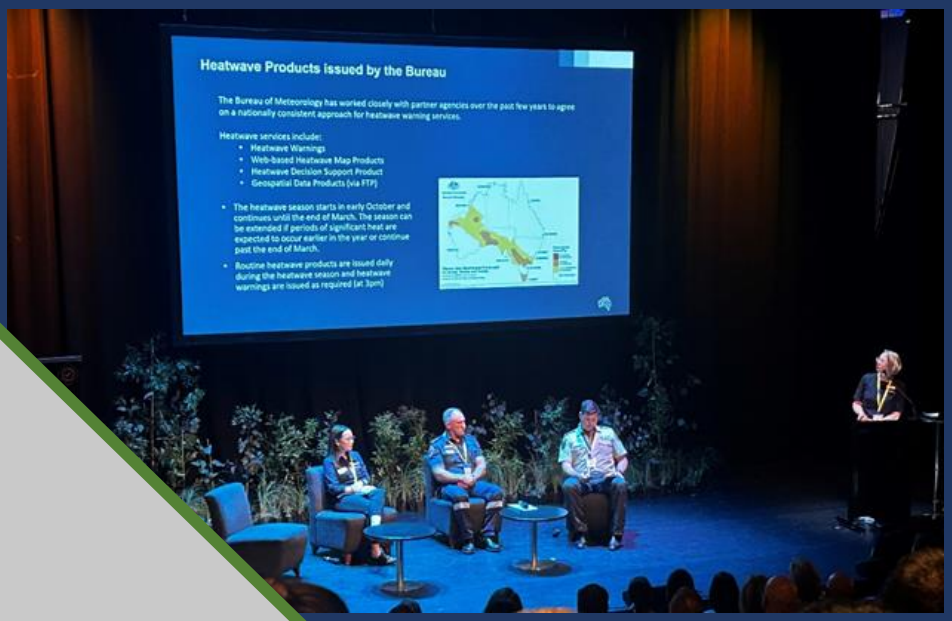
Greater Dandenong

Extreme Heat Sub-Plan

2024 - 2027

Produced by:

Greater Dandenong MEMPC



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AMENDMENT REGISTER

Table 1: Amendment Register

Version	Date Approved	Changes
Version 1	3rd February 2010	Approved by Municipal Recovery Manager.
Version 2 Draft	20th Feb 2024	Draft Extreme Heat sub submitted to MEMPC members during MEMPC meeting for review, follow up email copy provided.
Version 2 Second Draft	19th March 2024	Second Draft of Extreme heat sub plan emailed to MEMPC for review.
Version 2.0	30 April 2024	Final Draft emailed to MEMPC for endorsement.
Version 2.0	3 May 2024	Endorsement of Extreme Heat Sub Plan provided by MEMPC via email.

ACKNOWLEDGMENT OF COUNTRY

The Greater Dandenong Municipal Emergency Management Planning Committee acknowledges and pays respects to the Bunurong people of the Kulin Nation, as the Traditional Custodians of the lands and waters in and around Greater Dandenong.

We value and recognise local Aboriginal and Torres Strait Islander Cultures, heritage, and connection to land as a proud part of a shared identity for Greater Dandenong.

The Greater Dandenong Municipal Emergency Management Planning Committee pays respect to Elders past and present and recognises their importance in maintaining knowledge, traditions, and Culture in our Community.

The Greater Dandenong Municipal Emergency Management Planning Committee also respectfully acknowledges the Bunurong Land Council as the Registered Aboriginal Party responsible for managing the Aboriginal Cultural heritage of the land and waters where Greater Dandenong is situated.

PART ONE - INTRODUCTION

1.1 Purpose

The Extreme Heat Sub-Plan is a sub-plan of the Greater Dandenong Municipal Emergency Management Plan (MEMP).

This plan provides details the specific risks for the Greater Dandenong Local Government Area (LGA) and outlines local arrangements aimed at reducing the impact of extreme heat for the Greater Dandenong community.

This Extreme Heat Sub Plan aims to strengthen community resilience and empower residents to be safer by understanding how to prepare for, respond to and recover from extreme heat events.

1.2 Scope

This Extreme Heat Sub-Plan outlines actions that can be taken to support the Greater Dandenong community to reduce the impacts of Extreme Heat.

This plan recognises that emergency management (supporting communities to be safer and more resilient) is the shared responsibility of all Victorians, not just the emergency management sector.

1.3 Plan Assurance and Approval

This Extreme Heat Sub-Plan has been prepared in accordance with and complies with the requirements of the EM Act 2013 including having regard to the guidelines issued under section 77, Guidelines for Preparing State, Regional and Municipal Emergency Management Plans.

A Statement of Assurance (including a checklist and certificate) has been prepared and submitted to the Southern Metro Regional Emergency Management Committee (SM REMPC) pursuant to EM Act 2013 (s60AG).

This current version of the extreme Heat Sub-Plan was approved by the Southern Metro REMPC on 30 May 2024.

This plan comes into effect when it is published on the Greater Dandenong City Council Website and remains in effect until superseded by an approved and published update.

1.4 How to Read this Document

This plan should be read in conjunction with the Greater Dandenong Municipal Emergency Management Plan (MEMP) and the State Emergency Management Plan Extreme Heat Sub-Plan

Table 2: Acronyms

Acronym	Full Term
AEMO	Australian Energy Market Operator
AV	Ambulance Victoria
BoM	Bureau of Meteorology
CA	Control agency
CALD	Culturally and linguistically diverse
CEOC	Council Emergency Operations Centre
CGD or Council	Greater Dandenong City Council
CHO	Chief Health Officer
DFFH	Department of Families, Fairness and Housing
DH	Department of Health
EHF	Excess Heat Factor
EM	Emergency Management
EMT	Emergency Management Team
EMC	Emergency Management Commissioner
EPA	Environment Protection Authority
IEMT	Incident Emergency Management Team
LGA	Local Government Area
MEMP	Municipal Emergency Management Plan
MEMPC	Municipal Emergency Management Planning Committee
PV	Parks Victoria
REMP	Regional Emergency Management Plan
REMPC	Regional Emergency Management Planning Committee
REMT	Regional Emergency Management Team
SEMP	State Emergency Management Plan
SEPHU	South Eastern Public Health Unit
VICPOL	Victoria Police
VPR	Vulnerable Persons Register

1.5 Roles and Responsibilities

The State Emergency Management Plan (SEMP) specifies the roles and responsibilities of agencies in relation to emergency management.

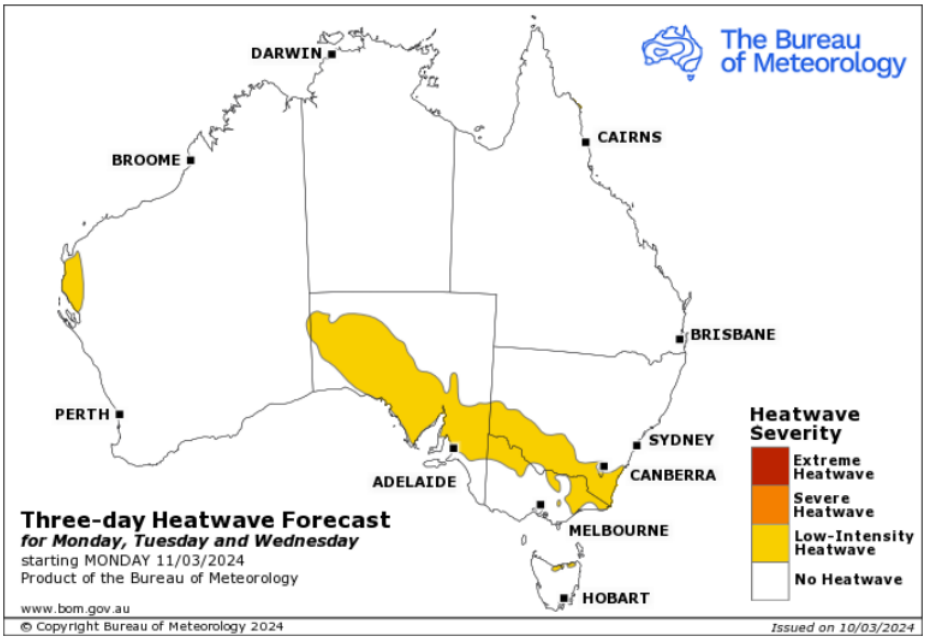
The State Emergency Management Plan Extreme Heat Sub-Plan outlines the arrangements, roles and responsibilities for preparation, response (including relief) and recovery from extreme heat events.

1.5.1 Control agency

The Emergency Management Commissioner (EMC) is the control agency for extreme heat events.

1.5.2 Bureau of Meteorology (BoM)

The BoM issues heatwave warnings for severe or extreme heatwave conditions. An example of a warning may look like figure 1 below:



Heatwave Situation for Monday, Tuesday, Wednesday, 3 days starting Monday 11 March 2024

Figure 1: Heatwave warning

Heatwave Warnings

A heatwave warning consists of four maps covering four three-day periods, extending out to three days in the future. The warning includes:

- expected maximum and minimum temperatures
- when the heatwave will peak and/or ease
- a list of affected towns and communities within the warning area.

The heatwave warnings will include action statements that match the heatwave severity. These statements have been agreed with partner health and emergency service agencies across Australia. BoM heatwave warnings will complement heat health messages provided by state and territory agencies. Source: Heatwave Service for Australia (bom.gov.au)

1.5.3 Department of Health (DH)

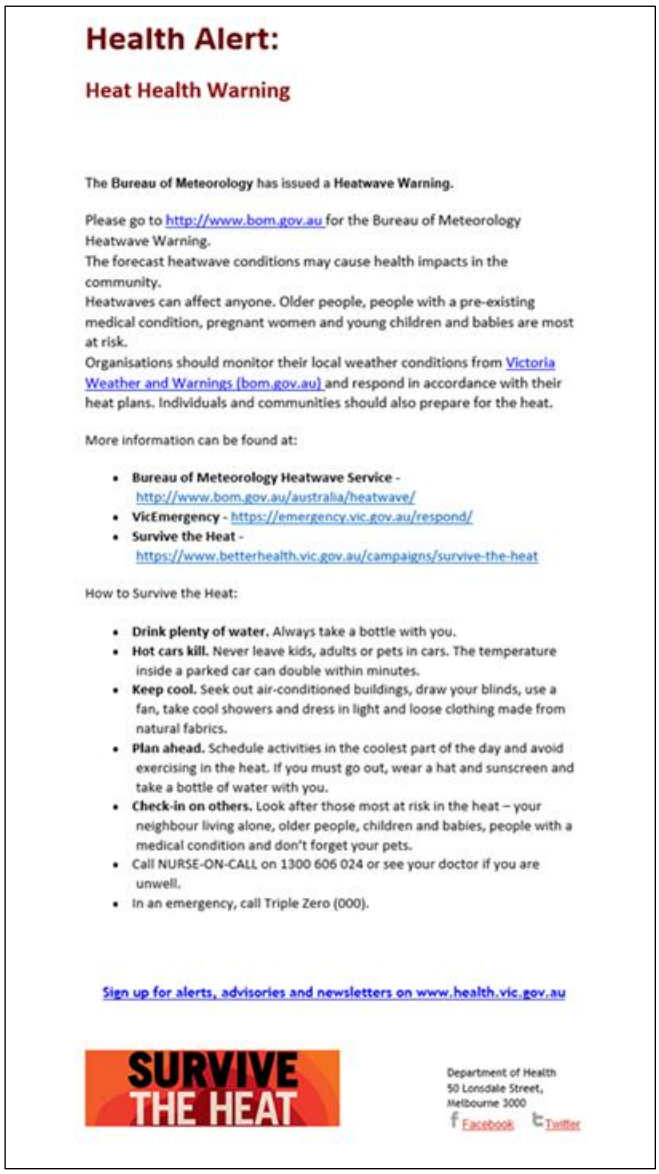
Through the State Emergency Management Plan (SEMP) and the SEMP Health Emergencies Sub-Plan (HESP) the DH is a support agency for extreme heat. Their role is to ensure a safe, effective and coordinated health and medical response to extreme heat events. The DH provides subject matter expertise and advice, relating to the heat health component of extreme heat events.

Heat Health Warning

The DH issue a heat health warning when the BoM issues a heatwave warning.

A heat health warning notifies the community, local governments, hospitals, health and community services of the risk and likely impact on people's health. You can subscribe to receive heat health warnings when temperatures risk impacting people's health here: Subscribe to alerts, advisories and newsletters

The Chief Health Officer (CHO) may also issue a heat health warning if they consider forecast temperatures pose a health risk for example a single day of extremely high temperatures.
Source: Heat health warning | health.vic.gov.au



Health Alert:

Heat Health Warning

The **Bureau of Meteorology** has issued a **Heatwave Warning.**

Please go to http://www.bom.gov.au for the Bureau of Meteorology Heatwave Warning.
The forecast heatwave conditions may cause health impacts in the community.
Heatwaves can affect anyone. Older people, people with a pre-existing medical condition, pregnant women and young children and babies are most at risk.
Organisations should monitor their local weather conditions from Victoria Weather and Warnings (bom.gov.au) and respond in accordance with their heat plans. Individuals and communities should also prepare for the heat.

More information can be found at:

- **Bureau of Meteorology Heatwave Service** - http://www.bom.gov.au/australia/heatwave/
- **VicEmergency** - https://emergency.vic.gov.au/respond/
- **Survive the Heat** - https://www.betterhealth.vic.gov.au/campaigns/survive-the-heat

How to Survive the Heat:

- **Drink plenty of water.** Always take a bottle with you.
- **Hot cars kill.** Never leave kids, adults or pets in cars. The temperature inside a parked car can double within minutes.
- **Keep cool.** Seek out air-conditioned buildings, draw your blinds, use a fan, take cool showers and dress in light and loose clothing made from natural fabrics.
- **Plan ahead.** Schedule activities in the coolest part of the day and avoid exercising in the heat. If you must go out, wear a hat and sunscreen and take a bottle of water with you.
- **Check-in on others.** Look after those most at risk in the heat – your neighbour living alone, older people, children and babies, people with a medical condition and don't forget your pets.
- Call NURSE-ON-CALL on 1300 606 024 or see your doctor if you are unwell.
- In an emergency, call Triple Zero (000).

Sign up for alerts, advisories and newsletters on www.health.vic.gov.au

SURVIVE THE HEAT

Department of Health
50 Lonsdale Street,
Melbourne 3000
Facebook Twitter

Figure2:
Example of Heat Heath Warning from the DH

1.5.4 Local Government

Greater Dandenong City Council and the Municipal Emergency Management Planning Committee (MEMPC) have a role to play in planning and preparing at a local level for extreme heat events, including:

- long term mitigation through urban design
- monitoring for heatwave warnings and heat health warnings
- implementing targeted community engagement strategies that will support the community to prepare and respond to extreme heat events
- coordinating municipal relief and recovery activities and local support as required
- incorporating mitigation strategies into services offered to the local community.

1.5.5 Community's Role

Shared responsibility is a key component of emergency management, this includes both communities and individuals, having a level of responsibility for preparing for emergencies.

The community's role is to support each other, check on friends, family and neighbours. Stay informed, plan and prepare how to be safe during an extreme heat event.

PART TWO – WHAT IS A HEATWAVE?

A heatwave is a when the maximum and minimum temperatures are unusually hot over three days. This is compared to the local climate and past weather.

It takes more than a high daily maximum temperature to make a heatwave. It's also about how much the temperature cools down overnight. Cooler nights allow some recovery from each day's heat. A high overnight temperature can mean that the next day heats up quickly and there may be more hours of extreme heat.

In heatwaves, hot nights make it harder to recover from the heat of the day and this puts more stress on the body.

A run of unusually high night and daytime temperatures can:

- lead to heat stress, a critical factor in human health
- affect infrastructure such as public transport and electricity supply.

There is no single temperature threshold for a heatwave in Australia. The Bureau of Meteorology issues heatwave warnings when ten per cent or more of a weather district is in a severe or extreme heatwave.
Source: What is a heatwave? (bom.gov.au)

2.1 Heatwave Intensity Levels

1. Low-intensity heatwaves: are the most common, most people can cope with this level of heat.

2. Severe heatwaves: are less frequent and are challenging for vulnerable people such as the elderly, particularly those with pre-existing medical conditions.

3. Extreme heatwaves: are the rarest kind. They affect the reliability of infrastructure, like power and transport, and are dangerous for anyone who does not take precautions to keep cool - even those who are healthy. People who work or exercise outdoors are particularly at risk.
Source: What is a heatwave? (bom.gov.au)

Table 3: Heatwave Levels

Level	Frequency	Messaging	Health Impact
Low-intensity heatwave	Most common EHF >0<1	Possible Heat Health warning from DH. Monitor local conditions. Prepare and respond according to heatwave plans.	Most people can cope during these heatwaves.
Severe heatwave	Less frequent EHF ≥1<3	BOM Heatwave Warning issued. Monitor local conditions. Prepare and respond according to heatwave plans.	Can impact those most at risk such as those over the age of 65 years, particularly those with medical conditions, and the very young.
Extreme heatwave	Rarest EHF ≥3	BOM Heatwave Warning issued. Monitor local conditions. Prepare and respond according to heatwave plans.	Causing widespread health issues to all population cohorts. This can impact infrastructure such as power and transport.

Source: SEMP Extreme Heat Sub-plan | Emergency Management Victoria (emv.vic.gov.au)

2.2 Excess Heat Factor

The BoM uses the Excess Heat Factor (EHF) to monitor and forecast heatwaves by intensity.

The EHF combines:
a comparison of the average temperatures for a three-day period with what would be considered hot at that location.

Essentially the EHF measures how much of a shock to the body the forecast temperatures will be, compared to the weather over the past month.

2.3 Impacts of Heatwaves

Severe and extreme heatwaves have claimed more lives than any other natural hazard in Australia.

Heatwaves can be dangerous because they pose health risks to the most vulnerable people in our community.

While older people and very young children are often the most vulnerable, extreme heatwaves can affect anyone's health.

In January 2009, Victoria experienced an unprecedented state-wide heatwave, with Melbourne experiencing three consecutive days of temperatures above 43°C and little overnight relief. The report by the office of the Chief Health Officer concluded that there were 374 additional deaths during the heatwave in comparison to the previous five years.
Source: January 2009 Heatwave in Victoria: An Assessment of Heath Impacts

Heatwaves can also affect the transport, agriculture and energy sectors and associated infrastructure.

During a Heatwave the risk of drowning can also increase as people engage in more water based recreational activities in an attempt to cool down.

Extreme heat rarely occurs in isolation. Likewise, the effects of extreme heat can continue for some days after temperatures have dropped.

As described in the Greater Dandenong MEMP, recovery from emergencies is considered in five key environments. When considering the impacts of heatwaves on these environments a range of consequences can occur.

Across our social environment heatwaves can cause:

- fatalities and heat-related illness
- stressed or overwhelmed emergency services, ambulances and hospitals
- loss of power, no air conditioning and refrigeration may impact health (i.e., inadequate pharmaceutical storage and food spoilage leading to illness).

Across our built environment heatwaves can cause:

- power supply disruptions
- train system disruptions
- increased pressure on water supplies
- damaged infrastructure (i.e., road surfaces).

Across our economic environment heatwaves can cause:

- agricultural damage to crops
- livestock stress
- supply chain impacts due to transport disruption
- business disruption due to energy failure
- loss of productivity - impaired efficiency and poor worker health.

Across our natural environment heatwaves can cause:

- mass deaths of birds, bats and fish due to the combination of extreme heat and drying, stagnant waterways
- tree stress
- dry vegetation - increased bushfire risk.

Source: Heatwaves | Australian Climate Service (acs.gov.au)

Aboriginal Culture and Healing environment

The SEMP Extreme Heat Sub-plan recognises that Victoria's First Peoples could be significantly impacted by extreme heat events, and the need for the Victorian Government and agencies to work with and support Aboriginal community activities throughout all phases of emergency management. It is important to ensure the following outcomes:

- Aboriginal culture is valued and respected
- Aboriginal trauma is addressed, and healing is supported
- Aboriginal cultural safety is promoted
- Aboriginal participation and ownership is promoted.

2.4 Heat Health

Heat can cause illnesses such as heat cramps and heat exhaustion which can lead to the life-threatening condition, heatstroke. Heatstroke is a medical emergency which can result in permanent damage to your vital organs, or even death, if not treated immediately. Extreme heat can also make existing medical conditions worse.

Table 4: Heat Health

	SYMPTOMS	WHAT TO DO
HEAT CRAMPS	• Muscle pains • Spasms in the abdomen, arms or legs	• Stop activity and sit quietly in a cool place • Drink cool water • Rest a few hours before returning to activity • See a doctor if cramps persist
HEAT EXHAUSTION	• Pale complexion and sweating • Rapid heart rate • Muscle cramps and weakness • Dizziness, headache, nausea, vomiting, fainting	• Go to a cool area and lie down • Fan if possible • Drink cool water if not vomiting • Remove outer clothing • Wet skin with cool water or wet cloths • See a doctor
HEAT STROKE **(life-threatening emergency)**	• Same symptoms as heat exhaustion except sweating stops • Mental condition worsens, confusion • Seizure • Stroke-like symptoms or collapsing • Unconsciousness	• Call an ambulance phone Triple Zero 000 • Get the person to a cool area and lay them down • Remove clothing • Wet skin with water fanning continuously • Positions an unconscious person on their side and clear their airway

PART THREE - EXTERME HEAT RISK GREATER DANDENONG

Extreme heat can affect anybody however the people within Greater Dandenong most at risk:

- are aged over 65 years
- have a medical condition such as diabetes, kidney disease or mental illness
- are taking medications that may affect the way the body reacts to heat
- have problematic alcohol or drug use
- have physical disabilities, poor mobility
- have cognitive impairment
- are pregnant women and breastfeeding mothers
- are infants and young children
- are overweight or obese
- work or exercise outdoors
- are people who have low cardiovascular fitness
- are not acclimatised to hot weather
- are non-English-speaking who may not be able to understand heat warnings or have reduced access to appropriate health or support services
- are homeless, living in boarding houses or live in homes that are poorly insulated, have limited shading, or lack air-conditioning or adequate ventilation
- are disadvantaged families, particularly those with young children
- have a lack of technology and ability to access technology to see updates.

3.1 Vulnerable Groups in Greater Dandenong

Greater Dandenong has a total residential population of 164,000 people

- 24,300 people (or 14.8% of the residential population) are over the age of 65
- 37,700 people (or 22.9% of the residential population) are 19 years or younger
- 11,500 people (or 7. 7% of the residential population) are living with a disability (requiring daily assistance with mobility, self-care or communication)

According to the 2021 Commonwealth index of Relative Socio-economic Disadvantage Greater Dandenong is ranked as the most disadvantaged municipality in Victoria.

Considering rental accommodation, the following family groups are living in poverty:

- 42% of single person households
- 34% of single-parent families
- 13% of coupled families
- 21% of couples with children
- 21% of all families

Calculations based on rental costs, income and financial requirements of each family/household type in 2021.

Greater Dandenong is also the most culturally diverse community in Australia.

- 69% of residents speak languages other than English
- 14% of residents have limited fluency in the use of spoken English

Those most at risk during an extreme heat event are those who lack proficiency in English including recent arrivals, older migrants, people in new communities, low-income migrants, women and infants.

People experiencing financial and social disadvantage are vulnerable to high temperatures because they often live in homes that are poorly insulated, with no or limited shading and no air conditioning or fans to help cool indoor temperatures. Even if the home has air conditioning and/or fans, rising energy costs mean that people on low incomes often cannot afford to run them. They are also less likely to have rooftop solar, which would significantly reduce their energy bills.
Source: ACOSS Summer Heat Survey 2024

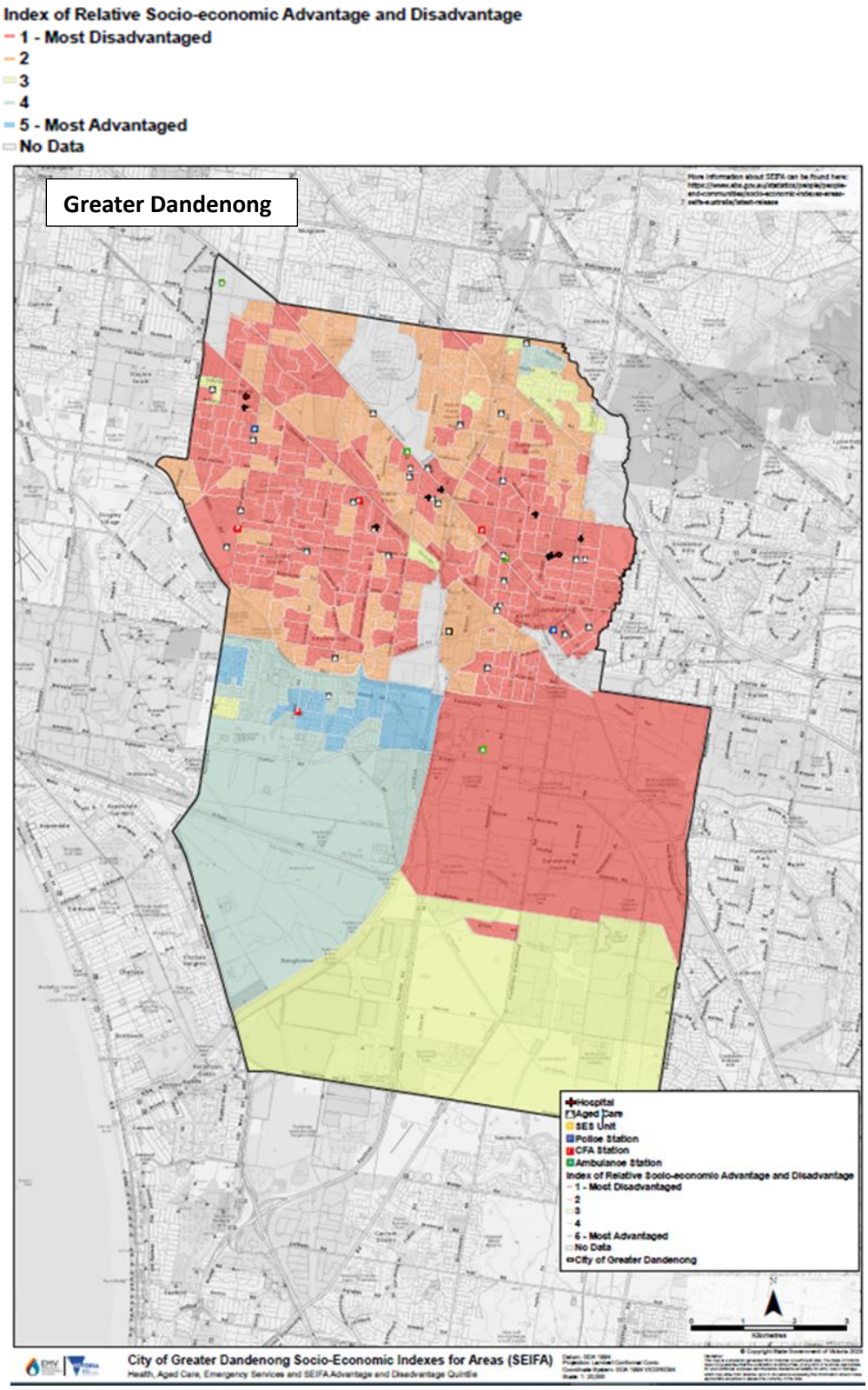
3.1.1 Vulnerable People in Emergencies

Greater Dandenong Cit y Council maintains a register of people residing in the municipality who meet the criteria within the Vulnerable people in emergencies policy known as the Vulnerable Persons Register (VPR) – for further information refer to section 4.6 of the MEMP.

3.2 Socio-Economic Indexes for Areas (SEIFA)

SEIFA is a product developed by the Australian Bureau of Statistics that ranks areas in Australia according to relative socio-economic advantage and disadvantage. A lower score on the index means a higher level of disadvantage. A large part of Greater Dandenong is low in score and therefore at a high level of disadvantage.

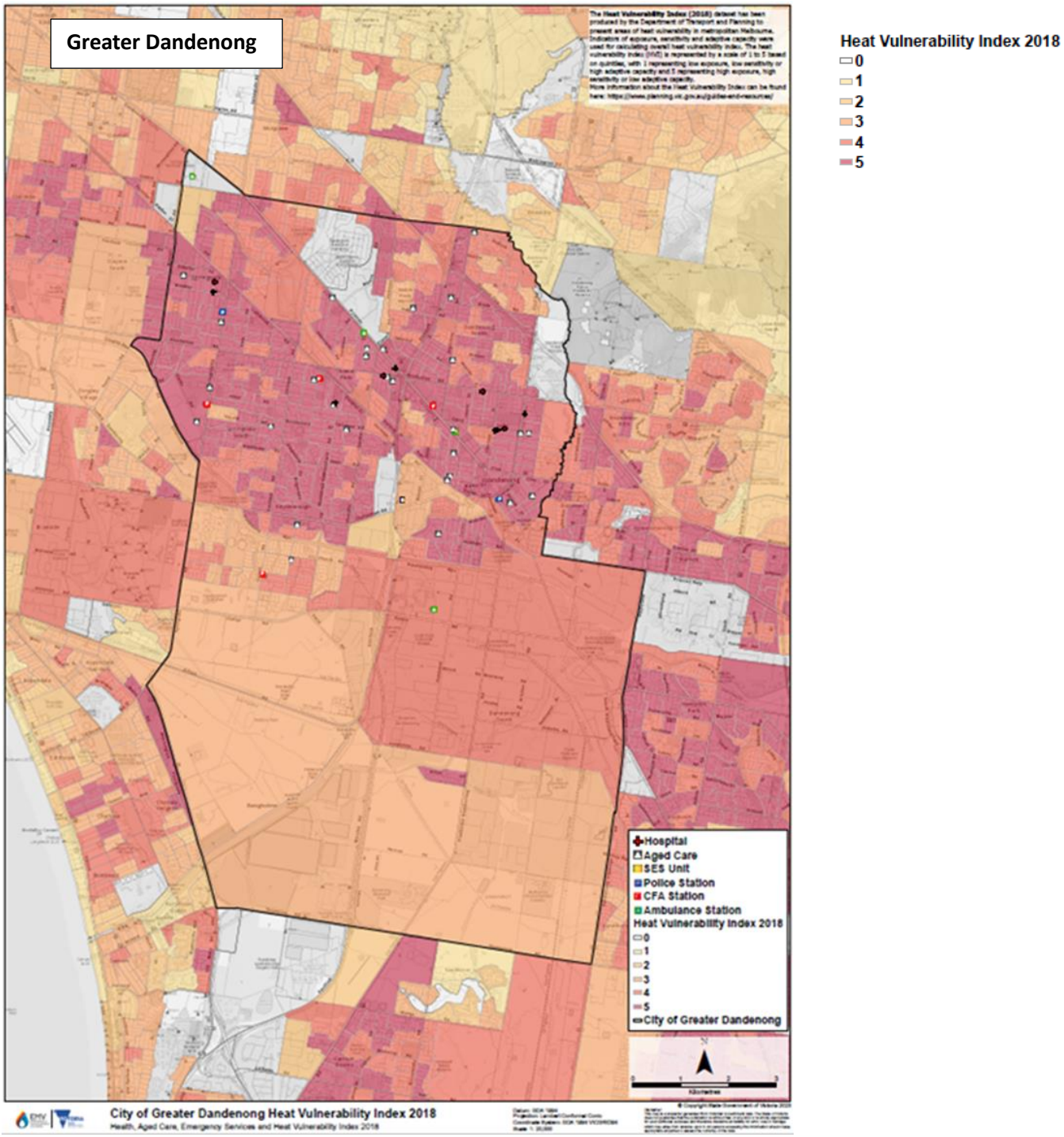
Figure 1: Map Socio-Economic Indexes for Areas (SEIFA)



3.3 Heat Vulnerability Index (HVI)

The HVI identifies which populations are most vulnerable to heat. Vulnerability ratings range from one (low vulnerability) to five (high vulnerability). The map shows that the Greater Dandenong community is highly vulnerable to urban heat due to high heat exposure (lack of shade), sensitivity to heat and low adaptive capability (low socio-economic demographic, people living with disabilities, the elderly and children).

Figure 2: Heat Vulnerability Index



Maps for Illustration only- for up-to-date information please visit:
https://www.planning.vic.gov.au/guides-and-resources/data-and-insights/cooling-and-greening-melbourne-map
The information can also be viewed dynamically on a map here:
Socio-Economic Indexes for Areas (SEIFA), Australia, 2021 | Australian Bureau of Statistics (abs.gov.au)Critical Infrastructure

The combined circumstances of high heat exposure, vulnerable population and low adaptive capability due to disadvantage means the Greater Dandenong community is very vulnerable to extreme heat.

3.4 Critical Infrastructure and Major Hazard Facilities

Extreme heat and heatwaves can have a significant impact on critical infrastructure and major hazard facilities this may reduce service delivery, including:

- power outages
- delays or cancellations of rail services
- failure of traffic management systems.

This can have a downstream impact on other services, such as:

- public transport delays - cancellations and power disruptions may leave commuters stranded on hot platforms
- increasing the demand for the use of taxis and rideshare services
- power outages impact access to vital cooling systems.

Disruptions to telecommunications may impact crucial messaging regarding extreme heat events by government departments and agencies.

Greater Dandenong Major Hazard Facilities

Greater Dandenong has five regulated major hazard facilities within the municipality. Major hazard facilities are managed and regulated by WorkSafe Victoria, they area also monitored by the Environment Protection Authority (EPA) to identify and manage potential environmental impacts.

Several other high-risk facilities that do not quite meet the regulated definition of a major hazard facility can be found throughout the municipality.

Greater Dandenong Critical Infrastructure

Various critical infrastructure is located within the Greater Dandenong Local Government Area, Critical infrastructure supports our most basic needs, including:

- safe drinking water
- food
- reliable transport
- accessible public health services
- energy for homes and industry
- access to banking, finance and government services
- global communications networks to connect us socially and in business.

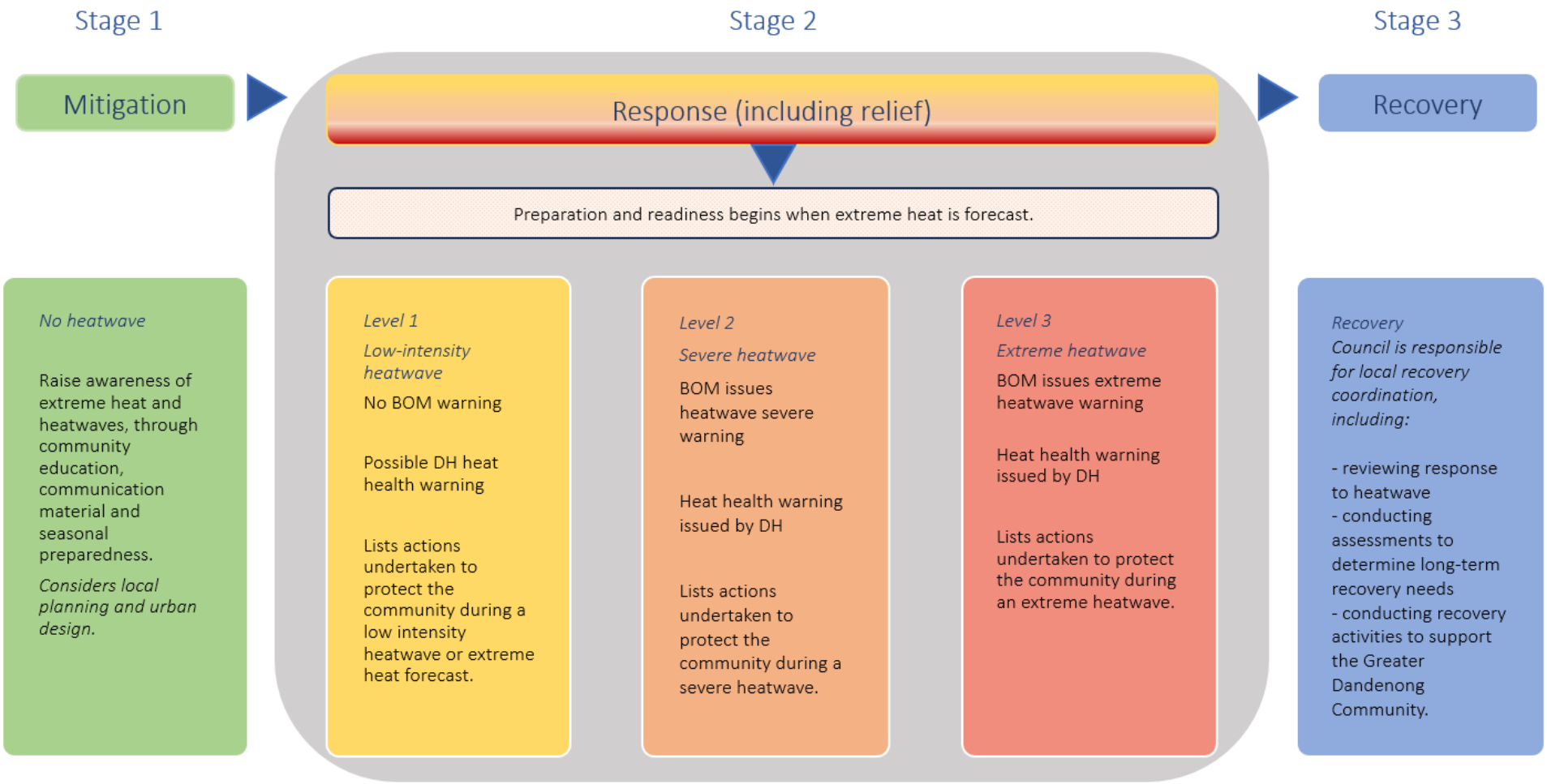
For further information on building critical infrastructure resilience from emergencies visit Critical Infrastructure Resilience - Emergency Management Victoria

An extreme heat event may have significant impact on these facilities, and this could affect service delivery. This could not only impact the Greater Dandenong community but have reaching affects throughout Victoria. All agencies with a role in protecting critical infrastructure are required to take action to prepare for and to protect these services during extreme heat and heatwaves at all levels.
Source: SEMP Extreme Heat Sub-plan

PART FOUR - GREATER DANDENONG EXTEME HEAT - MITIGATION, RESPONSE AND RECOVERY

The operational components of the Greater Dandenong Extreme Heat Sub-Plan are organised into three stages to address the mitigation of response to, and recovery from heatwaves.

Figure 3: Stages of Extreme Heat Sub plan



4.1. Mitigation (Stage 1)

4.1.1 Local Planning and Urban Design

In January 2020 Greater Dandenong City Council joined a growing number of cities around Australia and declared a 'Climate and Ecological Emergency' committing us to emergency action on climate change.

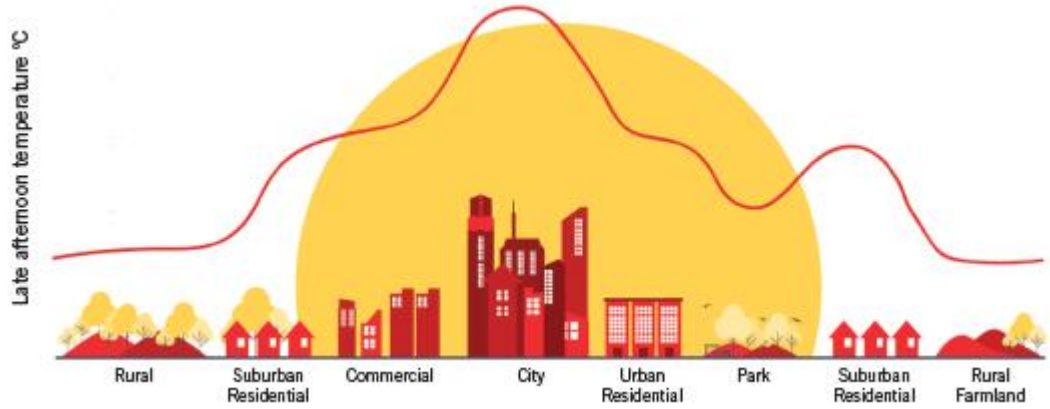
Through urban planning and design Council plays an important role in the long-term mitigation of extreme heat, this includes:

- Urban Forest Strategy 2021–28
- Greening Our City - Urban Tree Strategy
- Greening Our Neighbourhoods Strategy 2021-28

The key objectives that Council will work towards are:

1. Provide a framework for managing the urban forest
2. Improve Greater Dandenong's resiliency to climate change
3. Cooling through greening our city
4. Improve the health of our community
5. Engage and educate our community about the importance of trees

Figure 4: Urban Heat Island Effect



An urban heat island is when urban areas are warmer than surrounding rural areas. Urban heat islands occur due to:

- limited canopy trees to shade and cool
- increased hard and dark surfaces that absorb and radiate heat
- heat production from machines
- air pollution creating local greenhouse effects.

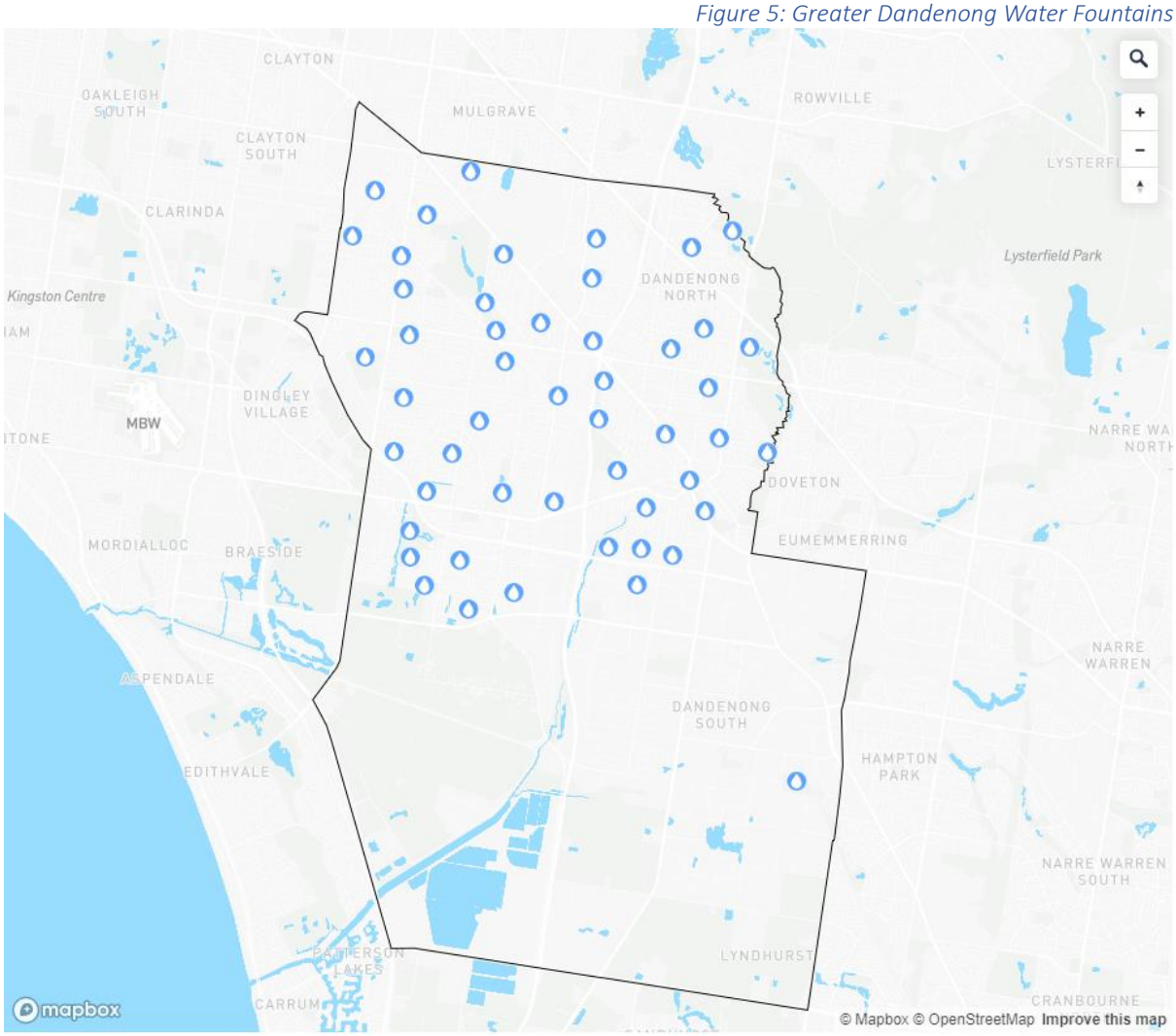
Council has set a target to increase the tree canopy cover for the municipality from the existing 9% to 15% by 2028. Aiming to cool our neighbourhood and support or community to be more resilient in extreme heat events.

4.1.2 Greater Dandenong Water Fountains

Drinking water is crucial during hot weather. There are many free water fountains located across Greater Dandenong.

An Interactive map detailing the location free water fountains is available on the Council website: Heatwaves | Greater Dandenong Council

Figure 5: Greater Dandenong Water Fountains



4.1.3 Supporting the Community to be Safer in a Heatwave

To assist the community to become aware and educated about the dangers of extreme heat and understand how to prepare for, respond to and recover from extreme heat Council will:

- Raise awareness of extreme heat and heatwaves, through community education, communication material and seasonal preparedness:
    - Collate and prepare community messaging for distribution.
    - Provide relevant posters and brochures to the Greater Dandenong community, including translated materials.
    - Implement a social media plan to deliver regular key health messages prior to the onset of extended hot periods such as summer.
    - Ensure the Greater Dandenong community receives messaging that is consistent with a whole of government approach - communications may include re posting of media items such as media conferences, radio, advertisements, culturally appropriate messaging, and social media to target specific groups.

- Identify established and informal networks for connecting and engaging with vulnerable groups, including culturally and linguistically diverse (CALD) groups:
    - Promote of seasonal preparedness to community leaders and other key stakeholders.
    - Share of communication resources to help amplify extreme heat and heat health messaging with community leaders, community groups and other relevant stakeholders.
    - Provide support to groups and organisations that wish to provide information or cool places for their vulnerable community members.
    - Partner with existing networks to deliver key messages.

Links to key safety information:

Greater Dandenong City Council website contains information about Extreme Heat and Heat Health
https://www.greaterdandenong.vic.gov.au/emergencies/heatwaves

Heatwave – Emergency Prepare
https://www.emergencyprepare.com.au/heatwave/

Power Outage – Emergency Prepare
https://www.emergencyprepare.com.au/power-outage/

Heat health warning | health.vic.gov.au
https://www.health.vic.gov.au/environmental-health/heat-health-warning

How to cope and stay safe in extreme heat- Better Health Channel
https://www.betterhealth.vic.gov.au/health/healthyliving/how-to-cope-and-stay-safe-in-extreme-heat

What you can do now – Emergency Prepare
https://www.emergencyprepare.com.au/plan-and-general-preparedness/what-you-can-do-now/

4.1.4 General Advice for the Greater Dandenong Community

Stay Informed:

Warnings aim to provide you with the best advice and information on what is happening to help you make good decisions to protect yourself and others. It is recommended to:

- download the VicEmergency App on your smart phone and electronic devices
- call the VicEmergency Hotline 1800 226 226 - for translated information on the VicEmergency hotline please call the Translating and Interpreting Service 131 450
- listen to ABC 774 am.

How to Reduce the Impact of Heat:

Plan ahead
To protect your health in the heat, plan activities for the coolest part of the day or plan them for another day. Plan to do activities in known cool places.

Drink water
Drink plenty of water, even if you don't feel thirsty (check with your doctor if you normally have restricted fluids).

Protect your pets
Make sure your pets have clean, cook water and shade. If the ground is too hot to rest the back of your hand against, it is too hot for your pets' paws.

Check on those most at risk
Check in on others regularly. Look after those most at risk in the heat – your neighbour living alone, older people, those with a disability, the young, people with a medical condition, pregnant mothers and don't forget your pets.

Keep cool
Keep yourself cool by using wet towels, putting your feet in cool water and taking cold showers. You don't need to cool your whole home during high heat. Close windows and doors and only use the coolest rooms in the property with a fan or air conditioner on low speed.

Recover
After a heatwave the body can take at least three days to fully recover so continue regularly drinking plenty of water, keep cool and slowly get back to your normal routine.

For more sustainable and accessible ways to keep cool- Refer to Appendix 3 (page 29)

4.2 Response (Stage 2)

4.2.1 Response Levels

Upon receipt of a Heatwave Warning from the Bureau of Meteorology or a Heat Health Warning issued by the Department of Health Council's emergency response will activate in the following three levels:

Level 1

Table 5: Level of Response

Level 1	Activation	Warnings	Action
Low-intensity heatwave or extreme heat forecast	Council Emergency Management Team - lead by Emergency Management Coordinator	Possible Heat Health Warning from DH	• monitor local conditions • notify relevant internal and external stakeholders of pending heatwave • increased promotion of heatwave awareness and delivery of key health messages and protective actions: - include translated materials - use of website and social media accounts - use of local networks to amplify extreme heat and heatwave messaging

Level 2

Level 2	Activation	Warnings	Action
Severe heatwave	Greater Dandenong Incident Emergency Management Team (IEMT) • MERC • MEMO • MRM May include: CGD Emergency Management Coordinator or Emergency management officers as required	BoM Heatwave Warning issued Heat Health Warning from DH	• IEMT meet online to confirm readiness • monitor local conditions and forecasts • notify relevant internal and external stakeholders of pending heatwave - ensure customer service staff are prepared to provide appropriate and up to date information - MRM to contact key community groups with available cool places to confirm readiness and operational status - MRM to contact identified air-conditioned public spaces to confirm readiness - use existing internal and external networks to reach vulnerable community members (i.e., homeless residents and elderly people living alone) • increased promotion of heatwave awareness and delivery of key health messages and protective actions: - include translated materials - use of website and social media accounts - use of local networks to amplify heatwave messaging (i.e., community groups and community leaders) - inform the community of any changes to services or access to public areas • fulfill emergency management responsibilities and provide support to emergency services as outlined in the MEMP and SEMP Extreme Heat Sub-plan: - liaising with emergency services, maintaining situational awareness and understanding of the broader emergency management response - collecting local intelligence and providing information and feedback to emergency services

Level 3

Level 3	Activation	Warnings	Action
Extreme heatwave	Greater Dandenong Emergency Incident Team (IEMT): MERC MEMO MRM May include: CGD Emergency Management Coordinator or Emergency management officers as required	BoM Heatwave Warning issued. Heat Health Warning from DH	• IEMT meet online or in person to confirm readiness • monitor local conditions and forecasts • notify relevant internal and external stakeholders of pending heatwave - ERC Staff notified of heatwave warning and availability confirmed - ensure customer service staff are prepared to provide appropriate and up to date information - MRM to contact key community groups with available cool places to confirm readiness and operational status - MRM to contact identified air-conditioned public facilities to confirm readiness - use existing internal and external networks to reach vulnerable community members (i.e., homeless residents and elderly people living alone) • increased promotion of heatwave awareness and delivery of key health messages and protective actions: - include translated materials - use of website and social media accounts - use of local networks to amplify heatwave messaging (i.e., community groups and community leaders) - inform the community of any changes to services or access to public areas • fulfill emergency management responsibilities and provide support to emergency services as outlined in the MEMP and SEMP Extreme Heat Sub-plan: - liaising with emergency services, maintaining situational awareness and understanding of the broader emergency management response - collecting local intelligence and providing information and feedback to emergency services - consideration of the establishment of Council Cool Place or ERC by MRM

Depending on the scale and impact of the emergency, the MEMO will decide, in consultation with the MRM and MERC what level of response is required by the IEMT. The level of response can range anywhere between the IEMT remotely monitoring an emergency event to physical setup of the Council Emergency Operations Centre (CEOC).

4.2.2 Emergency Relief Centre (ERC)

Activation of an ERC will be consistent with the arrangements outlined in the MEMP.

The decision to open an ERC rest with the MRM in consultation with the MERC and MEMO and will be determined based on the characteristics of the emergency event and risk to the community.

If an ERC is established a CEOC will also be activated to support the operation of the ERC.

Municipal Emergency Management Plan | Greater Dandenong Council
https://www.greaterdandenong.vic.gov.au/municipal-emergency-management-plan

4.2.3 Cool Places

A cool place is a local facility that can offer temporary shelter from extreme heat, this may include community centres, libraries or other Council facilities. Cool places may be staffed by Council officers or community groups and will offer air conditioning, water and a place to charge mobile phones.

Community members may also choose to visit air-conditioned public places such as shopping centres, cinemas or swimming pools to get relief from extreme heat.

Members of the community should be encouraged through education and engagement to have their own emergency plans to stay safe during a heatwave by staying cool and seeking shelter at home (if safe to do so).

Refer to:

- *General Advice for the Greater Dandenong Community (page 25)*
- *Sustainable and accessible ways to keep cool Appendix 3 (page 33)*

However, the MEMPC recognises that vulnerable members of the community may not have the capacity or support networks available to them to stay safe at home. Also, that some community members may not wish to stay at home and want to seek relief from extreme heat by visiting airconditioned public places.

The decision to open a Council cool place rests with the MRM in consultation with the IEMT and will be determined based on the characteristics of the extreme heat event and the risk to the community.

When deciding to travel to a cool place community members should consider:

- the reliability of public transport
- their safety when travelling to and from the facility and the risk of heat related illness
- that facilities will not be setup the same as an emergency relief centre and will not provide the same support as an ERC
- that facilities are at risk of being impacted by a power outage and may need to close early or unexpectedly
- there may be additional staffing needs and capacity limits at these facilities.

It is recommended that community members call to confirm facilities are open before traveling to them. We also recommend checking operating hours and capacity for more visitors.

A list of identified locations where people may wish to go for respite from the heat is included as an appendix to this plan, *Appendix 2 (page 32).*

4.2.4 Animals

The Prevention of Cruelty to Animals Act 1986 says that the person responsible for an animal must make sure it's not in pain or suffering, especially during extreme heat. This applies to pet owners, farmers, wildlife shelters, foster parents, zoos, and animal businesses.

The Victorian Emergency Animal Welfare Plan provides guidance for:

- the planning requirements for animal welfare support services
- government agencies and non-government organisations involved in emergency preparedness, response, relief and recovery
- the roles and responsibilities of agencies, organisations and owners and carers when planning for and providing emergency animal welfare support services.

Animal Welfare Victoria recommends the following guidelines to care for your pet in hot weather. They are especially important for owners of - older pets, pets with thick coats, pets with short noses and pets adapted to cooler climates.

Tips for owners of all types of pets

- Always provide plenty of cool, clean water. Fill two bowls with water in case one is knocked over. If outside, ensure your pets are in the shade.
- Ensure pets have access to cool, shady and well-ventilated areas during all parts of the day.
- It is best to leave pets at home during heatwaves, they will be much more comfortable in a cool home than riding in a hot car.
- If pets must be taken along for the ride, don't leave them alone in a parked vehicle. Even with the windows open, a parked car can quickly become a furnace. Pets can get heat stroke, brain damage or die in as little as four to six minutes. Never, under any circumstances, leave pets unattended in a car — even on a mild day when the car is in the shade and has the windows down.
- If you and your pet must travel, carry an extra thermos filled with fresh, cool water — just for them. Put the air conditioning on and if possible, use a window shield (the type used for babies and small children) on the rear windows.
- Add ice blocks to your pet's water bowl throughout the day.
- Fill an empty container or drink bottle with water, freeze it, and place in your pet's bed. Alternatively, place wet towels in the freezer for a few hours, remove and place in your pet's bed.
- Where possible, leaving the air-conditioning or fans on in the house will help to keep pets cool.
- If you know it is going to be a hot day and you will be at work, close the blinds in one or two rooms to keep the sun out. This will help the rooms to stay cooler.
- Animals can get sunburned too. Protect hairless and light-coated dogs and white cats with sunscreen when your animal will be outside in the sun for an extended period of time. Put sunscreen or zinc on exposed areas of pink skin (ear tips and noses).
- Animals with long coats can be clipped to increase comfort in hot weather.
- Be aware of the signs of heat stroke in animals — this can be potentially fatal. Signs include rapid panting, lethargy, drooling, weakness, muscle tremors, or collapse.
- Pets with signs of heat stroke should be put in a cool shady area, wetted down with cool (not icy) water and fanned. If the animal is conscious, offer cool (not cold) drinking water. Don't allow it to gulp large amounts. Contact the nearest vet immediately, but don't transport animals in a hot car.

4.3 Recovery (Stage 3)

Local Councils are responsible for local recovery coordination; this may include recovery activities and Post Emergency Needs Assessment (PENA) to determine long-term recovery needs for the Greater Dandenong Community.

The Victorian Government has set four recovery outcomes that guide the planning and implementation of recovery efforts:

- Victorians are safe, resilient and healthy.
- Victorians are connected to people, places and culture.
- Government responses are people-centred, adaptable and sustainable.
- Victoria has thriving regions and a healthy environment.

Greater Dandenong's recovery activities will vary according to the nature and extent of the emergency. We will work alongside government departments and agencies to assist the community and persons affected by an emergency to recover to a proper level of function.

When the heatwave is over the IEMT will conduct a debrief. This review may result in suggestions to improve mitigation and preparedness for heatwaves or impact future responses. This Extreme Heat-Sub plan will be amended accordingly.

PART FIVE - APPENDICES

5.1 Appendix 1 – Information Sources

Greater Dandenog Website, Social Media Accounts

Home | Greater Dandenong Council
www.greaterdandenong.vic.gov.au/
Provides local hubs for relevant information related to heat health and extreme heat events.

Emergency Prepare Website
Emergency Prepare – Are you prepared for an emergency?
www.emergencyprepare.com.au/

Department of Health Heat Health Warnings
Heat health warning | health.vic.gov.au
www.health.vic.gov.au/environmental-health/heat-health-warning
A heat health warning notifies the community, local governments, hospitals, health and community services of the risk and likely impact on people's health.

Better Health Channel
Survive the heat - Better Health Channel
www.betterhealth.vic.gov.au/campaigns/survive-heat
Available communication resources to support councils, health services and other government agencies to raise awareness about the impact of extreme heat on human health.

Vic Emergency App and Website
Incidents and Warnings - VicEmergency
www.emergency.vic.gov.au/respond/

Bureau of Meteorology
Heatwave Service for Australia (bom.gov.au)
www.bom.gov.au/australia/heatwave/
The Bureau of Meteorology issues heatwave warnings before and during severe and extreme heatwaves in Victoria.

5.2 Appendix 2 – Identified Cool Places

When deciding to travel to a cool place community members should consider:

- the reliability of public transport
- their safety when travelling to and from the facility and the risk of heat related illness
- that facilities will not be setup the same as an emergency relief centre and will not provide the same support as an ERC
- that facilities are at risk of being impacted by a power outage and may need to close early or unexpectedly
- there may be additional staffing needs and capacity limits at these facilities.

It is recommended that community members call to confirm facilities are open before traveling to them. We also recommend you check operating hours and capacity for more visitors.

Dandenong Library
Phone: 1300 630 920
Email: cgdlibraries@cgd.vic.gov.au
Address: 225 Lonsdale Street, Dandenong

Springvale Library
Phone: 1300 630 920
Email: cgdlibraries@cgd.vic.gov.au
Address: 5 Hillcrest Grove, Springvale

Noble Park Aquatic Centre (NPAC)
Phone: 9546 7955
Email: npac@southeastleisure.com.au
Address: 9 Memorial Dr, Noble Park VIC 3174, Australia

Dandenong Oasis
Phone: 9767 3100
Email: oasis@southeastleisure.com.au
Address: Cnr Heatherton Rd &, Cleeland St, Dandenong

Dandenong Plaza
Phone: 9767 2000
Address: Cnr McCrae and Walker Streets Dandenong

Parkmore Shopping Centre
Phone: 9798 9494
Address: 317 Cheltenham Road Keysborough

Dandenong Stadium
Phone: 8789 7980
Email: dandenongstadium@southeastleisure.com.au
Address: 270 Stud Road Dandenong

Other Council facilities

Other Council facilities may be considered appropriate to open as a cool place, this will be determined by the MRM in consultation with the IEMT. The decision will be based on the characteristics of the extreme heat event and risk to the community.

5.3 Appendix 3 - Sustainable and Accessible Ways to Keep Cool

Source: Jay O, Capon A, Berry P, et al. Reducing the health effects of hot weather and heat extremes: from personal cooling strategies to green cities. The Lancet 2021. Published online August 19

Sustainable and accessible ways to keep cool

Mitigating climate change is vital, but inevitable rising temperatures means that identifying sustainable cooling strategies is also important. Strategies at the individual scale that focus on cooling the person instead of the surrounding air can be effectively adopted, even in low-resource settings.

Electric fans

- ⊕ Can provide effective cooling for young healthy adults up to 42˚C in 50% humidity
- ⊖ Effectiveness is reduced with low humidity, and in older adults (>65 years), unless accompanied by self-dousing
- ⊖ Increases dehydration, but can be offset by drinking an extra glass of water per h

Self-dousing

- ⊕ Can reduce heat strain and dehydration up to 47˚C if dousing is sufficient to keep the skin wet
- ⊕ Can be used during power outages
- ⊖ Low compatibility with high clothing coverage

Foot immersion*

- ⊕ Can reduce dehydration and thermal discomfort in hot and humid conditions
- ⊕ Can be used during power outages
- ⊖ Risk of slips and falls

** Feet immersed above the ankles in 20˚C water*

Wet clothing

- ⊕ Provides high evaporative heat loss without needing to sweat
- ⊕ Can be used during power outages
- ⊖ Clothing must be re-soaked roughly every 60 min

Electric fans can be used below these temperatures irrespective of humidity:

39˚C	*Healthy young adults (aged 18 to 40 years)*
38˚C	*Healthy adults (aged over 65)*
37˚C	*Over 65s taking anti-cholinergic medication*

Evaporative coolers

- ⊕ Can cool air temperatures in dry conditions
- ⊖ Minimal effect in high humidity
- ⊖ Risks creating mosquito breeding sites without proper maintainence

Misting fans

- ⊕ Lowers air temperatures in hot and dry conditions
- ⊖ Must be used in well ventilated or outdoor areas otherwise humidity increases offset any benefit
- ⊖ Risk of slips and falls

Ice towels*

- ⊕ Can reduce core temperature and cardiovascular strain in conditions up to 45˚C
- ⊖ Requires access to ice
- ⊖ Labour-intensive to prepare

** Crushed ice wrapped in a damp towel applied to the neck and chest*

Cold water ingestion

- ⊕ Can provide internal cooling
- ⊕ Water should be ingested at a temperature that is most palatable (~10˚C) to ensure optimal hydration
- ⊖ If person has already started sweating, not effective at lowering core temperature

Read the full paper: Jay O, Capon A, Berry P, et al. Reducing the health effects of hot weather and heat extremes: from personal cooling strategies to green cities. *The Lancet* 2021. Published online August 19

THE LANCET — The best science for better lives

PART SIX – REFERENCES

Greater Dandenog Climate Emergency Strategy and Action Plan
https://www.greaterdandenong.vic.gov.au/climate-emergency-strategy-and-action-plan-2020-30Council Plan (incorporating the Municipal Public Health and Wellbeing Plan)

Greater Dandenong Municipal Emergency Management Plan
https://www.greaterdandenong.vic.gov.au/search/content?keys=emergency+managment

State Emergency Management Plan (SEMP)
https://www.emv.vic.gov.au/responsibilities/state-emergency-management-plan-semp

State Emergency Management Plan Extreme Heat Sub Plan
https://www.emv.vic.gov.au/responsibilities/state-emergency-management-plan-sub-plans/semp-extreme-heat-sub-plan

Health and Wellbeing Profile 2023 | Greater Dandenong Council
Health%20and%20Wellbeing%20Profile%202023%20|%20Greater%20Dandenong%20Council

Australian Bureau of Statistics (ABS):
2021 Greater Dandenong, Census All persons Quick Stats | Australian Bureau of Statistics (abs.gov.au)
Greater Dandenong | Region summary | Data by region | Australian Bureau of Statistics (abs.gov.au)

Maps:
https://www.planning.vic.gov.au/guides-and-resources/data-and-insights/cooling-and-greening-melbourne-map
The information can also be viewed dynamically on a map here:
https://mapshare.vic.gov.au/coolinggreening/
2033.0.55.001 - Census of Population and Housing: Socio-Economic Indexes for Areas (SEIFA), Australia, 2016 (abs.gov.au)

Socio-Economic Indexes for Areas (SEIFA), Australia, 2021 | Australian Bureau of Statistics (abs.gov.au)
https://www.abs.gov.au/statistics/people/people-and-communities/socio-economic-indexes-areas-seifa-australia/2021#interactive-map

What is a heatwave? (bom.gov.au)
http://www.bom.gov.au/australia/heatwave/knowledge-centre/understanding.shtml

Heatwave Service for Australia (bom.gov.au)
http://www.bom.gov.au/australia/heatwave/

Heat health warning | health.vic.gov.au
https://www.health.vic.gov.au/environmental-health/heat-health-warning

Heatwaves | Australian Climate Service (acs.gov.au)
https://www.acs.gov.au/pages/heatwaves

State of the Climate 2022: Bureau of Meteorology (bom.gov.au)
http://www.bom.gov.au/state-of-the-climate/

Department of Human Services (2009), Heatwave Planning Guide: development of heatwave plans in local Councils in Victoria, Environmental Health Unit, Victorian Department of Human Services, Melbourne.
https://www.health.vic.gov.au/environmental-health/planning-for-extreme-heat-and-heatwaves

Climate change and public health in Victoria
https://www.health.vic.gov.au/your-health-report-of-the-chief-health-officer-victoria-2018/environmental-health/climate-change

Emergency Prepare
https://www.emergencyprepare.com.au/

Heat health warning | health.vic.gov.au
https://www.health.vic.gov.au/environmental-health/heat-health-warning

How to cope and stay safe in extreme heat- Better Health Channel
https://www.betterhealth.vic.gov.au/health/healthyliving/how-to-cope-and-stay-safe-in-extreme-heat

National Weather and Warnings (bom.gov.au)
http://www.bom.gov.au/australia/?ref=hdr

IRSD | Socio-Economic Indexes for Areas (SEIFA), Australia 2021 (arcgis.com)

ACOSS Summer Heat Survey 2024

Reducing the health effects of hot weather and heat extremes: from personal cooling strategies to green cities- The Lancet