Store poisons above ground level in case of flash floods.
- Secure all windows and doors.

For more information to assist in developing your Emergency Plan, Emergency Kit and preparing your home, visit getready.qld.gov.au/.

During a storm

- Stay inside, take shelter, remain clear of windows and make sure your pets are safe. Avoid using fixed line telephones unless essential.
- Avoid contact with metal fixtures such as roofs, guttering, downpipes and taps.
- If outdoors, find safe shelter (solid building) but not under trees or metal structures. If far from shelter, crouch down, don't lie flat.
- Avoid metal objects such as ladders, umbrellas, fences and clothes lines.
- If driving, stop clear of trees, power lines and streams.
- If boating or swimming, leave the water immediately.

After the storm has passed

- Check the radio for updated weather reports and power outages.
- Confirm the location and safety of family members and neighbours.
- Beware of fallen power lines.
- Check your house for damage and trees for stability.
- Check your fuse box. Operate only essential household items.



Flood

Floods can happen in a flash so it's important to know your local area, particularly if there is a history of flooding. The Bureau of Meteorology provides the following warnings:

- Generalised flood warnings where flooding is occurring, or is expected to occur, in a particular region where no specialised warning systems have been installed
- Warnings for severe storms that may cause flash flooding
- Warnings of minor, moderate or major flooding in areas where specialised warning systems have been installed. In these areas the warning message will identify the river valley, the locations expected to be flooded, the likely severity of the flooding and when it is likely to occur.

When you hear warnings for the potential of flood or severe storm:

- Stay tuned into your local radio/ television station for warnings and updates.
- Identify evacuation routes and centres via your local council website and be ready to evacuate if necessary.
- Follow instructions from local authorities.
- Move vehicles, outdoor equipment, garbage, chemicals, poisons and valuables to higher locations.
- Check your Emergency Kit is fully stocked.

Cyclone

Cyclones are dangerous because they produce destructive winds, heavy rainfall and damaging storm surges. Collect information by asking neighbours, your State Emergency Service (SES) and the local council about whether cyclones have occurred in your area, what to expect and appropriate action to take. Be prepared with these safety tips:

Before the cyclone

- Tune into warnings via your local radio, TV station or BOM website to keep up to date on the progress of a cyclone.
- Find out if your home is in a storm tide evacuation area. If it is, arrange a safer place for your evacuation as part of your preparations.
- Decide as early as possible whether you are going to evacuate and check the radio for details of safe routes and when to move (evacuations may be necessary based on reports of predicted wind speeds and storm surge heights).
- Clear your property of loose material which could blow about causing injury or damage.
- Fit window shutters or metal screens.
- Trim tree branches well clear of your home.
- Follow the advice of local authorities for appropriate action during each cyclone stage.



During a cyclone

- Move into the strongest part of the house and shelter well clear of windows, doors and skylights.
- If the building begins to break up immediately seek shelter under a strong table or bench or under a heavy mattress.
- If you are told to return to your home, do so using the recommended routes only.
- Confirm the location and safety of family members and neighbours.

After a cyclone

- Remain indoors until you have received official advice that it is safe to go outside.

Bushfire

Bushfire is one of nature's most devastating forces and the risks increase with the number of people in or near bushland, in semi-rural areas and residential estates on the outskirts of cities and towns. Check these basic bushfire safety tips:



Before a bushfire

- Clean out gutters and clear overhanging trees.
- Tidy the yard, mow the grass and remove rubbish.
- Store flammable items away from the house.
- Check your firefighting equipment.
- Have an emergency kit and first aid kit ready.
- Ensure your property is easily identifiable.

During a bushfire

- Refer to your prepared Bushfire Survival Plan.

If you are going to prepare and leave:

- Notify your family and friends that you are leaving and where you are going.

If you are going to prepare and stay:

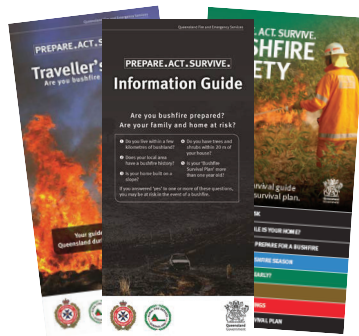
- Follow the plans you have made in your Bushfire Survival Plan.
- Notify your family and friends that you are staying.
- "Tune in" to the bushfire warnings and messages on your local radio.

After a bushfire

- Don't return to your home until it is safe.
- Remember to look out for dangers as you return home.
 - Emergency Crews working around the area.
 - Animals not behaving normally.
 - Trees that may have been weakened by the fire and can fall at any time.
 - Power lines that have come down or may fall and impact you.
 - Water and other infrastructure which may not be working.

People who are well prepared, both physically and mentally, can shelter in their homes and survive. If you are caught on the road during a bushfire, you stand a better chance of survival in your vehicle rather than fleeing on foot.

PREPARE.ACT.SURVIVE.



In a bushfire, your ability to make wise decisions depends on good planning and preparation. Information from the Rural Fire Service is available to assist you in this planning. Help may not always be close by, therefore you need to know the options without relying on authorities to tell you what is your best course of action. Apart from what you see, hear and smell, you may also receive fire updates directly from firefighters and police or via your telephone or local radio stations. Preparedness is the key.

Phone 13 QGOV (13 74 68) to receive free printed advice or to organise a bushfire presentation from local firefighters for your community group or street; or go to www.ruralfire.qld.gov.au.

Bushfire Warnings

When are warnings issued?

If a fire starts that may threaten life or property, warnings are issued. It's up to you to take notice, seek information, make decisions and act.

Remember, don't rely on one source of information.

What do warnings mean?



Advice
There is a fire in your local area, access information and monitor conditions.



Watch and Act
Fire is heading toward you, conditions are changing and you need to take action now to protect yourself and your family.

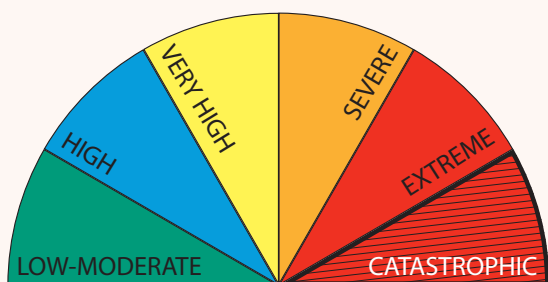


Emergency Warning
You are in imminent danger and need to take action immediately. You will be impacted by fire.

Fire Danger Ratings

The Fire Danger Rating (FDR) is an early indicator of potential danger, and should act as your first trigger for action. The higher the rating, the greater the need for you to act.

The FDR is an assessment of the potential fire behaviour, the difficulty of suppressing a fire, and the potential impact on the community should a bushfire occur on a given day.



Prevention of heat related illness

A heat wave occurs when there are more than a few days in a row of above-average temperature, often combined with high humidity. Babies, children under four years, older people, people with a chronic condition or illness, people who are overweight and people who undertake vigorous exercise are the most susceptible to the effects of a heat wave.

If a heatwave is predicted or is happening, you should do the following:

1. Drink water

- Drink small amounts of water every 15-20 minutes, even if you don't feel thirsty.
- Drink cool drinks – avoid the use of ice as it can cause cramps.
- Avoid drinks that contain alcohol, caffeine or a lot of sugar. They can cause dehydration.
- Monitor urine output. If you are passing less urine than usual you are not drinking enough. Urine should be clear to light straw colour – any darker could be a sign of dehydration.
- If you are on medication, check with your doctor about how much water you should drink.

Tip
Each morning, fill a large jug with water and ensure it is finished by the end of the day.

2. Modify your lifestyle

- Eat small meals and eat more often.
- Slow down and avoid strenuous activity.
- Wear lightweight, light coloured, cotton clothing.
- Take additional cool showers during the day.

Tip
Stay inside (with adequate ventilation) or visit an air conditioned building such as a shopping centre.

3. Staying inside

- Use blinds and curtains to shade your house from the sun.
- Stay inside between 10.00am and 3.00pm.

Tip
While you are at home, keep windows and doors open and use a fan to keep the air circulating.

4. Call family or friends

- Check on the wellbeing of family members, friends and neighbours.

Be alert to these signs of heat stress:

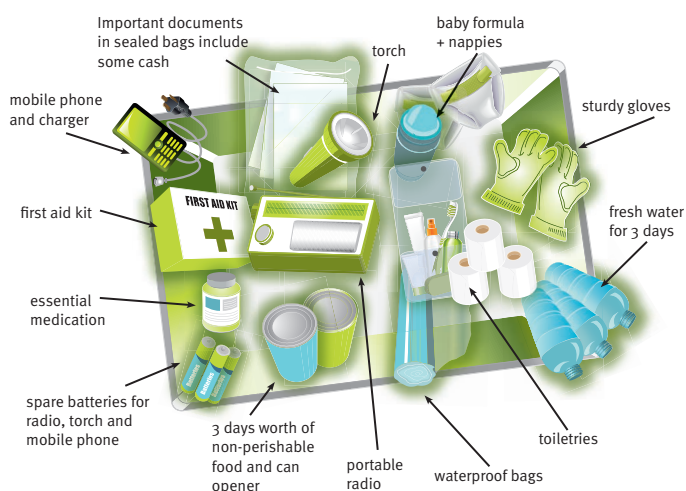
- *loss of appetite*
- *rising body temperature*
- *dry mouth and eyes*
- *tiredness, dizziness, headache*
- *nausea, loss of concentration*
- *muscle weakness or cramps.*

Remember:

If you have any doubts about your condition (or someone else's), phone Triple Zero (000), request the ambulance service and ask the Queensland Ambulance Service Emergency Medical Dispatcher for advice.

Emergency kit at the ready

For many emergencies, you may be able to shelter at home. In this situation you will need to rely on items you've included in your Emergency Kit. The items, which can include the following, should be stored in a sturdy carry bag or water-resistant container.



- Fresh water for three days
- Three days worth of non-perishable food and can opener
- First aid kit
- Portable radio
- Torch
- Sturdy gloves
- Spare batteries for radio and torch
- Essential medication
- Mobile phone and charger
- Important documents in sealed bags + cash
- Waterproof bags
- Toiletries

Additional items can include: medications, toiletry and sanitary supplies; special needs for infants, the aged and people with disabilities; sleeping equipment and spare clothes, including strong shoes, broad brimmed hat, leather gloves and sunscreen for each household member. Additional items may be needed if you need to evacuate.

For further suggested items visit the website getready.qld.gov.au/.

First aid kit

A general-purpose first aid kit should contain the following items which your pharmacist will be able to identify and supply.

1 packet of plastic strips	1 pair stainless steel scissors (sharp/blunt)
1 roll of non-allergenic tape	2 square gauze swabs
2 sterile eye pads	1 pair forceps
4 triangular bandages	1 pack (10) latex gloves
1 conforming gauze bandage (10cm)	1 resuscitation mask
1 conforming gauze bandage (7.5cm)	2 bottles eye irrigation (15ml)
1 conforming gauze bandage (5cm)	1 bottle antiseptic cream (50g)
1 hospital crepe bandage (10cm)	1 wound closure steri-strip
1 sterile combine dressing (9x10cm)	1 stainless steel splinter remover
1 sterile combine dressing (20x20cm)	1 bottle antiseptic solution (30ml)
1 sterile combine dressing (#14)	5 alcohol swabs
2 non-adhesive dressings (5x7.5cm)	1 first aid hints booklet
1 non-adhesive dressing (10x7.5cm)	

Triple Zero (000) calls

When should you make a Triple Zero (000) call?

Calls should only be made to Triple Zero (000) when police, fire or ambulance attendance is necessary in an emergency situation. When a situation does not fulfil this criterion, but still requires police, fire or ambulance attendance, you should obtain the appropriate numbers from the telephone directory or directory assistance.



What happens when you phone Triple Zero (000)?

Callers can be connected to police, fire or ambulance by phoning Triple Zero (000) from any fixed or mobile phone in Australia. Telstra operates the Triple Zero (000) emergency call service. Their role is to connect callers to the designated emergency services answer points as quickly as possible. You do not need to explain your emergency to this operator, simply advise them which service you require. The Triple Zero (000) service only deals with emergencies requiring police, fire or ambulance.

When requesting an emergency service, it is important to:

- STAY FOCUSED – answer the prompted questions
- STAY RELEVANT – use for emergency assistance only
- STAY ON THE LINE – until you speak to the requested emergency service.



SES
FLOOD STORM
EMERGENCY
132 500
www.132500.qld.gov.au
SES Assistance QLD Mobile App

- storm damage
- rising flood water
- damaged roof
- fallen trees on buildings

Emergency information list

Complete the emergency information list (on page 24) including your current health details, medications and allergies as well as your doctor/specialist details. Detach the page from this booklet and place it by your telephone.



Emergency information list

Ambulance • Fire • Police Triple Zero (000)	Other Emergency Numbers Local Council State Emergency Service (SES) 132 500 Electricity supplier Gas supplier Poisons Information Centre 13 11 26 QLD Government Electrical Safety Office 1300 362 128 For TTY phone 106 <i>Record other personal information in the sections below</i>
Phone 000 or 112 from mobiles if unsuccessful*	

In an emergency, contact...		
Name	Relationship (e.g. next of kin / friend) and address	Telephone

Personal details of household residents			
(You can bend this section underneath for privacy before placing this list by your phone)			
Resident's name. Date of birth	Medical conditions and allergies	Current medications and dose	Doctor/Specialist name and telephone

*For emergencies throughout Australia, phone Triple Zero (000). Although this number works on landline phones, if you phone Triple Zero (000) on some mobile phones it may not connect. In such cases, phone 112 on your mobile phone. If there is no mobile coverage available, you must phone Triple Zero (000) from a landline phone.



Develop an emergency plan

Find out about natural disasters that can occur in your area and decide how you can best prepare for such events. Here are some ideas to discuss and record on your Emergency Plan:

- Decide how you would keep in touch with carers and family and where you would evacuate to if required. Include a list of contact numbers on your Emergency Plan.
- Nominate two meeting places, one near your home and another outside your neighbourhood that you can easily evacuate to. Family or friends who live in secure accommodation further inland and on higher ground are the best option. Record these two locations on your Emergency Plan.
- Nominate an out of town or interstate family member or friend to be a point of contact in case you and your immediate family become separated and record their contact details on your Emergency Plan.
- Make a list of personal and household items to take with you in the case of evacuation.

Learn CPR

Queensland Ambulance Service (QAS) provides an accredited Perform Cardiopulmonary Resuscitation (CPR) course. The CPR training course assists members of the public to respond to and manage an unconscious casualty, perform CPR and communicate details of the incident.



To enrol in a course or to find out more about any QAS product, phone Smart Service Queensland on 13 QGOV (13 74 68) or visit www.ambulance.qld.gov.au.

Pets in emergencies

- Some evacuation centres may not accept animals so have an alternative plan
- If moving animals to a safer place, do so early to avoid unnecessary risk
- If staying at home, secure animals early so they do not take flight
- If you have to leave pets behind, try to leave them indoors in separate rooms with small or preferably no windows (e.g. laundry, bathroom)
- Provide adequate food and water in large heavy bowls
- If pets are left outside, do not tie them up.

Remember:
Your family's safety is paramount. Do not risk human life trying to find and protect pets.

Your final home safety checklist

At the very least, make sure you have these items covered in a final safety check:

- Street number clearly visible day and night
- Smoke alarm cleaned and a fresh battery installed
- Home escape plan prepared
- Fire extinguisher and fire blanket available
- Emergency plan developed
- Evacuation plan prepared
- Emergency Information List completed
- Emergency kit prepared
- First aid kit available



PREPARE. ACT. SURVIVE.
**BUSHFIRE
SAFETY**

Your home survival guide
and bushfire survival plan.



KNOW YOUR RISK



Photo: Pierre Smithdorf

Bushfires can affect just about anywhere in Queensland.

They move fast, can be highly destructive to both land and property, and can pose a serious threat to life.

In a state as big as Queensland, don't assume you'll receive a warning as a fire approaches and don't assume a fire crew will be available to assist every home. It's important that you have a plan in place and know exactly what you can do to protect yourself, your family and your property.

When is bushfire season where you live?



QUEENSLAND'S FIRE SEASON IS AT A DIFFERENT TIME TO OTHER AUSTRALIAN STATES.

It normally begins in July in the far north and progresses to southern areas as spring approaches, extending through to February in some southern and far south-western areas.

These times can vary from year to year depending on the condition of local bushland, long-term climate conditions and short-term weather events.

You need a Bushfire Survival Plan

All Queenslanders should be prepared for bushfire. If you answer yes to any of these questions and you don't have a plan you could be putting yourself, your family and your property at risk:

- Do you live within a few kilometres of bushland?
- Does your local area have a bushfire history?
- Do you have trees and shrubs within 20m of your home?
- Is your home built on a slope?

HOW VULNERABLE IS YOUR HOME?



How bushfire safe is your home and property?



ALL HOMES ARE VULNERABLE TO FIRE,
HOW DOES YOURS COMPARE?

Use this handy checklist to assess the vulnerability of your home to fire. The more boxes you tick, the safer your home is against fire.

Does your home have:

- Sealed roof ridge capping.
- Enclosed eaves.
- Roof gutters and valleys clear of leaf litter and fine fuels.
- An enclosed underfloor.
- Screened vents.
- Unrestricted driveway gate access.
- Vehicles able to reverse in.
- Turning or passing areas for vehicles.
- Heavy vehicle access on cattle grid or bridge.
- Two-wheel drive access.
- An alternative way out for vehicles.

Is it:

- Clear of overhanging vegetation.
- Clear of overhead powerlines.

Do you have an accessible water supply:

- Reticulated water supply.
- Tank supply suitable for firefighter access – 50mm male camlock fitting.
- Firefighter accessible external open water supply such as a dam or pool.
- Firefighting pump and hose connected to water supply.

IF YOU'RE UNSURE ABOUT YOUR LEVEL OF RISK OR REQUIRE ASSISTANCE, CONTACT YOUR LOCAL FIRE STATION OR CALL **13 QGOV (13 74 68) TO BOOK A BUSHFIRE SAFETY PRESENTATION.**

BASIC STEPS TO PREPARE FOR A BUSHFIRE



IT'S TOO LATE TO START PLANNING WHEN A FIRE IS ALREADY APPROACHING, SO HAVING A BUSHFIRE SURVIVAL PLAN IN PLACE WELL IN ADVANCE MAKES GOOD SENSE.

And remember, you don't have to live in the bush to be threatened by bushfires, just close enough to be affected by burning material, embers and smoke.

What will you do?

Prepare your property and family now, so everyone knows what actions to take to survive.

Start your Bushfire Survival Plan here:



PREPARE FOR BUSHFIRE SEASON



WILL YOU LEAVE EARLY?



WILL YOU STAY?



TUNE IN TO WARNINGS

Know your Neighbourhood Safer Place

A Neighbourhood Safer Place (NSP) is a local open space or building where you can seek shelter from a bushfire as a place of last resort.

For that reason, it's important you:

- Make sure you know the travel time and distance to a NSP and if one is available.
- Include your NSP details in your Bushfire Survival Plan.
- Check before bushfire season to confirm that your NSP has not changed location.
- Never drive through fire affected areas to get to a NSP.

TO FIND OUT ABOUT NSPs IN YOUR LOCAL GOVERNMENT AREA VISIT [RURALFIRE.QLD.GOV.AU](https://ruralfire.qld.gov.au) AND CLICK ON THE LINK TO NEIGHBOURHOOD SAFER PLACES.

PREPARE FOR BUSHFIRE SEASON



AN UNPREPARED PROPERTY IS NOT ONLY AT RISK ITSELF BUT MAY ALSO PRESENT AN INCREASED DANGER FOR NEIGHBOURS.

Here are some things you can do:

Structure

- Clear leaves, twigs, bark and other debris from the roof and gutters.
- Purchase and test the effectiveness of gutter plugs.



Torch



First aid kit



Medications



Towels



Blankets
(natural fibres)



Ladder



Shovel



Mop



Bucket



Hoses



Fire extinguisher



Knapsack sprayer

Is your property able to withstand the impact of bushfire?

Do you have well-maintained firefighting resources and equipment and know how to use them? Make sure you clearly understand what you will do to protect your life and property when the fire arrives and **discuss details of your plan with family, friends and neighbours.**

- Enclose open areas under decks and floors.
- Install fine steel wire mesh screens on all windows, doors, vents and weep holes.
- Point LPG cylinder relief valves away from the house.
- Conduct maintenance checks on pumps, generators and water systems.
- Seal all gaps in external roof and wall cladding.

Access

- Display a prominent house or lot number in case it is required in an emergency.
- Ensure there is adequate access to your property for fire trucks – four metres wide by four metres high, with a turn-around area.

Vegetation

- Reduce vegetation along the access path.
- Mow your grass regularly.
- Remove excess flammable material like long dry grass, dead leaves and branches.
- Trim low-lying branches to a height of two metres from the ground surrounding your home.

Personal

- Check that you have sufficient personal protective clothing and equipment.
- Relocate flammable items away from your home, including woodpiles, paper, boxes, crates, hanging baskets and garden furniture.
- Check the first aid kit is fully stocked.
- Make sure you have appropriate insurance for your home and vehicles.
- Find out if there is a nearby Neighbourhood Safer Place.
- Review and update your household Bushfire Survival Plan.

WILL YOU LEAVE EARLY?



IF YOU PLAN TO LEAVE EARLY, THEN YOU MUST LEAVE YOUR HOME WELL BEFORE A BUSHFIRE THREATENS AND TRAVELLING BY ROAD BECOMES HAZARDOUS.

Bushfire Evacuation Kit

Ensure you and your family have all the important items and equipment required to relocate for the time needed.

Protective clothing for you and your family.



Long sleeve shirt



Jeans



Boots



Hat



Safety goggles



Bottled water (enough for all)



Battery-operated radio



Batteries



Mobile phone & charger



Blankets (natural fibres)



Passports & birth certificates



Wallets/purses



Medications



Family photos, valuables & documents



Children's toys



WHETHER YOU'RE LEAVING OR STAYING, THERE ARE SOME BASIC PRECAUTIONS YOU SHOULD TAKE WELL BEFORE THE FIRE FRONT ARRIVES, BECAUSE A WELL-PREPARED PROPERTY STANDS A GREATER CHANCE OF SURVIVING.

- Move cars to a safe location.
- Remove garden furniture, door mats and other items.
- Close windows and doors and shut blinds.
- Take down curtains and move furniture away from windows.
- Block downpipes (at the top) and fill gutters with water if possible.
- Bring pets inside and restrain them (leash, cage or a secure room) and provide water.
- Seal gaps under doors and windows with wet towels.
- Wet down the sides of the buildings, decks and close shrubbery in the likely path of the bushfire.
- Wet down fine fuels close to buildings.
- Put on protective clothing.
- Drink lots of water.
- Tune in to warnings – monitor local radio, websites and social media for updates.

You may also need to consider:


- Turning on garden sprinklers for 30 minutes before the bushfire arrives.
- Filling containers with water – baths, sinks, buckets, wheelie bins.



Contingency Plan

HAVE A CONTINGENCY PLAN, JUST IN CASE. FOR EXAMPLE, A RAPID ONSET FIRE COULD MAKE TRAVEL DANGEROUS AND FORCE YOU TO STAY OR YOUR VEHICLE MAY BE UNAVAILABLE OR NOT WORKING.



 **PREPARATION IS THE KEY TO SURVIVAL. BEING INVOLVED IN A FIRE WILL BE ONE OF THE MOST TRAUMATIC EXPERIENCES OF YOUR LIFE. YOU WILL NEED TO BE MENTALLY AND PHYSICALLY READY AND YOU WILL NEED TO HAVE A PLAN.**

Bushfire Emergency Kit

If you elect to stay, are forced to stay at your home or your escape is hindered, a Bushfire Emergency Kit will offer you a basic level of protection and should be part of your household contingency plan.

Protective clothing for you and your family.



- Enclose open areas under decks and floors.
- Install fine steel wire mesh screens on all windows, doors, vents and weep holes.
- Point LPG cylinder relief valves away from the house.
- Conduct maintenance checks on pumps, generators and water systems.
- Seal all gaps in external roof and wall cladding.



WHETHER YOU LEAVE OR STAY THERE ARE SOME BASIC PRECAUTIONS YOU SHOULD TAKE WELL BEFORE THE FIRE FRONT ARRIVES. THESE ARE COVERED ON THE 'WILL YOU LEAVE EARLY?' PAGE.

As the fire front arrives:

- Disconnect hose and fittings and bring inside.
- Go inside for shelter.
- Drink lots of water.
- Shelter in your house on the opposite side from the approaching fire.
- Patrol and check for embers inside, particularly in the roof space.
- Check on family and pets.
- Maintain a means of escape.
- Continually monitor conditions.

After the fire front has passed:

Check for small spot fires and burning embers:

- Inside the roof space.
- Under floor boards.
- In the under house space.
- On verandahs and decks.
- In roof lines and gutters.
- In garden beds and mulch.
- In wood heaps.
- Around outdoor furniture.

TUNE IN TO WARNINGS



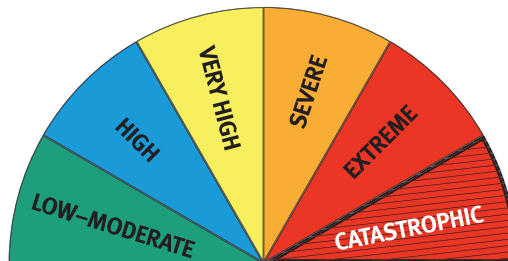
DON'T ASSUME YOU WILL RECEIVE A WARNING AS A FIRE APPROACHES.

It's up to you to monitor conditions, know what the Fire Danger Rating is each day and stay connected to local media, radio stations, websites like ruralfire.qld.gov.au and social media.

Know your Fire Danger Ratings (FDR)

There are six categories of danger ranging from low-moderate to catastrophic. On days when the FDR rating is catastrophic, leaving early is the only option for your survival. On days when it is lower than catastrophic, your decision to leave or stay will form the basis of your Bushfire Survival Plan.

Keep up to date with your local Fire Danger Ratings every day at ruralfire.qld.gov.au/pages/FDR.aspx



LOW-MODERATE

- A fire with a 'low to moderate' rating can be easily controlled and poses little or no risk to life or property.
- During a fire with a 'low to moderate' rating you should know where to get more information and monitor the situation for any changes.

HIGH

- A fire with a 'high' danger rating is a fire that can be controlled, where loss of life is unlikely and damage to property will be limited.
- During a fire with a 'high' danger rating you should know where to get more information and monitor the situation for any changes.

VERY HIGH

- A fire with a 'very high' danger rating is a fire that can be difficult to control, with flames that may burn into the tree tops. During a fire of this type, some homes and businesses may be damaged or destroyed.
- During a fire with a 'very high' danger rating you should use your home as a place of safety only if it is well-prepared and well-constructed.

SEVERE

- A fire with a 'severe' rating may be uncontrollable and move quickly, with flames that may be higher than roof tops. A 'severe' fire may cause injuries and some homes or businesses may be destroyed.
- During a fire with a 'severe' rating leaving is the safest option for your survival. Use your home as a place of safety only if it is well-prepared and well-constructed.

EXTREME

- A fire with an 'extreme' rating may be uncontrollable, unpredictable and fast moving. The flames will be higher than roof tops. During an 'extreme' fire, people may be injured and homes and businesses may be destroyed.
- During an 'extreme' fire well-prepared and well-constructed homes may not be safe. Leaving is the only option for your survival.

CATASTROPHIC

- A fire with a rating of 'catastrophic' may be uncontrollable, unpredictable and fast moving. The flames will be higher than roof tops. Many people may be injured and many homes and businesses may be destroyed.
- During a 'catastrophic' fire well-prepared and well-constructed homes will not be safe. Leaving is the only option for your survival.

Know your Bushfire Warnings

There are three levels of official Bushfire Warnings. You should be able to recognise them and act on them accordingly.



ADVICE

MONITOR CONDITIONS.

Review your **Bushfire Survival Plan**.

When an Advice warning is issued for your area, it indicates a fire or other emergency has started, however there is no immediate threat.

You should...

- Note there is a fire nearby.
- Understand there is currently no threat to property.
- Tune in to local radio or log on to the web or social media. to stay informed.
- Review your **Bushfire Survival Plan**.



WATCH & ACT

CONDITIONS ARE CHANGING.

Start taking action and follow your Bushfire Survival Plan.

When a Watch & Act warning is issued for your area, there is a heightened level of threat, you need to be aware of your situation and take action to be prepared and protect yourself and your family.

Be aware that...

- There is a heightened level of threat.
- Bushfire conditions in your area are changing.
- A fire is approaching you.
- Your life may come under threat.
- You need to start taking appropriate action now to protect yourself and your family.
- You could be impacted and should prepare to enact your **Bushfire Survival Plan**.



EMERGENCY WARNING

YOU ARE IN DANGER.

Act on your Bushfire Survival Plan now.

When an Emergency Warning is issued for your area, you are in danger.

You should...

- Take immediate action recommended by the Fire Service in its warning message.
- Enact your **Bushfire Survival Plan**.
- Make sure you are ready for any emergency and prepare for the fire to impact where you are if you are not able to leave.

Tune in to local media including radio, social media and websites

- Current bushfires map – ruralfire.qld.gov.au/map/pages/default.aspx
- Find your local ABC radio – abc.net.au/newsradio
- Find your local commercial radio – commercialradio.com.au/find-a-station/queensland
- QFES Facebook – facebook.com/QldFireandRescueService
- QFES Twitter – twitter.com/QldFES
- Rural Fire Service – ruralfire.qld.gov.au

PHONE TRIPLE ZERO (000) for life-threatening emergencies.

MY BUSHFIRE SURVIVAL PLAN



Create your Bushfire Survival Plan

Name:

Address:

List name and contact details to remember your:

Insurer:

Electricity:

Gas:

Phone:

Internet:

Council:

School:

Work:

Neighbours:

Neighbours:

Others:



Leaving?

Who will leave early:

Name:

Pets:

When will they go? (List the triggers for leaving)

Where will they go?

How will they get there?

What will they take?



Staying?

Who will stay:

Name:

What is the plan for livestock and pets?

Before there is a fire, how will you get yourself and your property ready?

If a fire is approaching, what steps will you take so you and your home can withstand the fire?

As the fire front arrives, where will you safely monitor the fire from inside your home?

After the fire has passed, what areas of your property will you check for spot fires and burning embers?



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(Queensland Fire and Emergency Services) July 2017.
QFE00061/ 1/17B

www.ruralfire.qld.gov.au



LIGHTING FIRES IN QUEENSLAND

Fire can be a useful tool for managing weeds, pastures, and reducing bushfire risk. Fire can also be used to achieve ecological outcomes such as the regeneration of some plant species or the improvement of habitat for wildlife. However, if used inappropriately, fire can endanger lives, properties and the environment.

Lighting fires on your property is regulated under the *Fire and Emergency Services Act 1990 (the Act)* which is the principal legislation for fire prevention and fire protection in Queensland. The Act provides the authorisation for the use of fire throughout the state. You may require a permit to light fire to use fire on your property for debris removal (stack burn) or to burn a larger area for hazard reduction, pasture management, or other land management purposes.

Note: Smoke from your fire can negatively impact on your community and neighbours and can contribute to local and regional air pollution issues. Many Local Government Authorities have local laws in place that restrict or prohibit the lighting of fires in part or all of the local government area. Always check with your local Council if you can use fire on your property.

Contact Us

Barcardine	(07) 4651 1190
Bundaberg	(07) 4154 6120
Burnett	(07) 4172 8700
Caboolture	(07) 5420 3733
Cairns	(07) 4232 5468
Caloundra	(07) 5293 4206
Darling Downs	(07) 4698 5720
Emerald	(07) 4843 9020
Gladstone	(07) 4899 2200
Innisfail	(07) 4063 4004
Mackay	(07) 4965 6641
Maryborough	(07) 4190 4839
North West	(07) 4761 5130
Rockhampton	(07) 4932 8129
Roma	(07) 4578 0045
South Coast	(07) 5587 4101
Townsville	(07) 4796 9082
West Moreton	(07) 3294 4944

As a landholder in Queensland you are ultimately responsible for managing fire on your land. The following information provides advice for those planning to burn vegetation or use fire on their property.

Remember - Your fire – your responsibility!



www.ruralfire.qld.gov.au



RFS 00011 05/20A

Do you need a Permit to Light Fire?

A Permit to Light Fire (permit) is required for most fires and must be obtained from your local Fire Warden to use fire on your land. There are significant liabilities and penalties for failing to obtain a permit or failing to comply with permit conditions.

The aim of a permit is to ensure your fire will be managed safely and may include certain conditions on the way the fire is lit and maintained. It also informs fire services on when and where you intend to burn ensuring that adequate measures are in place so that fires remain under control.

A permit application can be made through your local Fire Warden by using an application form, available from your Fire Warden or the Rural Fire Service (RFS) website.

Before applying for a permit you need to make reasonable steps to contact your neighbours and inform them of your intent to apply, allowing a reasonable timeframe for your neighbours to contact the Fire Warden to lodge an objection or to assist with a more coordinated property burn.

Following receipt of your application, the Fire Warden will assess the intended burn and if a permit is issued, impose a range of conditions to reduce risk or nuisance to people, property, and the environment. The Fire Warden can also refuse an application if they believe that appropriate safety measures cannot be reasonably achieved, or if neighbours have not been given enough time to raise any concerns about the intended fire.



Fire Bans

If there is a period of extreme fire danger where predicted conditions and weather forecasts indicate that fires may be difficult to control and pose a danger to communities, or if there is a rising fire emergency, a local fire ban or a State of Fire Emergency may be declared.

A **Local Fire Ban** can be declared over part or all of a local government area and generally prohibits the lighting of all or certain types of fires.

A **State of Fire Emergency** can be declared for part or all of the state. This declaration imposes stricter restrictions and prohibitions on lighting fires and can prohibit the use of certain tools and equipment that can pose a fire risk. When, declared it is published in the Queensland Government Gazette advertising the timeframe of the declaration and the areas to which the emergency situation applies. This ban remains in force until cancelled.

These bans can impose the following restrictions:

- The lighting of fires in the declared fire ban areas may be prohibited, subject to any special conditions or exemptions.
- Open fires may be prohibited (Gas and electric barbecues may be used).
- Permits to Light Fire issued in the declared area may be cancelled.
- Other special conditions (or exemptions) may be imposed.

Where can I find information on fire bans?

- Check the RFS website at www.ruralfire.qld.gov.au
- Call the Fire Ban Information Line on 1800 020 440
- Check the weather forecast and warnings at www.bom.gov.au
- Monitor your local radio station, television channel and newspaper.

Further Information

These brochures will provide you with additional information that will assist you in safely using fire on your property and are available from RFS Area Offices or the RFS website.

- Applying to Light Fires in Queensland
- Obligations and Responsibilities of Permit Holders

Fires that do not require a permit

Under the Act there are a number of fires that normally do not require a permit. Some fires may be prohibited in your local government area under a local law or other legislation. If your local Council have fire restrictions in place contact your local Fire Warden to discuss your fire management options.

Providing that adequate precautions are taken to prevent the spread of fire, the following fires may be lit without a permit:

- Fires less than two (2) metres in all directions (these fires are not exempt during fire bans and you must obtain a permit from a fire warden).
- BBQs and campfires (for cooking), enclosed in a fireplace, constructed to prevent the escape of fire or embers.
- A fire lit for the purpose of burning the carcass of a beast.
- A fire lit at a sawmill for the purpose of burning sawdust or other residue resulting from the operation of a sawmill.
- A cane fire may also be subject to a notification and may be lit under certain conditions.

Note: if you plan to mechanically clear native vegetation to burn, you may need to obtain a separate permit for clearing vegetation under Queensland's Vegetation Management Laws.

Note: You can find your local Fire Warden by using the Fire Warden Finder on the RFS website or by contacting the local RFS Area Office.

DO SOMETHING EXTRAORDINARY

in the Rural Fire Service



**ALL IN.
ALL FRONTS.**



ARE YOU ALL IN?

YOU CAN

- Learn new skills
- Form new friendships**
- Gain valuable qualifications
- Have Fun**
- Be active as part of a team

Contact your local
Rural Fire Service Area Office
or visit qfes.qld.gov.au/employment

Local Area Office and Brigade

South Coast
Phone: 5587 4101
32 Mudgeeraba Road
WORONGARY QLD 4213

RURAL FIRE SERVICE VOLUNTEER

With approximately 32,000 dedicated volunteers, in approximately 1,400 Rural Fire Brigades, the Rural Fire Service (RFS) provides fire services across 93% of Queensland.

Rural Fire Brigades operate in areas not covered by the Fire and Rescue Service to help create resilient communities in the face of fire and natural disasters.

The RFS needs all types of people with a wide range of skills to keep brigades running. Volunteers participate in a range of activities including firefighting, incident management, communications, catering, administration, and community education.

HAVE YOU GOT WHAT IT TAKES?

- » Enthusiastic, adventurous, and willing to give back to your community
- » Willing and able to activate during disasters and emergencies
- » Applicants may be required to possess a certain level of fitness appropriate to the role and the functions they will be performing



ABOUT THE ROLE

Being part of the Rural Fire Service offers fantastic opportunities for self-development. Members of rural brigades receive training and skills that can assist in all areas of life.

Brigade members learn:

- » Teamwork
- » Leadership skills
- » Incident management
- » Fire behaviour
- » Communication

Many volunteers go on to undertake further training. These are skills that will not only help you in your role in the brigade, but in your every day life as well.

YOU CAN

Learn new skills

Be part of a team

Make new friends

Save lives

BUSHFIRE HAZARD ASSESSMENT & MANAGEMENT PLAN



Burleigh Heads Estate Pty Ltd

**QLD FIRE & EMERGENCY SERVICES
CITY OF GOLD COAST BUSHFIRE PLANNING**

BUSHFIRE MANAGEMENT PLAN ASSESSED

File No: MIN/2020/683

This Plan is to be read in conjunction with QFES
Cover Sheet bearing the same file number.

Prepared by
Rob Friend & Assoc. Pty Ltd



March 2021

DOCUMENT CONTROL

RFA21-004

QUALITY ASSURANCE STATEMENT				
Revision No.	Author	Status	Approved for Issue	
			Name	Date
01	Lucy Ford	Draft	Rob Friend, Director, Rob Friend & Associates Pty Ltd	08/03/2021
02	Lucy Ford	Final	Rob Friend, Director, Rob Friend & Associates Pty Ltd	9 March 2021

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Cover Photo: View from top of the ridge over the proposed development site toward Lot 1.



**QLD FIRE & EMERGENCY SERVICES
CITY OF GOLD COAST BUSHFIRE PLANNING**

BUSHFIRE MANAGEMENT PLAN ASSESSED

MIN/2020/683

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**QLD FIRE & EMERGENCY SERVICES
CITY OF GOLD COAST BUSHFIRE PLANNING**

BUSHFIRE MANAGEMENT PLAN ASSESSED

MIN/2020/683

File No:

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Cover Sheet bearing the same file number.

INTRODUCTION

Rob Friend and Associates have been engaged by Burleigh Heads Estate Pty Ltd to provide a Bushfire Hazard Assessment in support of a Minor Change development Application in Gold Coast City Council (GCC) over land located at Pacific Hwy, Burleigh Heads currently described as Lot 118 on SP316002 and Lot 117 on SP316001.

A site inspection was undertaken on the 19 February 2021 to collect the site-based data to inform this advice.

PROPOSAL

The development application is for a Minor Change to the existing approved development which seeks, in its amended form, a development permit for Reconfiguring a Lot (ROL) to create 61 Residential Lots, Lot 1 - and 5 management lots, internal roadways, access easement and greenspace.

The land within which the residential lots are located have been recently cleared of vegetation under an operational works approval.

SITE DESCRIPTION

General

The site is located at Cowell Drive, Burleigh Heads within a residential area and south of the Pacific Motorway. Sharing the southern boundary are large residential blocks off Sullivan Road and Fenton Drive that are partly vegetated. We note that a number of these lots have cleared the understorey under a eucalypt canopy. These lots are all upslope from the proposed residential lots.

To the west is a medium density residential development with access to the site from Cowell Drive. The eastern boundary is shared with a large block residential property that is clear of vegetation and has a small drainage line abutting the eastern boundary of the site. The Sullivan Road turn around is currently located adjacent the north east corner of the site. The land directly north is under the control of the Department of Transport and Main Roads.

Vegetation has been retained within Lot 900, which is designated as a Conservation Area due to it containing the Endangered Regional Ecosystem 12.11.23 *Eucalyptus pilularis* open forest on coastal metamorphics and interbedded volcanics.

Master Lots 1000-1003 are located in the western corner of the site. Master Lot 1003 currently contains a grassland and low lying land which retains ephemeral water following rainfall events.

Vegetation in the north eastern corner will be retained and is currently a wetland dominated by weeds and will be rehabilitated as a wetland community precinct, including walkways and access from local parkland within the development.

**QLD FIRE & EMERGENCY SERVICES
CITY OF GOLD COAST BUSHFIRE PLANNING**

BUSHFIRE MANAGEMENT PLAN ASSESSED

MIN/2020/683
File No:

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BUSHFIRE MANAGEMENT PLAN ASSESSED

File No: MIN/2020/683
.....

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Figure 1: Nearmap imagery of the development site

Landform

The site has a general upslope characteristic to the south east with waterway drainage lines intersecting low undulating hills, flowing from south to north. The low point of the site stretches the length of the northern boundary, with wetland and waterholes in neighbouring properties to the north.

The topography within and around the development land has a significant influence on bushfire behaviour and as such the strategy will seek to take advantage of the topography where it assists in limiting the rate of spread and bushfire intensity.

Vegetation

The State's Regulated Vegetation Management Area Map, maps vegetation abutting the southern and eastern boundary as Category B Regulated vegetation consisting of the "Of Concern" RE12.11.25. And a relative smaller area, of the "Endangered" RE12.11.23.

Furthermore, there is also a relatively small area of the Regional Ecosystem 12.3.11 located in the north-eastern corner of the development area. based on our initial assessment this area may be better described as regrowth and potentially Category X or C depending on the species dominance. However, initial observations indicate while there were a number of Acacia species and several immature eucalypt species the area was dominated by a range of shrub and grass environmental weeds over a disturbed sub-strata.

Vegetation in the western corner of the development site, adjacent to the end of Cowell Drive is mapped as Category C, high value regrowth area containing "Of Concern" regrowth. Based on our site observations this mapping would appear to be correct.

The Regional Ecosystems described within and adjacent to the site are: -

RE12.11.25 - *Corymbia henryi* and/or *Eucalyptus fibrosa* subsp. *fibrosa* woodland. Other frequently occurring canopy species may include *Eucalyptus crebra*, *E. carnea*, *E. tindaliae*, *E. siderophloia*, *C. citriodora* subsp. *variegata*, *Angophora leiocarpa*, *E. acmenoides*, *E. helidonica*, *E. propinqua*, *C. intermedia* and *E. seeana*. Rarely includes patches of *E. dura*. Usually occurs on low hills, hills and foot slopes of mountains in near coastal areas on Palaeozoic and older moderately to strongly deformed and metamorphosed sediments and interbedded volcanics. (BVG1M: 10b).

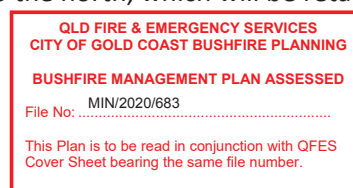
RE12.11.23 - *Eucalyptus pilularis* open forest. Other canopy species include *E. microcorys*, *Corymbia intermedia*, *Angophora woodsiana*, *E. tindaliae* and *E. carnea*. *E. racemosa* subsp. *racemosa* and *Corymbia trachyphloia* are prominent in the Venman area whilst *C. gummifera* and *E. resinifera* are prominent in the Nerang area. Occurs on low coastal Palaeozoic and older moderately to strongly deformed and metamorphosed sediments and interbedded volcanics (Neranleigh-Fernvale beds). (BVG1M: 8b). This regional ecosystem is confined to the lower portions of a singly gully which drains into the subject site through Lot 900.

RE12.3.11 - *Eucalyptus tereticornis* +/- *E. siderophloia* and *Corymbia intermedia* open forest to woodland. *Corymbia tessellaris*, *Lophostemon suaveolens* and *Melaleuca quinquenervia* frequently occur and often form a low tree layer. Other species present in scattered patches or low densities include *Angophora leiocarpa*, *E. exserta*, *E. grandis*, *C. trachyphloia*, *C. citriodora* subsp. *variegata*, *E. latisinensis*, *E. tindaliae*, *E. racemosa* and *Melaleuca sieberi*. *E. seeana* may be present south of Landsborough and *Livistona decora* may occur in scattered patches or low densities in the Glenbar SF and Wongi SF areas. Occurs on Quaternary alluvial plains and drainage lines along coastal lowlands. Rainfall usually exceeds 1000mm/y. (BVG1M: 16c)

The vegetated wetland area to the immediate north of development site, up to the M1 Motorway is managed by the Department of Transport and Main Roads (TMR). The vegetation currently existing within this site is seasonally inundated wetland grasses and sedge land. To the west of this grassy wetland is a large natural waterbody with associated vegetation to the north, which will be retained.

BUSHFIRE HAZARD MAPPING

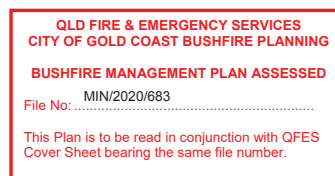
State



The State Planning Policy Natural Hazards, Risk and Resilience Bushfire Overlay maps polygons of Very High and High Potential Bushfire Hazard over the southern and eastern vegetation within and adjacent to the site. The associated Potential Impact Buffer Zone covers the majority of the remaining area of the site. It should be noted that a large portion of vegetation within the site boundaries, currently mapped by the state as bushfire hazard, has been cleared for the proposed development. There is a polygon of Very High Bushfire Hazard over remaining vegetation in the western corner of the site.

Local

The Gold Coast City Plan Bushfire Overlay maps areas consistent with the State as very high and high potential bushfire hazard over the southern and eastern portions of the site, as well as adjacent properties. There is a polygon of very high bushfire hazard over remaining vegetation in the western corner of the site. Again, areas of vegetation that are currently cleared, are incorrectly mapped as potential bushfire hazard.



FINDINGS

VEGETATION TO THE EAST AND SOUTH

1. All of this vegetation with the exception of the vegetation within and abutting Lot 900 has been cleared and as such is no longer considered to be hazardous vegetation and as such is an area of low bushfire hazard.
2. All vegetation abutting the proposed residential development area is located within the neighbouring large lot residential allotments. We further note that none of this vegetation is protected by an instrument under the *Land Act 1994* or *Land Titles Act 1994* such as environmental covenant.
3. The local topography above the residential allotments varies between an upslope of 23.4⁰ at its maximum to 12.5⁰ at its minimum. Based on method 2 in AS3959-2018 an upslope of 23.4⁰ would produce a fireline intensity of 1,556kW/m and an upslope away from the residential allotments of 12.5⁰ would produce a fireline intensity of 3,301kW/m.
4. We note that *Leonard et al (2017)* clearly indicates that areas with a fireline intensity of less than 4,000kW/m are considered to be areas of low bushfire hazard or potential fireline intensity.
5. We further note that a 10 metre cleared buffer will be established at the rear of all lots and the management of this will be the responsibility of the land holder. This buffer will further separate all future habitable structures from the adjacent vegetation and further separate the ability for a low intensity downward moving ground fire to impact on the habitable structures within each of the lots in this area.

VEGETATION TO THE NORTH

6. A proposed Open Space Management Plan (see Appendix I Map 2) exists over the site and details the vegetation that will be designated for rehabilitation, formal parklands, and streetscape amenity.
7. We are informed that the Department of Transport and Main Roads has resumed the land to the north, Lot 505 on RP861636 for future widening of the Pacific Motorway and as such it is expected that, part of the land will be used in road widening of the motorway and the remainder will potentially remain in its current state that is a wetland dominated by sedge, exotic grasses. This area, therefore, can be treated as a grassland.
8. It is noted Lot 1004 is located within close proximity to Lot 505 and separated by an area of parkland some 32 metres in width and which is to be partly revegetated.
9. With regard to the residential properties to the east of the internal roadway linking Sullivan Road to Cowell Drive, these will be separated from any vegetation within Lot 505 by a modified and managed area of parkland, Lot 1004 and the internal roadway. The separation

distance is approximately 50 metres. However, we note that the area of grassland is mapped as an area of low bushfire hazard.

10. With respect to Master Lots 1000, 1001, 1002 and 1003 and the lands to the north, these lots, Lot 505 on RP861636, and Lots 1 on Lot 2 on SP316002, are mapped as areas of Low bushfire hazard in that they are not mapped as an area of bushfire hazard. Based on the SPP Bushfire Asset Protection Zone Width Calculator based on a Vegetation Hazard Class of 34.3 grassland dominated wetland, the radiant heat flux is calculated to be 0 (zero)kW/m.
11. Therefore with respect to all lots, residential and Master Lots and any potential bushfire threat from the grassy wetlands to the north, while they are deemed to be areas of low bushfire hazard, they can become involved in a grass fire and with respect to the residential lots, the internal roadway and parkland and managed Lot 1004 will provide sufficient separation from any radiant heat emitted from that grassfire.
12. With respect to Master Lots 1000, 1001, 1002 and 1003, again the internal roadway will provide sufficient separations from any grass fire within the lands to the north of the development.

LOT 1 – ADJACENT LOT 900 CONSERVATION AREA

13. Lot 1 abuts vegetation within the Lot 900 Conservation Area to the west and neighbouring vegetation from the south east corner. This vegetation is currently mapped as Category A endangered RE12.11.23. It is recommended this lot maintain a building envelope area outside of the potential bushfire hazard to a RHF of 29kW/m² from the edge of the Lot boundary. This area includes the 5m vegetation buffer in place to protect vegetation to the west.
14. Considering the topography of the land adjacent Lot 1, a vegetated slope ending in a gully at 6m located 40m downslope to the west from the Lot boundary and all other vegetation upslope from the site, with a peak at 35m approximately 10m to the south east, a Short Fire Run calculation can be used to determine the fire line intensity with a width of fire front being 40m.
15. The vegetation on the western slope of the gully is burning down slope towards Lot 1, where only understory fuels would be involved and would not contribute to the fire run on the upslope eastern bank of the gully. The fireline intensity of this vegetation using the AS3959-2018 Method 2 Calculator with an FFDI of 53, a Vegetation Hazard Class of 10.2 – Spotted gum dominated woodlands, a downslope characteristic of 11 degrees and a surface fuel load of 14.0t/ha and a total fuel load of 17.0t/ha the calculations is provides a fireline intensity of **3,661 kW/m** and can be considered a low bushfire hazard.
16. To mitigate potential bushfire hazard from the vegetation abutting Lot 1 to the west, that would be the upslope bank of the gully, a recommendation of a 1.8m non-flammable fence on the west and south boundary of Lot 1 as well as a 15m wide Asset Protection Zone (APZ) maintained in a low fuel state within Lot 1 be included in the design.
17. The Radiant Heat Flux determined with a 1.8 m barrier and 15m APZ buffer using the AS3959-2018 Method 2 Calculator with an FFDI of 53, a Vegetation Hazard Class of 8.1 – Wet eucalypt tall open forest, an upslope characteristic of 11 degrees and a surface fuel load of 28.0t/ha and a total fuel load of 31.0t/ha the calculations is provided below in Table 1.

Table 1: Lot 1 Boundary Barrier Fence (1.8m non-flammable fence) and buffer width of 15m

Calculated March 8, 2021, 1:49 pm (RHBC v.1.4)

Radiant Heat Barrier calculator - AS3959-2018

Inputs		Outputs	
Fire Danger Index	53	Rate of spread	6.12 km/h
Vegetation classification	Shrubland	Flame length	15.32 m
Understorey fuel load	28 t/ha	Flame angle	65 °
Total fuel load	31 t/ha	Panel height	13.88 m
Vegetation height	1.5 m	Elevation of receiver	4.02 m
Effective slope	11 °	Effective barrier height	1.8 m
Site slope	11 °	Fire intensity	98,040 kW/m
Distance to vegetation	15 m	Transmissivity	0.857
Flame width	40 m	Viewfactor	0.4415
Windspeed	45 km/h	Radiant heat flux	28.79 kW/m ²
Heat of combustion	18,600 kJ/kg	Viewfactor of barrier	0.042
Flame temperature	1,090 K	Adjusted viewfactor	0.3995
Actual barrier height	1.8 m	Adjusted radiant heat flux	26.05 kW/m ²
All other input vales are default values in Flamsol calculator		Bushfire Attack Level	BAL-29

Rate of Spread - Catchpole et al. 1998

Flame length - Byram, 1959

Elevation of receiver - Douglas & Tan, 2005

Flame angle - Douglas & Tan, 2005

Radiant heat flux - Drysdale, 1999, Sullivan et al., 2003, Douglas & Tan, 2005

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18. A total setback from the downslope property boundary for Lot 1 of 15 metres, which includes the 5 metre vegetation setback and an additional 10 metre bushfire setback to achieve the Radiant Heat flux of 29kW/m² or BAL-29.

CONCLUSIONS

1. The land abutting the south-eastern boundary about an area which has been determined by site inspection and re-assessment against *Leonard et al* (2014) to be an area of low bushfire hazard.
2. The lands to the north including Lot 505 on RP861636 and Lots 1 & 2 on SP316002 are considered based on the Gold Coast City Plan, bushfire hazard overlay map, the SPP bushfire hazard mapping and reinforced by the SPP Asset Bushfire Protection Zone Width Calculator to be an area of low bushfire.

3. Mitigation of potential bushfire hazard from grasslands to the north of the development site can be achieved through strategic management of vegetation with the woodland rehabilitation area and the local parkland and the internal roadways.
4. Lot 1, abutting the conservation area in Lot 900 will require a setback distance of 15m to vegetation to achieve an acceptable level of risk from bushfire or a Radiant heat flux of 29kW/m².
5. With regard to Master Lots 1000, 1001 1002 and 1003;
 - a. Lots 1000, 1001 and a significant portion of Lot 1002 all abut cleared residential allotments off Sky Royal Terrace and as such are not subjected to an external bushfire threat.
 - b. A powerline extends to the western portion of Lot 1003 and thereby separates the remainder portion of Lot 1003 to its western portion as well as Lots 1001 and Lot 1000 further to the west.
 - c. The approved layout plan identifies an area of conservation area, Lot 900 to the east of Lot 1002 and around Lot 1003. The existing vegetation within this area is mapped as the RE12.11.25 and 12.11.23. This patch is connected to an area of vegetation within several lots off Fenton Drive and consist of an upper catchment gully system with the western portion mapped as the RE12.11.25 and the eastern portion mapped as the RE12.11.23.
 - d. Based on a vegetation fire commencing upslope and burning toward Lot 1002 and 1003, table 2 below provides the minimum setback distances for each Radiant heat flux category.

Table 2- Radiant heat flux setbacks for Lots 1002 and 1003

Minimum Distance Calculator - AS3959-2018 (Method 2) (Calculated March 9, 2021, 5:54 pm (MDC v.4.9))

Inputs		Outputs	
Fire Danger Index	53	Rate of spread	0.48 km/h
Vegetation classification	Woodland	Flame length	5.21 m
Understorey fuel load	14 t/ha	Flame angle	49 °, 58 °, 65 °, 69 °, 71 ° & 75 °
Total fuel load	17 t/ha	Elevation of receiver	2.7 m, 3.2 m, 3.81 m, 4.51 m, 4.94 m & 8.74 m
Vegetation height	n/a	Fire intensity	4,290 kW/m
Effective slope	-8.7 °	Transmissivity	0.891, 0.882, 0.869, 0.854, 0.845 & 0.784
Site slope	-8.7 °	Viewfactor	0.5847, 0.4262, 0.2844, 0.1909, 0.1554 & 0.0419
Flame width	50 m	Minimum distance to < 40 kW/m ²	4.7 m
Windspeed	n/a	Minimum distance to < 29 kW/m²	6.4 m
Heat of combustion	18,600 kJ/kg	Minimum distance to < 19 kW/m ²	9.4 m

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Flame temperature	1,090 K	Minimum distance to < 12.5 kW/m ²	13.5 m
All other input vales are default values in Flamsol calculator		Minimum distance to < 10 kW/m ²	16.1 m

RECOMMENDATIONS

Based on our assessment of the bushfire hazards and risks associated with the proposed Minor Change proposal, we have made the following recommendations;

The Residential Lots

GENERAL

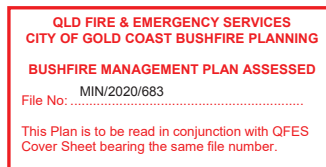
1. With regard to Lots 1, 12-23, 39-41 and 57 to 61 a non-flammable fence, 1.5 m high is sufficient, be constructed along the lot boundaries to assist in arresting any ground fire burning downslope toward the subject site from within any of the adjacent residential lots of Sullivan Road and Fenton Drive.
2. The rehabilitation Management Plan and Draft Open Space Management Plan ensure that any future plantings and park planning does not increase the potential bushfire hazard to a level that it could threaten any of the existing residential allotments and future life and property that will be located within those residential allotments.
3. Specific recommendations apply to Lot 1 where a 1.8m non-flammable fence on the lot boundary and an APZ of 15m kept in a low fuel state are recommended to achieve a radiant heat flux of less than 29kW/m² and as such an acceptable level of risk as defined under the State Planning Policy, Natural Hazards, Risk and Resilience.
4. It is assumed that the Conservation Area, lot 900, will be dedicated to The Council of the City of Gold Coast upon the completion of the development. However the establishment of fire management lines within the adjacent master Lots may need to be established as part of the dedication.

ROADS

5. All road widths and locations for hydrant standpipes comply with the State Government's Fire Hydrant and Vehicle Access Guidelines for Residential, Commercial and Industrial Lots (QFES, 2015).
6. The proposed layout ensure a road separation to all lots where they abut hazardous vegetation. Alternatively, an internal setback that achieves a radiant heat flux of 29kW/m² is established.

VEGETATION

7. The areas of vegetation not protected under the Gold Coast City Plan or under State legislation is removed and maintained into the future to maintain those areas in a low fuel state.



8. All trees within 1.5 times of a structure are assessed by a suitably qualified and experienced Arborist to determine if those trees are of good health and will not be a public safety risk to future residents and visitors to the area.

WATER

9. The development is connected to reticulated water and water pressures are such that are approved by the water utility company or Council.

The Master Lots

VEGETATION

10. The Master Lots are, for the time being, being retained and managed by the current Applicant, Burleigh Heads Estate Pty Ltd and as such their responsibility is to manage any bushfire hazards currently within the development site until such time as a lot or lots are sold and up until Lot 900 is dedicated to Council.
11. The areas of Category C or B vegetation within Lots 1000, 1001 and 1002 present a potential bushfire risk to the adjoining land holders. The establishment of a fire management line along the rear property boundary be undertaken to reduce the potential bushfire risk to the adjoining property. s20A(a)(ii) of Schedule 6, part 3 of the *Planning Regulation 2017* allows for the establishment of a necessary 10 metre wide fire management line without seeking approval from the local Authority. Additionally, Schedule 21, Part 2, 2 – freehold land of the *Planning Regulation 2017* also exempts the clearing of regulated vegetation for essential management for the establishment of a necessary 10 metre wide fire management line. While this is not essential as the width of this vegetation is not such that a bushfire would grow to become a significant bushfire risk to the neighbouring life and property, discussions with the local land holders about their concerns of bushfire from the subject site should be undertaken and if there is a well found fear then the establishment of a fire management line should be undertaken.
12. All future response to bushfire will be required to satisfy the Planning Scheme at the time of any future application over those master Lots.

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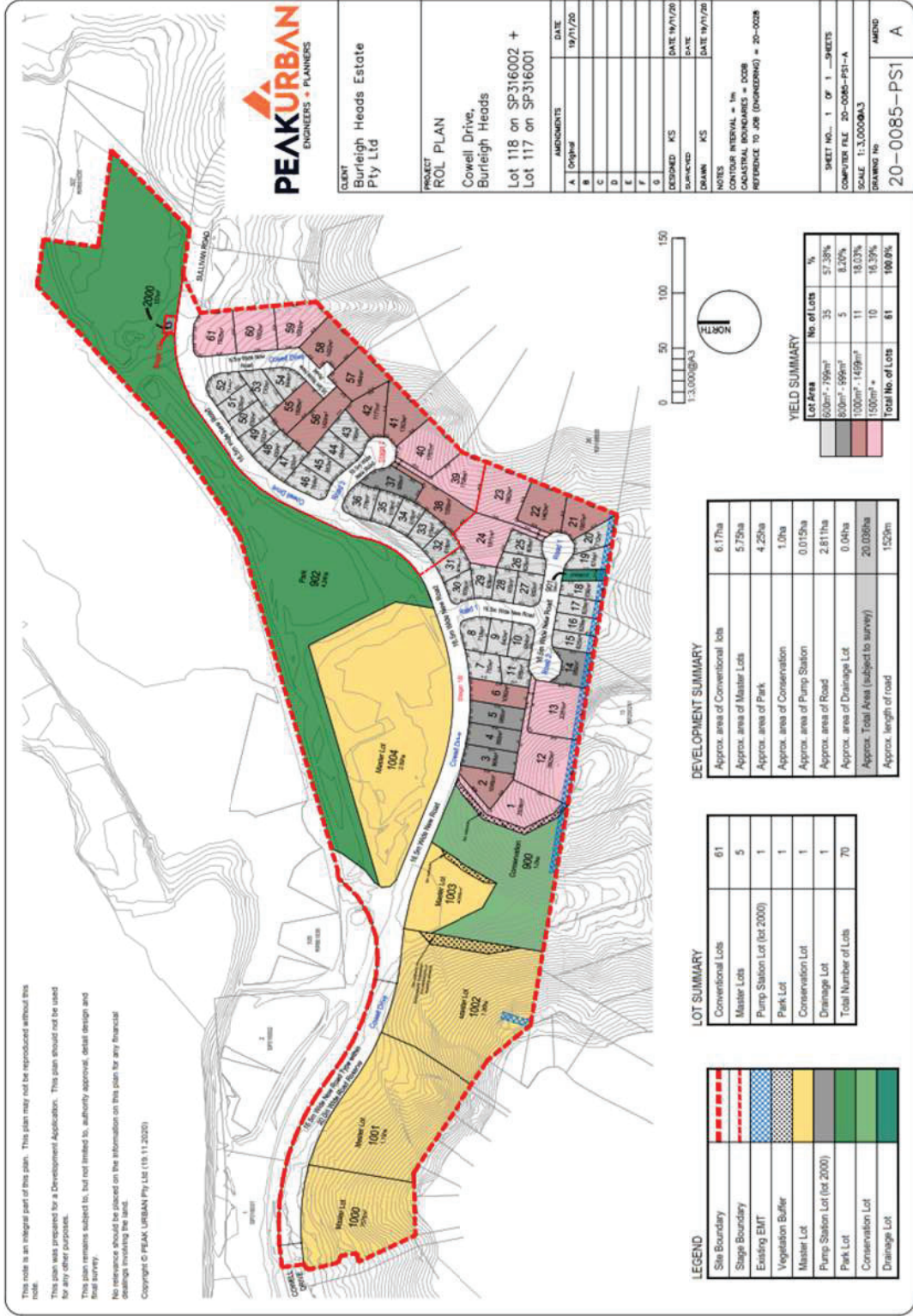
APPENDICES
Appendix I - Plans
MAP 1 PLAN FOR SUBDIVISION

QLD FIRE & EMERGENCY SERVICES
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OPEN SPACE MANAGEMENT PLAN



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Appendix III – Mapping

STATE PLANNING POLICY - -NATURAL HAZARDS, RISK AND RESILIENCE - BUSHFIRE HAZARD MAP

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GOLD COAST CITY COUNCIL PLANNING SCHEME - BUSHFIRE HAZARD OVERLAY MAP



City Plan

Date: 18/02/2021



GOLD COASTTM

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Legend

- polygonLayer**
 - Override 1
 - GCCC Boundary
 - Surrounding Councils Labels
 - Adjacent Councils**
 - <all other values>
 - Brisbane; Ipswich; Logan; Redland; Scenic Rim
 - NSW; Tweed
 - Bushfire hazard area**
 - Medium potential bushfire hazard
 - High potential bushfire hazard
 - Very high potential bushfire hazard
 - Potential bushfire impact buffer
 - GCCC Boundary
 - Suburb Boundary Lines
 - NSW Tweed
 - Unit numbers
 - Suburbs Labels
 - Major Roads
 - Minor Roads
 - Waterway Labels
-
- ADJACENT_LGA**
 - Brisbane City Council; Ipswich City Council; Logan City Council; Redland City Council; Scenic Rim Regional Council
 - Tweed Shire Council
 - Ocean Labels
 - Railway (Brisbane - Robina Line)
 - Latest property boundaries

**QLD FIRE & EMERGENCY SERVICES
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City Plan

Date: 15/02/2021



Regional Ecosystem

Burleigh Heads Estate

Legend

- Vegetation management regional ecosystem map labels
- Category A or B area containing endangered
- Category A or B area containing of concern
- Category A or B area that is least concern
- Category A or B area containing endangered and is S20AH
- Category A or B area containing of concern and is S20AH
- Category A or B area that is least concern and is S20AH

- Water
- Road crossing
 - Bridge
 - Tunnel
- Road
 - Highway
 - Main
 - Local
 - Private
- Railway

- Category C or R area containing endangered
- Category C or R area containing of concern
- Category C or R area that is of least concern

Attribution

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