



# Barossa Region Extreme Heat Preparation & Response Planning Project

Report Prepared for  
**Light Regional Council**  
**The Barossa Council**  
**Adelaide Plains Council**  
**Regional Development Australia (Barossa)**

3 April 2017



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# Barossa Region Extreme Heat Preparation & Response Planning Project

## Final Report

Prepared for Light Regional Council, The Barossa Council, Adelaide Plains Council and RDA, Barossa

3 April 2017

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### Front cover photo credits

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1. Mallala Museum, Adelaide Plains Council 2015
2. Kapunda Principal Office, <https://www.bunyippres.com.au/lights-fed-budget-impact/> June 2015
3. The Barossa Council <https://www.barossa.sa.gov.au/> 2015

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# Acronyms

BCMP – Business Continuity Management Plan

BoM – Bureau of Meteorology

CFS – Country Fire Service

DEWNR - Department of Environment, Water and Natural Resources

SES – State Emergency Service

ZECC – Zone Emergency Coordination Centre

ZEMC – Zone Emergency Management Committee

# Executive summary

The Barossa region regularly encounters summer heat waves, but evidence suggests that periods of extreme heat and heat intensity are likely to increase in a future changing climate. Being prepared and ready for response is vital for regional councils who manage a range of facilities for both their own operations and the community. Risk reduction relating to extreme heat, will be an important part of future emergency preparedness and response, asset management and business continuity planning.

Light Regional Council received funding from the LGA Mutual Liability Scheme's Adaptation Risk Fund on behalf of The Barossa Council, Adelaide Plains Council and RDA Barossa to review Councils' response to extreme heat events in the Barossa region. A Barossa Region Extreme Heat Preparation & Response Planning Project was implemented. The objectives of the project were to:

- identify extreme heat planning and response roles and responsibilities of Barossa regional Councils compared with emergency service providers such as CFS and SES;
- determine additional Council specific actions to reduce risk of third party claims from extreme heat events;
- identify opportunities for sharing resources across Councils;
- understand the extent to which Council owned facilities can cope with an influx of public users during extreme heat events; and
- identify specific actions that can reduce the frequency and level of third party liability claims against Councils.

The project combined an audit of Council owned facilities with an extreme heat scenarios planning workshop and a later briefing from the Bureau of Meteorology (BoM) on forecasting tools for extreme weather events.

The key findings of the project were that:

- Council owned facilities are generally not prepared for use as "cooling centres" other than those with regular public open hours such as public libraries;
- the scenarios exercise identified a need to clearly communicate internally and externally where the liability of Council sits regarding facilities, their management and the community;
- the scenario exercise was an effective format for assessing the preparedness of Councils to respond to extreme heat events. It provided an engaging way to work with Council staff and could be repeated in the future for other extreme weather events (e.g. extreme storm and fire) as a way to build collaboration amongst regional Council emergency management personnel;
- further information could be shared across Councils on approaches to emergency management and business continuity planning. An example of this is the ability to share

information networks to enable consistency of regional information regarding extreme heat, given the extent to which the community and visitors move through the region;

- awareness of alternate forecasting tools could be increased and access to alternate forecasting data improved. Awareness of BoM forecasting tools is low, mainly because they appear to be poorly promoted or the available information is not in a format that is as easy to access and/or interpret compared with websites such as Elders'. An action arising is that Barossa region Councils could consider writing to the BoM to request that the information about extreme weather events provided to emergency service providers is also accessible by Councils;
- formal communications before, during and after an extreme heat event are already well managed but areas for improvement exist such as:
  - greater use of social media platforms to acquire and distribute information during an event;
  - providing access to VHF radios to provide for continued communications if there are power and telecommunications outages;

This project helped to review and identify areas for improvement in current Council emergency management and business continuity planning processes. It also addressed a priority area for action in the regional climate change adaptation plan for the Barossa Region in relation to the increasing risk of extreme heat events. In so doing it demonstrated that improving current best practice for Council operations can assist with building adaptive capacity.

A range of recommendations detail where further work may be required to assist in reducing liability risk for Councils. If addressed, it is possible that a number of the findings from this project could reduce the risk of third party claims from extreme heat through better preparation and response.

Through combining facilities audit data analysis with an innovative scenario based workshop process, the project has developed an approach that could be repeated in other Local Government regions across the State. There are also risk mitigation benefits that can be transferred across the Local Government sector such as increasing awareness of alternate forecasting tools, greater use of social media platforms to acquire and distribute information during an extreme weather event.

# 1. Introduction

Light Regional Council (LRC) in collaboration with Adelaide Plains Council (APC - formally the District Council of Mallala) and The Barossa Council (TBC) are developing Extreme Heat Preparation and Response Plans. Light Regional Council received funding from the LGA Mutual Liability Scheme's Adaptation Risk Fund on behalf of all participating Councils and Regional Development Australia Barossa (RDA Barossa) to review Councils response to extreme heat events in the Barossa region.

Development of the plans creates an opportunity for the Councils to develop important risk based strategies to respond to potential future extreme heat events. Figure 1 shows the extent of the Councils in the Barossa region (aligned with the RDA Barossa boundary).

Climate change modelling and experience in the region to date indicates that future heat waves may be longer in duration and more intense. In rural areas, this is exacerbated by the potential for greater risk of catastrophic fire events and intense storm events.

When these events occur concurrently the community is usually exposed to dramatic emergency situations, culminating in the need for clear emergency response plans which give rise to coordinated and effective service provision and assistance to the public. With respect to extreme heat events and preparation, public facilities such as community and Council buildings, sporting club rooms and recreational facilities may become refuges and emergency hubs and collection points. In many locations, particularly rural areas, these facilities may simply be a more comfortable place to be or the only place of refuge; however, in some cases these facilities may be directly threatened. Having a well prepared and planned extreme heat response strategy is vital for Local Government to ensure that the community has the support it needs to respond effectively.

Seed Consulting Services (Seed) was engaged by the Councils to investigate existing Council facilities, their suitability as refuges in extreme heat events, and determine community expectations regarding extreme heat events and provide advice to assist Councils in developing appropriate policy and plans that not only have regard for future extreme heat events but also consider the relationship with potential for bush fire and intense storm events, potentially associated with these heat events.

The project has collected important information relating to extreme heat events, including:

- the capacity and capability of Council owned facilities to respond as cooling centres;
- key stakeholder and collaborator information and experiences relevant to extreme heat events;
- gaps relevant to preparation of extreme heat policy and action plans for the participating Councils and regional stakeholders; and
- the value of testing existing policy and approaches in a scenarios based workshop.

This report summaries and presents results from the agreed project steps and includes a discussion of key findings, aimed at assisting the participating Councils in preparing extreme heat preparation and response plans that have regard for a future changing climate and the needs of Councils in peri-urban and rural areas.

By adopting a planned approach to extreme heat events, it is hoped that the risks presented in these situations will be reduced for the participating Councils and the project will assist

and demonstrate valuable learning for other local governments seeking to better plan for and manage extreme heat events in the future.

## 1.1 Role of Local Government

A key discussion point throughout the project, including during the stakeholder scenarios workshop related to the role of local government and extent to which liability rests with local government with respect to the preparation and response to extreme heat events. The project content boundaries and overlap with other emergency services processes and protocols needed to be clearly defined so that discussions surrounding extreme heat policy development did not evolve into a broader debate regarding emergency services responses in the event of escalating events such as fire, during and following extreme heat.

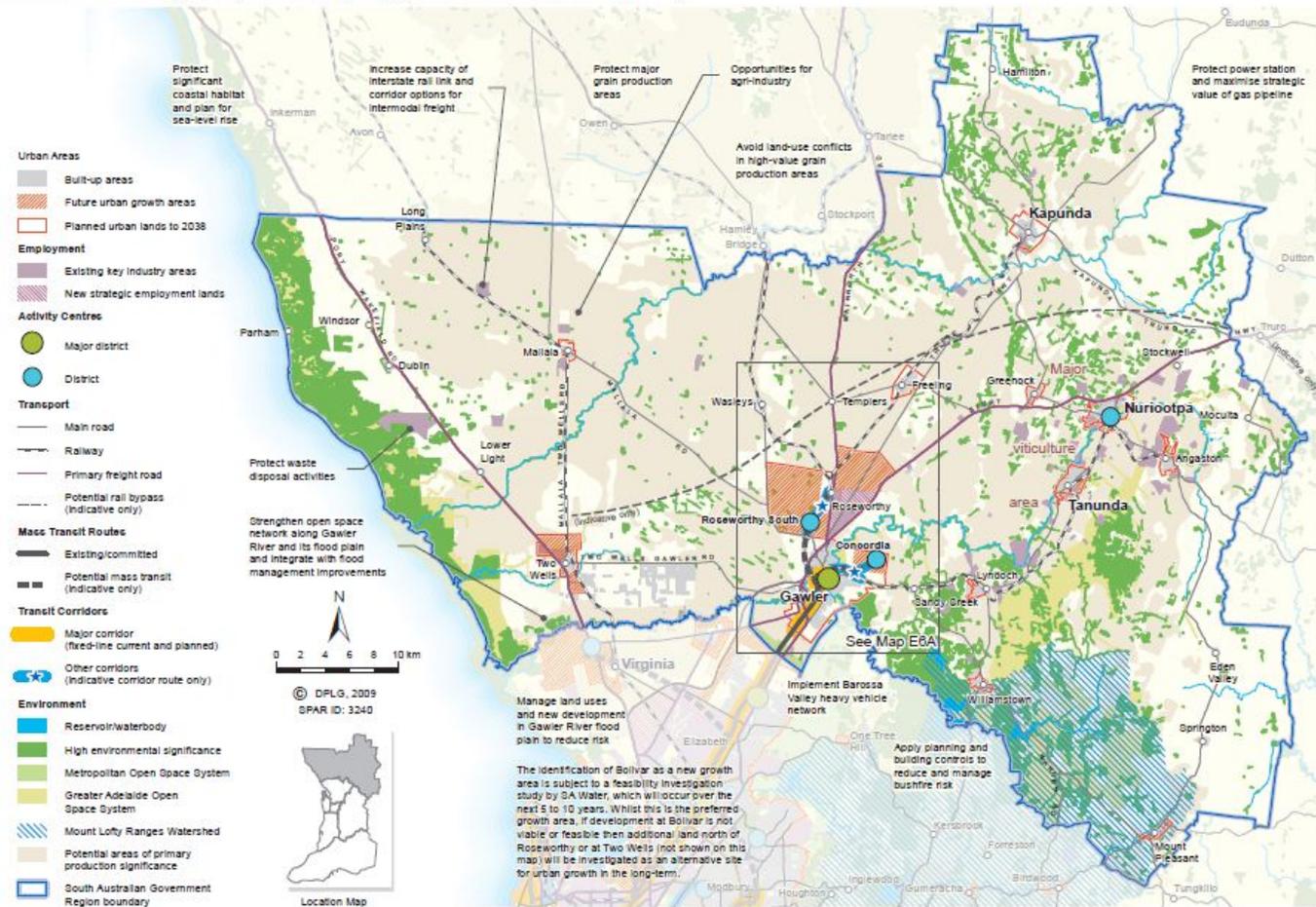
Principally, the participating Councils and the project Steering Committee wanted to ensure that:

- the project remained within the criteria relating to internal development of policies for Councils to prepare and respond to extreme heat events;
- the project did not debate existing emergency services procedures and protocols; and,
- there was strong recognition of the legal and organisational requirements of Councils regarding their facilities, management and interaction with members of the general public.

The main reason for the project was to enable Councils to further consider where and if any or additional liability may exist or could be reduced, associated with managing Council facilities, should they be considered for use as cooling centres.

Public circulars by the Local Government Association (LGA) and the South Australian State Emergency Service (SASES) regarding suggested planning and response to extreme heat events have been considered. Copies of these documents are included in the Attachments to this report.

## RDA Barossa Region (Barossa, Light and Lower North)



**Figure 1** Study area of interest, detailing the RDA Barossa region boundary, incorporating District Council of Light, The Barossa Council and Adelaide Plains Council (Map source, RDA Barossa).

## 2. Background

To assist the collaborating Councils to better plan for and develop extreme heat preparation and response plans, it was considered appropriate to better understand aspects of Council facilities that may influence their capacity to act (or not) as heat refuges or 'cooling centres' and enable Council employees to appropriately plan for and manage extreme heat events.

### What is a “heat refuge” or “cooling centre” ?

A cooling centre is an air-conditioned public space set up by local authorities to temporarily deal with the health effects of a heat wave. Cooling centres are meant to prevent hyperthermia caused by heat, humidity, and poor air quality. Cooling centers provide shade, water, and restrooms; medical attention and referrals to social services may also be offered. Their services are aimed at the homeless, at-risk populations such as the elderly, and those without air conditioning. *Wikipedia, 2016*  
[https://en.wikipedia.org/wiki/Cooling\\_center](https://en.wikipedia.org/wiki/Cooling_center)

A cooling centre is a temporary air-conditioned public space set up to deal with the health effects of a heatwave. Usually situated at a number of locations throughout a city, they are intended to reduce the risk of extreme heat to vulnerable people, especially those who do not use or have access to air-conditioning, especially among older people without air conditioning at home, or homeless people. *Victorian Government, Department of Human Services. Heatwave Planning Guide, 2009.*

The South Australian State Emergency Service (SASES, 2010) states:

*“Where Local Government wishes to establish temporary cooling centre facilities in their jurisdictions this will be conducted under their own responsibility and financial accountability. It should be noted that they may be held both legally and financially responsible for this initiative”.*

The Local Government Association of South Australia (LGASA, 2016) Extreme Heat Guide for Local Government in SA states:

*“.....the extension of operating or opening hours of existing facilities and services is encouraged. If Councils choose this option they should clearly indicate that it is the extension of an existing service and not create a community perception that additional services are being offered”.*

*“If Councils elect to extend the operating hours of existing facilities and services they should consult with LGA MLS about the management of risk associated with the extended service being offered. The LGA MLS has a checklist that will assist Councils to manage this risk. Annexure A outlines the issues that will be addressed”.*

*“To be selective about the access and usage of community facilities during an extreme heat event could attract liability risks to Council. Councils need to acknowledge that if they offer Council facilities during extreme heat events they will need to be made available to the community at large”.....*

Furthermore, the Regional Climate Change Adaptation Plan (2014), developed by RDA Barossa identified key areas of decision making for the future in adapting to a changing climate. Response to extreme heat was identified as one of the key future issues to manage.

In addition to understanding the requirements of Council facilities, there was also expected to be a need to understand any gaps in existing Council emergency and business continuity planning policy and process. Furthermore, there may also be possible requirements for retrofitting of buildings to further enable public facilities to adequately manage increased numbers of members of the public, should these facilities be used as heat refuges during periods of extreme heat or be considered general public places during extreme heat.

An important part of this project was to identify;

- Actions that could enhance health and wellbeing during extreme heat events and where relevant, how these could be used to update asset management plans;
- Where and which Council facilities could accommodate and adapt to community expectations regarding extreme heat, if appropriate;
- Existing documents within Councils regarding extreme heat preparation and response and their visibility within Council;
- Actions to better prepare and direct Council employees; and
- Actions to better prepare community members to make the best decisions during extreme heat events, thus reducing possible pressure on Council facilities.

A range of steps were included in the project, including:

- Council facilities (building) audit
- Develop extreme heat scenarios
- Identify Stakeholders
- Using BoM data to better forecast extreme heat events
- Scenario Planning Workshop
- Reporting to assist extreme heat preparation and response planning and community engagement

The initial stages of the project sought to enable further discussions between emergency services professionals, Council personnel and other relevant stakeholders in a workshop, with discussions based around typical scenarios that consider extreme heat event scenarios and other possible events such as fire, evacuations and extended durations of power outage.

In undertaking these initial project steps, Seed was mindful to consider the recent regional experiences of the Pinery fire. It is acknowledged that dialogue and discussion regarding future extreme heat preparation and response must be had in the context of this experience and that risk associated with fire, emergency response and management are more likely in the event of future extreme heat scenarios.

Light Regional Council provided a Project Officer. A steering committee consisting of officers from the three contributing Councils plus RDA Barossa assisted Seed with review and management of the project.

## 3. Methodology

### 3.1. Facilities audit

A facilities audit was undertaken to assist in understanding the relationship between the provision of Council facilities and how the nature of these facilities may influence community use during periods of extreme heat. The audit has also been used to assist in determining which Council facilities could be suitable to act as heat refuges during extreme heat events, or present special issues or problems, should the Council's seek to use these facilities as refuges or cooling centres in the future.

It must be stressed that the **SES does not recommend** the establishment of temporary cooling centres. They state that a more feasible and effective option may be to utilise existing facilities such as shopping centres, public swimming pools, movie theatres, libraries, and art galleries etc. where the public can seek refuge from extreme heat during the day.

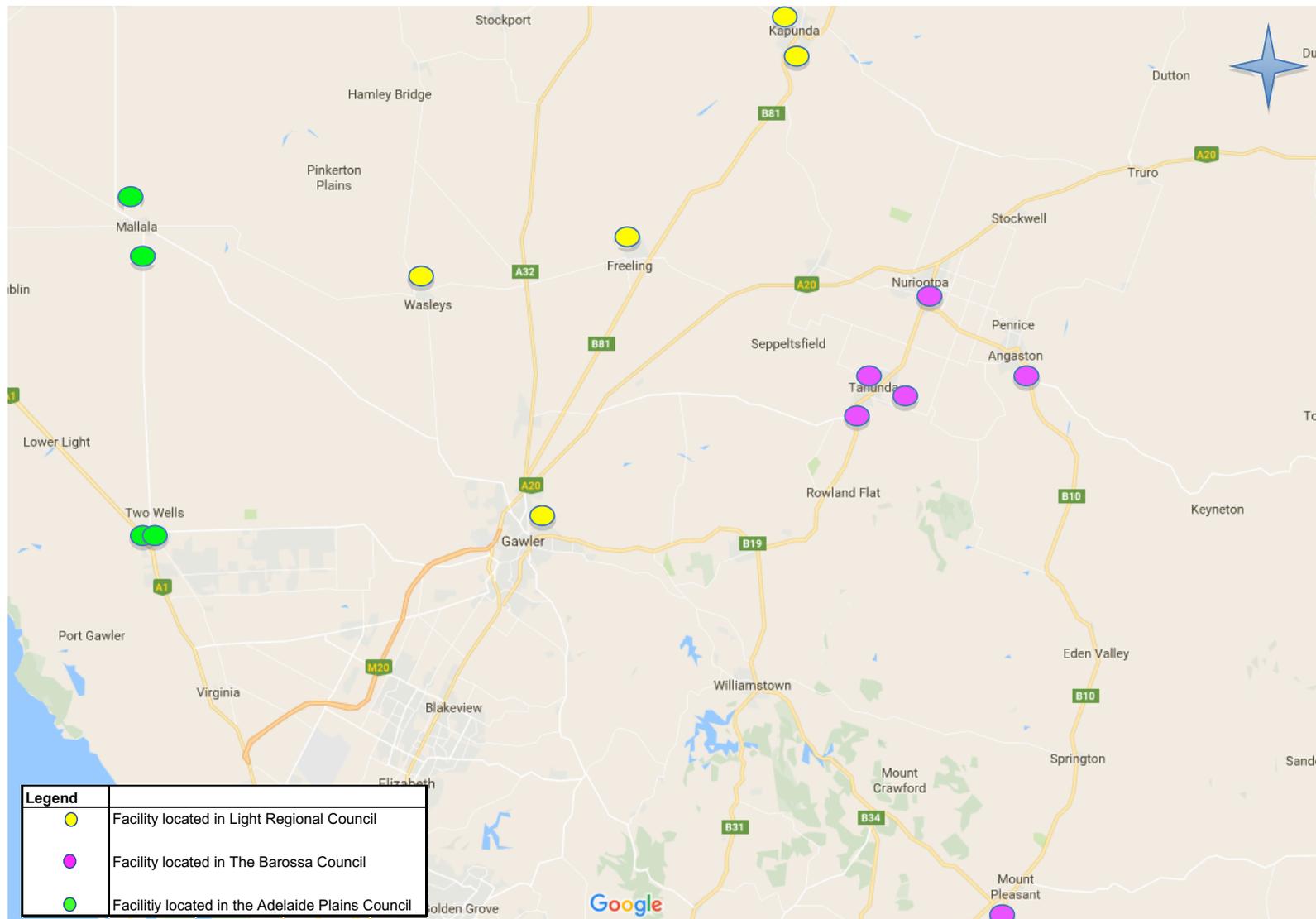
It is important to recognise that this audit was not designed to consider the use of the facilities as emergency centres in the advent of regional disasters or bushfire events and that emergency management protocols are already well defined within the region.

Through consultation with Seed and the Project Officer a range of potential Council owned facilities were initially identified. Facilities open during the week to the public were a priority. Seed did not audit or consider facilities that were only open through booking or prior appointment.

Following the identification of Council facilities, each facility was subject to an audit by Seed (where possible) to collect basic information about the premises. Each audit considered the following facility characteristics:

- general construction envelope – building type and construction;
- opening hours and building access requirements e.g. alarms, entry points, disabled access, closing hours;
- facilities available or usable to public – bathrooms, kitchens, air-conditioning, water, open and protected space/s;
- services connections and security (water, gas and electricity);
- back-up power potential;
- facility usage data e.g. visitor numbers, library usage, annual visits;
- communications platforms e.g. phone, internet, wireless and UHF radio; and
- proximity to other services such as emergency services, hospital, fire, police and ambulance.

It was decided at this stage not to review energy consumption patterns (billing data) until the individual Councils had developed extreme heat preparedness and response plans because it was premature to assume that any building would be considered suitable as a cooling centre and that clear policy within each Council needed to be developed and approved before this more detailed level of assessment occurred.



**Figure 2** Location of Council facilities audited. (Image sourced from Google maps 2016).

The audit included a review of Council facilities including offices, libraries, visitor information centres and community halls across the following townships:

#### **The Barossa Council**

- Mount Pleasant (Library);
- Nuriootpa (Library);
- Tanunda (Visitors Centre and Arts Centre);
- Lyndoch (Library); and
- Angaston (Hall)

#### **Light Regional Council**

- Kapunda (Library and Visitor Information Centre);
- Hewett (Hewett Community Centre);
- Freeling (Library); and
- Wasleys (Soldiers Memorial Hall)

#### **Adelaide Plains Council**

- Mallala (Council Chambers and Institute); and
- Two Wells (Library and Meeting Room)

Data was then collated and categorised and a simple scoring system used to rank the relative importance of aspects such as opening hours and site facilities including access to bathrooms, drinking water and air-conditioning that may influence the suitability of facilities for use by community members during extreme heat events.

The use of rankings enabled service provision at the facilities to be grouped into broad categories of High-Medium-Low capability to operate as a cooling centre.

It is important to recognise that there is a range of other critical aspects that influence the suitability of a facility for use as a cooling centre. These factors are raised in more detail in Section 4.5 (scenarios workshop) by key stakeholders such as Council and emergency management representatives.

Recommendations regarding cooling centres is expected to be a strong driver in policy development for the Councils and audit information is possibly more useful in identifying the risks associated with lack of capability of most facilities to fulfil such a role.

### 3.2. Developing extreme heat scenarios

Following the facilities audit the information collected was used to guide a discussion regarding potential workshop scenarios and selection of appropriate stakeholders for an extreme heat scenarios workshop.

The methodology for developing the scenarios was guided by the scenario planning framework approach outlined in the United Nations' Environment Program IEA Training Manual and discussions between Seed and emergency management consultant Mr. Brad Flaherty.

Developing the scenarios involved the following stages and steps:

- Clarifying the purpose and structure of the scenario exercise
  - Establish the nature and scope of the scenarios
  - Consider likely stakeholders and how they will be selected
  - Identify the themes, targets, indicators and potential policies
- Laying the foundation for the scenarios
  - Identify the drivers
  - Select critical uncertainties
  - Create a scenario framework

An extreme heat scenarios briefing paper was subsequently prepared. A copy of the scenarios briefing paper is enclosed in Attachment B.

### 3.3 Identify Stakeholders

Seed worked with the Steering Group and members of each Council's emergency planning staff to determine an appropriate list of stakeholders to attend a scenarios planning workshop. A full list of invitees is enclosed in Attachment C. The briefing paper referred to in Section 3.2 was subsequently distributed to all invitees.

### 3.4 Using BoM data to better forecast extreme heat events

A briefing by the BoM was originally intended to be delivered as part of the extreme heat scenarios planning workshop. Instead, a separate briefing session was conducted with staff of the Barossa regional Councils in February 2017. It was attended by BoM Senior Climatologist, Darren Ray. The presentation described general forecasting tools available from the BoM website with a focus on MetEye, followed by an overview of where to access forecasting information for severe thunderstorms, extreme heat and fire.

A similar briefing in the Riverland to Councils considering extreme storm preparation and response was considered extremely useful.

### 3.5 Scenario Planning Workshop

A Scenario's planning workshop was conducted in October 2016 to test existing Council capacity to respond to extreme heat events.

The workshop consisted of a general idea followed by three escalating special ideas. The following heading summarise the information provided to workshop participants.

#### *General Idea*

It is November 2017. The Bureau of Meteorology 3-month outlook has advised that El Nino conditions are likely to continue into the summer of 2017-18, meaning that there is a higher than average chance of heat wave conditions.

#### *Special Idea 1*

On Monday 15 January 2018, the forecast daily maximum temperature is 41°C. The Bureau of Meteorology advises that there is a high chance of heatwave conditions developing across all parts of the State during the course of the week.

On Wednesday 17 January 2018, the Bureau of Meteorology forecast is for temperatures in the Barossa region to reach 40°C. This represents the third day in succession with daily maximum temperatures across the region exceeding 40°C and daily minimums exceeding 24°C.

#### *Special Idea 2*

The time is now 12.30 pm on Wednesday 17 January 2018. Temperatures across the Barossa region have already reached the forecast maximum of 40°C.

An updated forecast from the Bureau of Meteorology advises that temperatures are likely to rise further with a revised forecast of 42°C for later in the afternoon. Relief is on the way with a cool change arriving later in the evening. However, winds are expected to increase from the north in advance of the change before moving to the south.

The Tanunda War Memorial Hospital is reportedly treating several elderly people for heat stroke. Patients were reportedly at home but had not switched on the air-conditioning systems in order to save money.

#### *Special Idea 3*

The time is 4.30 pm on Wednesday, 17 January 2018. Temperatures have dropped slightly to 39°C, however, northerly winds in advance of the cool change are approaching gale force. There are reports of smoke near Kapunda and CFS warnings have advised that several grass fires have been sparked as a result of dry lightning strikes.

A series of questions were posed for each special idea to stimulate discussion, identify gaps and better understand aspects such as chain of command, procedures and protocols, organisational structures and business continuity process. Responses were recorded and presented in summary within Section 4.4.

## 4. Results

### 4.1. Facilities audit

Through analysis of the facility audit data, facilities were grouped into three categories of suitability for possible cooling centre public access from high, medium to low.

A full list of all the facilities and assessment factors is provided in Attachment A.

Seed also considered lighting and energy use (lighting and HAVAC data was collected) which will assist Councils further in developing business cases for opening buildings or managing extended hours (energy consumption cost), should this be considered a future requirement of preparation and response plans.

Suitability of a facility was determined based primarily on the following:

- Opening hours;
- Open space and seating capacity;
- Facility amenities – air conditioning, toilets, drinking water, and kitchen facilities; and
- Proximity to emergency services.

In addition, consideration was given to the location of the potential refuge within the township in question with a focus on understanding its proximity to housing and travel distance for members of the community. These additional elements took into account the ability to walk to a particular facility or availability of transport options. Proximity of housing to a facility may be particularly important for the most vulnerable member of the community, who may be limited in ability to travel to a heat refuge.

This raises an important issue with respect to community engagement and advice provided to most vulnerable members of the community, who and how this advice is given and how Council's adopt or direct provision of public information on extreme heat events.

### High scoring facilities

The most important factor for high scoring facilities was opening hours. Facilities open regularly to the public (e.g. 5, 6 or 7 days a week) are most likely to already provide suitable facilities such as air-conditioning, bathrooms and kitchens and this was evidenced with all higher scoring facilities comprising these basic amenities with the only distinguishing factor between these facilities being the presence and quality of a kitchen (i.e. full commercial kitchen or not).

Selected examples of facilities in the high scoring category are provided below.

#### **The Rex – Barossa Aquatic and Fitness**

The Rex facility in Tanunda was considered one of the more suitable facilities. This facility is open every day of the week (Monday to Thursday - 6am-9pm, Friday - 6pm-7pm and Saturday and Sunday - 8am-5pm). The facility has large open space with a seating capacity for approximately 80 persons (seating capacity limited by reported number of chairs available – much more room available for further seating). The facility also had adequate air conditioning, male, female and disabled toilets and drinking water amenities. The Rex is also

located in relative close proximity to emergency services including the Tanunda Hospital and Tanunda CFS.

Distinguishing this facility from some of the others was the presence of a café including full commercial kitchen and pool facilities with associated amenities (change rooms, showers etc.). Staff have experience in serving the public and administration of first aid.

It is noted however that, the Rex is located to the north-east of the township and is therefore not readily accessible for those who may choose to walk.

### **The Barossa Council Public Library and Council Chambers and rooms (Nuriootpa Library)**

The Nuriootpa Library is open throughout the week (Monday to Thursday - 9am – 6pm, Friday - 9am - 5pm) and operates with limited hours during the weekends (Saturday 9am – 12 noon and Sunday 12 noon – 3pm).

The facility has a reasonable amount of floor space with a reported seating capacity of 40 based on numbers of chairs available. In addition, there is further space and seating available in the adjoining the Council Chambers and rooms.

Amenities include male, female and disabled toilets, kitchen, drinking water for the public and adequate air conditioning.

The facility is located in the southern outskirts of the township, potentially limiting the ability of all community to walk to this facility.

The library and council chambers is further supported through the adjoining council administrative centre.

### **The Hewett Community Centre**

Whilst a Council owned facility, the Hewett Community Centre is operated through a lease arrangement with the Hewett Community Church of Christ.

The Centre consists of several large open meeting spaces and a significant seating capacity for approximately 250. Added amenities include male, female and disabled toilets and showering facilities.

The café component consists of a commercial kitchen with seating space and with multiple water sources.

Opening hours differ depending on the amenity offered. The meeting spaces are available for hire Monday to Saturday and on Sunday a church service is held at the centre facilitated by the Hewett Community Church of Christ.

### **Kapunda Visitor Information Centre (and Library)**

Kapunda Visitor Information Centre and Library is open all week, has toilet facilities and kitchen facilities and adequate air conditioning. It is located in the centre of town and as shown in Appendix A is in very close proximity to emergency facilities such as the Kapunda Police Station, Kapunda Hospital, SA Ambulance Service Station, Kapunda MFS and SES Kapunda Unit.

This facility however offers limited seating and open space apart from some seating in the library and common areas upstairs.

### **Medium scoring facilities**

Facilities considered to have a medium suitability were assessed to be less appropriate than high scoring facilities in several aspects including lower seating capacity and available open space, reduced amenities mainly relating to the presence of toilets and kitchen facilities, and performance of air conditioning.

#### **Barossa Visitor Centre and Tanunda Library**

This facility has the convenience of being centrally located and in close proximity to other public facilities (shops, hotel etc.) and has adequate air conditioning. However, the audit confirmed that it has limited seating capacity and open space availability and no public kitchen provision. In addition, there are no toilets located in the facility, but public toilets are located adjacent to the building.

#### **Tanunda Soldiers Memorial Hall complex (including Gallery)**

This facility is located in the centre of town close to other public amenities and is open Wednesday to Monday from 11am-4pm.

The facility has toilet facilities, however only a small portion of the building is air conditioned.

#### **Two Wells Library**

Two Wells library offers drinking water and kitchen facilities however does not have toilet facilities located inside the building. Public toilets (open 24 hours) are located adjacent to the building.

### **Low scoring facilities**

The major factor contributing to low scores for other facilities audited (see Appendix A for full list) was limited or no public opening hours. Other factors taken into account (albeit some with less weighting than others) were the amenities offered at each facility, particularly air-conditioning, toilets and drinking water or lack thereof and to a lesser extent the availability of kitchen facilities.

Selected examples of low scoring facilities include the Freeling Library, Mallala Council Chambers, Two Wells Council Chambers and the Mallala Institute. Each of these facilities were open a small number of hours each week on selected days, or by appointment only.

It is noted that the Mallala Institute, whilst not open to the public, has large open spaces with significant seating, 6 split system air conditioners, male, female disabled toilets and a commercial kitchen and bar facilities. The Mallala Council Chambers also has seating capacity for approximately 40 persons, toilet facilities and a small kitchen, though again the building would need to be opened specifically for use by the general public.

## 4.2. Developing extreme heat scenarios

Seed met with emergency management consultant Brad Flaherty to progress thinking around design of the scenarios to ensure they were practical and relevant to contemporary experience in South Australia.

The scenarios were carefully designed to include elements that were realistic and that stakeholders could relate to, whilst pushing people outside of their comfort zone to think about events that are not in the historical record.

Emerging from these discussions three action areas were considered to balance factors that represent a blend of current and potential operations and outcomes:

- 1 Extending the use and opening hours of existing Council facilities which are open to the public such as libraries and visitor centres in prolonged heat events – What are the existing policies and expectations?
- 2 Opening high capacity Council facilities (not currently open to the public) during extended heat events as refuges for vulnerable members of the community. What will be required?
- 3 Opening high capacity Council facilities during extended heat events as refuges for threatened members of the community during a major a major fire event. How will we respond?

A key factor however was that the **SES does not recommend** the establishment of temporary cooling centres. They state that a more feasible and effective option may be to utilise existing facilities such as shopping centres, public swimming pools, movie theatres, libraries, and art galleries etc. where the public can seek refuge from extreme heat during the day.

From these considerations a scenarios based approach was developed. A copy of the scenarios briefing paper distributed to workshop attendees is attached (Attachment B).

Key points included:

Background on extreme heat within the region, previous experience and questions relating to the scenarios that focused on:

- the chain of command,
- planning procedures and protocols,
- organisational structures during response and
- business continuity process.

The intent was to provide a workshop structure that enabled critical thinking on factors that influence information exchange, decision making and consistent engagement during events where stress, time response and availability of critical assets and people are likely to be challenged. The briefing paper and its structure (Attachment B) is a key outcome of the project that considers these aspects.

### 4.3 Stakeholders

A range of stakeholders were included and invited to the scenarios planning workshop. They included;

- representative from each participating Council;
- zone emergency management committee members;
- Local police;
- Local CFS;
- Local SES; and
- Regionally active businesses.

A number of stakeholders were also included in the drafting stage of the scenarios and the subsequent briefing paper, including the Steering Committee (representative of each Council), emergency management officer (Barossa) and the zone emergency management project officer. An attendance list is attached (Attachment C).

### 4.4 Scenario Planning Workshop

A scenarios planning workshop was conducted on Friday 30<sup>th</sup> October at the Hewett Community Centre to consider planning for regional extreme heat events. Participants were asked to consider plans and systems used by each of the participating Councils relating to extreme heat events.

The day of the workshop coincided with extreme weather events (28 to 30 October 2016) in the Adelaide region, in particular a flood event in the North Para and Gawler River (Barossa) catchments. This subsequently reduced participant numbers, particularly from Council employees directly engaged with emergency response activities. Nevertheless the consensus was that the process and information exchanged within the workshops was particularly valuable for future planning, coordination and response to extreme heat events, as well as for potentially all emergency response and business continuity planning activities.

Workshop participants were provided with a participatory exercise on the day, involving a series of fictional (but possible) escalating, extreme heat scenarios. The object was to determine actions taken by Councils as a consequence of these scenarios and identify any gaps in policy and planning processes necessary to ensure risk reduction.

A copy of the scenarios exercise is attached (Attachment B).

The following table is a synthesis of the discussion that occurred between workshop participants during each phase of the scenarios.

Special idea	Comments
Special idea 1 – Preparation (Extreme Heat Event)	<ul style="list-style-type: none"> <li>• General feel that this was a scenario encountered in most summers but the intensity seems to be growing.</li> <li>• Should the Town of Gawler also be included?</li> <li>• Barossa Co-Op chosen not to set a temperature, conditions reviewed on a daily basis – trade normal hours providing it is safe to do so. Strong focus on business continuity management plan.</li> <li>• Review and meet hourly if needed to address current conditions</li> </ul>

Special idea	Comments
	<ul style="list-style-type: none"> <li>• delegated task to review BoM temperatures, conditions and warnings.</li> <li>• Need to manage staff needs with public needs.</li> <li>• What happens if we lose staff heading out to respond to emergency situations i.e. fire?</li> <li>• No current MOU's with Zone Emergency Coordination Centre (ZECC). Should there be?</li> </ul>
<p>Special idea 2 – Response (Escalating Extreme Heat Event)</p>	<ul style="list-style-type: none"> <li>• Local Council person is critical at the ZECC – local knowledge important.               <ul style="list-style-type: none"> <li>○ A very good communicator is needed with authority and ability to make decisions and spend money and access equipment.</li> <li>○ Must have a deputy</li> </ul> </li> <li>• Who has responsibility on staff to attend to members of the public who may be unwell?</li> <li>• Need a organising committee who can regularly update others and be alert to changing circumstances</li> <li>• Have a coordinator who is regularly (hourly) access information channels from formal entities such as BoM, SES, CFS, Police etc.</li> <li>• Need to be a single point of authority – link to the persons position description.</li> <li>• Strong need to be situationally aware.</li> <li>• Staff need to be aware of the BCMP's and have structures to supplement resources as needed.</li> <li>• Have a process that empowers employees to help themselves e.g. knowing you have sufficient information to support you in making the correct decision.</li> <li>• training and support important in developing these skills.</li> <li>• Link to tool box meetings – ensure planning is in place early</li> <li>• Some perception from public that it is Council's responsibility (and liability) to act on behalf of the public. Need to describe the middle ground between personal responsibility and the interface between legislative requirement and statutory responsibility.</li> <li>• Use available tools such as Heatsafe (SES)</li> <li>• Who is the discriminator for use of such tools? LGA?</li> </ul>
<p>Special idea 3 – Response (Regional Bush Fire)</p>	<ul style="list-style-type: none"> <li>• Need clear awareness around the chain of communication and understand differences between obligation and liability and who provides advice – consider informality of relationships i.e. librarian and public – should a Librarian be providing heat advice?</li> <li>• Require strong coordination with emergency protocols i.e. once a bushfire starts, staff must know the chain of command</li> <li>• Need to be able to refer to the sources of information in an emergency i.e. SES/CFS/Police.</li> <li>• Can there be coordination with “Safer Place”</li> <li>• Need better understanding of the liability issues between Community Groups and Council in Council owned facilities</li> <li>• Use HeatSafe as the entry point for advice</li> <li>• Review Risk V Perception V Opportunity – what are the “cooperative opportunities” between Councils?</li> <li>• Deeper assessment of BCMP to see where the overlaps are regionally – can resources be shared?</li> </ul>

Special idea	Comments
	<ul style="list-style-type: none"> <li>• Can radios be used during power down periods to enable greater communications potential i.e. to visitor centres, libraries etc.</li> <li>• Feel the process is not yet well documented.</li> <li>• Can LGA feedback to the Councils through the MLS i.e. update or LGA circular to help inform all on agreed best processes, then BCMPs can shape at the local Council level.</li> <li>• Consider cash availability for emergency purchases or hire of equipment. i.e. delegated authority through Senior Management.</li> <li>• This scenarios planning process could be used to wrap around and test all emergency processes i.e. fire/flood/heat together.</li> </ul>

It was evident from the discussions that consistency of information exchange was considered to be a critical step and where gaps currently exist. A representative from the Barossa Co-Op was able to describe how that company has very clearly defined processes and information sources in the way it considers continuity of its business, regardless of the emergency or event at hand.

#### 4.5 BoM Data and briefing

The Bureau of Meteorology (BoM) store and manage a range of historical climate data sets, and weather forecasting tools.

A workshop was conducted at RDA Barossa on Friday 24 February 2017 . Darren Ray, Senior Climatologist at the BoM explored the range of data sets and forecasting tools available from the BoM to assist in planning for and managing extreme heat events.

Observations from those attending the workshop was similar to those attending in other in other regions. The observed benefits included:

- awareness of the Weather Observations Website and local weather stations reporting data;
- advice that the BoM could assist with planning and implementing a local network. This will have the benefit of improving forecasting in the region in the future;
- awareness of the BoM's MetEye and the difference between this information and automated model including demonstrations of MetEye the 'MetEye User guide';
- advice regarding BoM's new weather app and mobile website; and
- having access to cell based information, seen as beneficial to aid in local forecasting.

Overall, workshop participants view that they have been operating with limited information compared to emergency services. There has been strong interest in investigating ways to improve the available information to Councils during significant extreme weather. It remains unclear whether this information gap will be reduced in the future given that nominated personnel from Councils now have an opportunity to participate in State Emergency Council briefings.

## 5 Key Findings

**The audit of Council owned facilities demonstrated that there is not a well-defined or documented approach to understanding the needs of Council buildings as “cooling centres”.**

The importance of the facilities audit was discussed in the scenarios workshops as it is anticipated that factors such as emergency zone planning, opening hours, capacity to manage and run facilities, extent to which facilities can cope with additional public demand, catastrophic fire day forecasts, possible evacuation, catering and hygiene requirements will all influence how, when and if facilities should be designated as cooling centres in extreme heat events. These factors and the risk surrounding them tended to support the SES’s position of not recommending cooling centres.

**There is no single planned approach to extreme heat preparation and response and consistency of access and communication of information is required.**

Information on extreme heat events such as forecasts, management information and subsequent lines of communication is managed in a variety of ways across the Councils depending on the needs of the Council and their BCMPs. Strong lines of communication across ZECCs, ZEMCs and access to up to date information through BoM into the Councils is required to ensure a consistency of message to the public and to enable the Council’s to develop strong internal and external chains of command.

Councils have a range of documents relating to management of extreme heat and emergency management, with the structure and documentation relating to extreme heat varying within each Council. An example (TBC) is included in Attachment D.

**The scenario exercise was an effective format for assessing the preparedness of Councils to respond to extreme heat events.**

Based on feedback from participants, the scenario exercise was found to be an effective way for Councils to assess their preparedness for an extreme heat event. The progressive scenarios with escalating special ideas presented an opportunity to explore how staff and systems would respond under increasingly worse conditions. While it validated that many of the systems in Councils were appropriate, several gaps and areas for improvement were also identified.

The format was seen as providing a fun and engaging way for Council staff to assess their preparedness. The general absence of emergency services personnel meant that participants could focus discussions on how they respond individually or collectively to maintain their own operations. It was suggested that the exercise could be repeated on a regular (e.g. annual) basis to test preparedness for other types of extreme events and as a way to build capacity amongst key personnel from each Council involved with emergency management and business continuity.

**Further information could be shared on approaches to emergency management and business continuity management planning.**

While there was awareness of the general approaches to emergency responses across Barossa Councils, there was recognition that this could be further enhanced. Developing an update or circular from MLS through the LGA could assist in advising of the best sources for extreme heat information in both the planning and response phases and help to standardise how BCMPs consider this information and then internal for individual Council needs.

**Awareness of alternate forecasting tools could be increased and access to alternate forecasting data improved.**

The workshop and BoM briefing has demonstrated to other (regional) Council staff involved with emergency management preparation and response who utilise the Elders website or other information sources instead of the BoM website for forecasting information that there is vital and accessible information available through the BoM. This is largely because of the ease of access to information on the Elders website and a preference for how the data is presented. By showing Council staff where to find forecasting data, such as on MetEye and through the BoM's new App it is possible that there will be an increase in use of this data.

Potentially of greater interest is for Councils to inform future product development for the BoM. For example, other Councils have expressed a strong interest in being able to access lightning tracker information which is extremely useful for the CFS and Council operations. There was also concern expressed that emergency management services have access to forecasting information not currently available to Councils and as such Councils are not able to make the best possible decisions in relation to their own operations.

Continuing to build the relationship between Barossa Councils and the BoM may present a way to ensure the region is kept abreast of new forecasting tools as they become available. This could be achieved by inviting the BoM to provide forecasting briefings in association with extreme event scenario exercises on an annual basis.

**Longer term forecasting tools exists and should be considered further for the role that can play in the preparation phase.**

Councils currently use the multi-day forecast to identify potentially extreme heat conditions. However, there are also forecasting tools that can provide an insight into when conditions are more likely to become heat waves.

**Communications before, during and after an extreme heat event are already well managed but areas for improvement exist.**

Clear lines of communication already exist within Councils before, during and after extreme events. Weather forecasting websites are regularly monitored and when potentially high impact events are identified, relevant emergency management personnel within each Council are notified and response plans are initiated.

There were two potential areas for improvement identified following the extreme storm planning workshop:

- Use of social media platforms: Social media platforms such as Facebook already provide a valuable source of information about the impact of extreme events. This could be further enhanced with such platforms also used more extensively as a way to communicate key messages during and following an event about impacts to Council services; and
- VHF radio: The extreme storm exercise coincided with a major storm that resulted in the loss of mobile phone communications networks. During this event VHF radios were the primary source of communication. While it was recognised that they are likely to be used infrequently, they were also considered to be a low cost back up telecommunications solution.

### **The findings from this project can help to reduce mutual liability risk.**

Managing core Council functions and services in a variable climate is at the forefront of a Council's risk management framework. Adapting work practices and managing infrastructure to cope with long term climatic shifts and associated extreme weather patterns is important to ensure that Councils remain sustainable in the long term and that they can continue operating and servicing customers during extreme events.

This project helped to review and identify areas for improvement in current Council emergency management and business continuity planning processes. It also addressed priorities in the regional climate change adaptation plan for the Barossa Region (RDA Barossa, 2014) in relation to the increasing risk of extreme heat. In so doing it demonstrated that improving current best practice for Council operations can assist with building adaptive capacity.

If addressed, it is possible that a number of the findings from this project could reduce the risk of third party claims from extreme storms through better preparation and response.

Through combining modelled and building audit data analysis with an innovative scenario based workshop process, the project has developed an approach that could be repeated in other Council regions across the State. There are also risk mitigation benefits that can be transferred across the Local Government sector such as increasing awareness of alternate forecasting tools, greater use of social media platforms to acquire and distribute information during an extreme weather event, and improving record keeping to gain a better understanding of hotspots which can then assist with post event debriefs and reporting.

## 6 Recommendations

Based on the facilities audit, scenarios planning workshop and project investigations, there are a range of recommendations for consideration in the preparation and response to extreme heat events. These are:

- 1 Councils need to review where they (do) or can incorporate preparation and response for extreme heat within their business continuity management plans (BCMP's) in particular in the areas of risk assessment and business impact analysis.
- 2 Councils should consider a review of how information is gathered and distributed within their organisations regarding extreme heat forecasts, preparation and response.
- 3 Specific policies may need to be developed regarding individual Council facilities (buildings) and the capability of these buildings regarding extreme heat events. In particular this may require written procedures for staff regarding management of the building and the public during extreme heat events.
- 4 Familiarisation across management within Councils, with LGA and SASES circulars regarding extreme heat preparation and response, is recommended.
- 5 A wider range of communications methods could be considered, i.e. use social media and VHF radios as extreme heat may coincide with loss of electricity preventing normal communications methods.
- 6 Cross Council collaboration on aspects like sharing of extreme heat policy guidelines, communications and facilities could be considered as a way to assist each other in planning, preparation and response to extreme heat events.
- 7 Cross collaboration with BoM in developing specific forecasting tools and information to assist in planning, preparation and response to extreme heat would be useful.
- 8 Communicating (as best as is possible) where liability for Council starts and stops, specifically in relation to publically open facilities, would aid Council and their employees to respond to members of the public that may consider some responsibility to rest with Council, rather than the individual; and
- 9 Developing methods, including communications for advising the community on Council plans for and management of employees and facilities during extreme heat, such that vulnerable members of the community are aware of mechanisms to best manage their own situation.

It is considered that these recommendations could be captured principally through BCMP integration, but, in some cases through setting clearly communicated (within Council) procedures regarding access to information, communication of information and well defined employee roles prior to, during and after periods of extreme heat.

# References

Local Government Association of South Australia (2016). Extreme Heat Guide for Local Government in South Australia. LGA of SA ECM 645558. November 2016.

RDA Barossa (2014). RDA Barossa Region Climate Change Adaptation Plan. Prepared for RDA Barossa by Seed Consulting Services, August 2014.

South Australian State Emergency Service (SES) website Heatsafe, 2016 SA Government. [http://www.ses.sa.gov.au/site/community\\_safety/heatsafe.jsp](http://www.ses.sa.gov.au/site/community_safety/heatsafe.jsp)

# Attachments

Appendix A: Summary Table of facilities audited										
District Council	Location	Facility	Opening hours	Building Envelope	Air conditioning	Toilets	Drinking water	Kitchen facilities	Service connections (Water, gas, electricity)	Proximity to other services
Barossa	Mount Pleasant	Library	Monday to Friday	Brick, timber, glass, steel	yes	yes	yes	yes	water and electricity (not sure about gas)	- 350 m to Mount Pleasant District Hospital - 160 m to Police Station - 1.5 km to Mouth Pleasant CFS - volunteer ambulance service (pretty sure located in the CFS station)
Barossa	Nuriootpa	The Barossa Council Public Library and Council Chambers and rooms	Monday to Friday and weekends	Brick, timber, glass, steel	yes	yes	yes	yes	water and electricity (not sure about gas)	- 2.9km to Inner North Community Health Service location - 7km to Angaston Hospital -1.5 km to

Attachment A



										<p>Nuriootpa Police Station          - 1.7 km to Nuriootpa CFS          - 6.8 km to Angaston St John Ambulance Volunteer Division          - 22 km to SES Kapunda Unit</p>
Barossa	Tanunda	The Rex - Barossa Aquatic and Fitness	Monday to Friday and weekends	Steel cladding, decking, some brick	yes	yes	yes	yes	water and electricity (not sure about gas)	<p>- 2.7 km to Tanunda hospital          -6.1 km to Nuriootpa Police Station          - 1.4 km to Tanunda CFS          - 8.7 km to Angaston St John Ambulance Volunteer Division          - 23 km to SES Kapunda Unit</p>

Attachment A



Barossa	Tanunda	Barossa Visitor Information Centre and Library	Monday to Friday and weekends	Stone, steel	yes	no	yes	no	water and electricity (not sure about gas)	- 450 m to Tanunda hospital -7.4 km to Nuriootpa Police Station - 1.2 km to Tanunda CFS - 10.9 km to Angaston St John Ambulance Volunteer Division - 27.2 km to SES Kapunda Unit
Barossa	Tanunda	Tanunda Soldiers Memorial Hall complex (including Gallery)	Wednesday to Monday	Stone, steel, brick	A/C but only in entry room	yes	yes		water and electricity (not sure about gas)	
Barossa	Lyndoch	Lyndoch Library	Monday to Friday and Saturday	Brick, timber, steel	yes 2x split reverse cycle	yes	yes	yes	water and electricity (not sure about gas)	- 7.7 km to Williamstown Police Station - 13.7 km to Gawler Hospital - 500m to Lyndoch CFS - 15 km to Gawler

Attachment A



										Ambulance Station - 39.9 km to SES Kapunda Unit
Barossa	Angaston	Town Hall/Library	Monday to Friday	Stone, steel	yes					
Light	Kapunda	Kapunda Visitor Information Centre (and Library)	Monday to Friday and weekends	Stone, steel	yes	yes	yes	yes	water and electricity (not sure about gas)	- 290 m to Kapunda Police Station - 1.4 km to Kapunda Hospital - 230m to Kapunda CFS - 25m to Kapunda SA Ambulance Service Station - 270 m to SES Kapunda Unit
Light	Hewett	Hewett Centre	Monday to Friday	Brick, steel, glass	yes	yes	yes	yes	water and electricity (not sure about gas)	- 2.5 km to Gawler Police Station - 2.9 km to Gawler Hospital - 1.5 km to CFS region 2 - 3.7km to Gawler

Attachment A



										Ambulance Station - 38.4 m to SES Kapunda Unit
Light	Freeling	Freeling Library	Selected week days	Brick, steel, glass						
Adelaide Plains	Mallala	Institute	By appointment	Stone, steel, brick	yes	yes	yes	yes	Water, electricity and gas	- 100 m to Mallala Police Station - 280m to Mallala District CFS - 200m to Mallala SA Ambulance Service Station - 38.3 m to SES Edinburgh Unit
Adelaide Plains	Mallala	Council Chambers	By appointment	Brick, steel, timber	yes	yes	yes	yes	water and electricity (not sure about gas)	- 270 m to Mallala Police Station - 250m to Mallala District CFS - 150 m to Mallala SA Ambulance Service Station - 38.4 m to SES

Attachment A



										Edinburgh Unit
Adelaide Plains	Two Wells	Council Chambers	By appointment	Stone, steel, timber	yes	no	yes	yes	water and electricity (not sure about gas)	- 1.6 m to Two Wells Police Station - 27.5km to Lyell McEwin Hospital - 100m to Two Wells CFS - 16.9 km to Mallala Ambulance Service Station - 22.3 m to SES Edinburgh Unit
Adelaide Plains	Two Wells	Library	Tuesday to Saturday	Stone, steel, brick	yes	no	yes	yes	water and electricity (not sure about gas)	- 1.7 m to Two Wells Police Station - 27.5km to Lyell McEwin Hospital - 100m to Two Wells CFS - 16.9 km to Mallala Ambulance Service

**Attachment A**



										Station - 22.3 m to SES Edinburgh Unit
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# Barossa Region Extreme Heat Planning Project 2016



## **Barossa Region Extreme Heat Planning Project**

### **Workshop briefing paper**

#### **Background**

Climate change modeling and experience in the Barossa, Light and Adelaide Plains region to date indicates that future heat waves may be longer in duration and more intense. In rural areas this is exacerbated by the potential for more intense and catastrophic fire events and intense storms.

When these events occur concurrently the community is usually exposed to dramatic emergency situations, culminating in the need for clear emergency response plans and coordinated and effective services and assistance to the public.

With respect to extreme heat events and preparation, public facilities such as community and Council buildings, sporting club rooms and recreational facilities may become refuges and emergency hubs and collection points. In many cases, particularly rural areas, these facilities may simply be a more comfortable place to be or in some cases directly threatened or the only place for emergency refuge.

Having a well prepared and planned extreme heat response strategy is vital for local government to ensure that the community has the support it needs to respond effectively.

#### **Workshop**

A workshop has been designed to provide an opportunity for Light, Barossa and Adelaide Plains Councils to review their emergency management and business continuity plans in response to extreme heat events. This will require assessment of the response of individual plans and the potential for cross Council coordination.

The workshop consists of three parts: project overview and historical impacts of extreme heat events, extreme heat planning exercise and overview of applicable weather forecasting tools. The objectives of the extreme heat planning exercise are to:

1. Discuss how councils will respond and recover to location specific extreme heat events;
2. Discuss how councils can work together and share resources to manage extreme heat impacts impacting multiple councils at once;
3. Identify roles and responsibilities of the Councils compared with emergency service providers such as CFS and SES;
4. Identify opportunities for sharing resources across Councils;
5. Identify specific actions that can reduce the frequency and level of third party liability claims against Councils.
6. Coach staff members in their roles where required

The agenda for the workshop is at Attachment A.

### **Extreme heat planning exercise format**

The extreme heat planning exercise will be conducted using a progressive discussion style, based on a **General Idea** and three escalating **Special Ideas**.

The exercise will be conducted with representatives of the three Councils (Light, Barossa & Adelaide Plains). It has been designed to inform council preparation, response and recovery from an extreme heat event. While informed by an understanding of emergency service provider responsibilities in the region, the exercise will focus on the needs of Councils to mitigate risk from such events.

Representatives will work in Council based teams. They will have an opportunity to present their response with reference to the special ideas and “key questions”, which will be made available on the day.

It is expected that a representative from each Council will outline an overall response to the event, operational structure, standard operating procedures and resources available. Human and equipment resources should be those available to Council on the day of the workshop (i.e. not what could be available in a years’ time).

Participants will be asked to take an active part in discussions and identify major issues at the conclusion of the exercise.

Decisions and opinions given should not set precedents and may not reflect your Council’s final position on any given issue.

On a future date the Bureau of Meteorology will provide an overview of the tools that are available to Councils to assist with forecasting extreme heat.

### **Timing and venue**

The exercise will be conducted as part of a workshop being held at the Hewett Centre, 28 Kingfisher Drive, HEWETT SA 5118 on Friday 30<sup>th</sup> September 2016 commencing at 9:30am.

### **Business units involved**

To be advised

### **Participants**

Each Council has been asked to invite representatives involved with emergency management and business continuity planning. Representatives should be aware of the content of Council emergency management plans and business continuity plans.

### **Safety officer**

Mark Siebentritt will ensure that safe practices are followed and acts as a check in the case of unsafe behaviour.

### **Rules**

Participants to conform to standard communication processes as per a real situation for initial notification.

**Health & safety**

In the event of a real emergency, the term “NO DUFF” should precede and follow any real emergency transmission or notification.

**Logistics**

Any logistics matters are to be referred to Mark Siebentritt.

**Evaluation**

Evaluation will be undertaken in two phases.

- Phase One - Evaluation of the Exercise with the Facilitators post the workshop;
- Phase Two – Evaluation of the Exercise with Light, Barossa and Adelaide Plains Councils.

### **Extreme heat in South Australia**

Extreme heat is defined as an extended period of very high temperatures, which is related but not confined to heatwave conditions. It has the potential to adversely affect urban and rural communities, infrastructure and the natural environment.

When temperatures spike for three or more consecutive days without an adequate drop in night-time temperature to cool the outdoor and indoor environments, there is a significant increase in the risk to vulnerable populations.

Extreme heat has a major impact on the economy and community in South Australia. Mortality and morbidity increase during extended periods of high temperatures, especially for people with non-communicable disease such as cardiovascular disease, some cancers, respiratory health, mental health disorders. Extreme heat also impacts livestock, transport services, power networks, public events, crop damage and food loss.

Heatwaves cause more deaths in Australia than any other natural hazard. With global warming resulting in rising temperatures and common extreme weather circumstances, heatwaves have become a part of life in Australia.

There is a greater likelihood of extreme heat events during El Nino conditions.

Climate projections show that extreme heat events are expected to occur more often and with greater intensity in the future.

### **Responding to Extreme Heat**

The State Emergency Service (SES) is the Hazard Leader for Extreme Weather under State Emergency Management arrangements. Key South Australian Government departments, led by the SES, have worked together to prepare a whole of government Extreme Heat Plan. The plan ensures a coordinated approach to increasing community preparedness, awareness and response to extreme heat events.

The Extreme Heat Plan includes trigger points for various actions that are based on a formula using the average daily temperature [ADT].

When an ADT of 32C or above (for example, an average of 40C daytime and 24C overnight) is predicted for three or more consecutive days the SES will issue an extreme heat warning to the public via media release where practical up to 24 hours in advance of the event.

Extreme heat warning messages will be posted to the Bureau of Meteorology and SES websites.

### **Cooling centres**

The SA SES does not recommend the establishment of temporary cooling centres. They state that a more feasible and effective option may be to utilise existing facilities such as shopping centres, public swimming pools, movie theatres, libraries, and art

galleries etc. where the public can seek refuge from extreme heat during the day. Discussions may need to occur with facility owners/operators to ascertain risk assessments for the potential increased number of the general-public seeking refuge within the facilities.

Where Local Government wishes to establish temporary cooling centre facilities in their jurisdictions this will be conducted under their own responsibility and financial accountability. It should be noted that they may be held both legally and financially responsible for this initiative. The SASES welcomes involvement in the consultation process to discuss associated risks and potential logistical issues associated with cooling centres.

There are various operational and logistical issues concerned with temporary cooling centres, such as, but not limited to:

- availability and sourcing of multiple suitable temporary facilities;
- accountability of associated expenditure for running the facilities;
- identification of appropriate locations to maximise efficiency for the community;
- access to and from facilities by public transport (if operational);
- logistics associated with management of the facilities such as staffing, security, medical assistance, public liability, infrastructure such as misting, air-conditioning hire, maintenance, cleaning, catering, amenities, hygiene etc; and
- the duration of operation and increased load on electricity requirements.

### Other information

The SES has developed the Heatwave Information Guide which includes lots of helpful tips on how to reduce the impact of extreme heat. It also includes information about how to respond to heat stress so the community are prepared for heatwaves.

Copies of the Heatwave Information Guide are available at the SES State and all Regional Headquarters as well as Service SA Customer Service Centres state-wide.

### Historical events and impacts

#### *March 2008*

Adelaide experienced a heatwave lasting 11 days in March 2008 when the record at the time for the longest number of days reaching 35 degrees Celsius was broken on Thursday 13th March when the city's temperature reached 35.1C at 10:30am.

The Bureau of Meteorology issued a summary of the March 2008 heatwave with key data consisting of: • 15 consecutive days with a maximum temperature in excess of 35°C, which was the longest heat wave recorded at the South Australian Regional Office. • 13 consecutive days with a maximum temperature in excess of 37.8°C at the South Australian Regional Office. This surpassed the heat wave of January 1939.

#### *Jan/Feb 2009*

A severe heat wave across south-eastern Australia in late January 2009 may have contributed to the sudden deaths of more than 20 people in South Australia. This precipitated a breakdown of electricity distribution and public transport systems in the states of Victoria and South Australia. SA was officially in the grip of a heatwave,

having on 12 January, experienced its fifth consecutive day of more than 35°C. In Adelaide, residents endured six straight days of temperatures over 40 degrees Celsius (maximum of 45.7°C reached on Jan 28), with the level remaining above 35°C for a further 7 days. Ambulance paramedics were inundated with an unusually high number of heat related call-outs, treating more than double the summer daily average. Several sporting fixtures, including lawn bowls, junior cricket and surf lifesaving were cancelled.

On 30 January 2009, the SA Ambulance Service (SAAS) recorded its highest number of callouts for the third consecutive day, responding to more than 1400 calls. The calls led to 920 people receiving medical attention, with around 600 needing emergency care.

### *December 2015*

Adelaide broke the record for its longest December heatwave on file as temperatures reached 40.9 °C on 20 December just before 12:00pm. It was the city's fourth consecutive day over 40C. Several instances of heat stroke were treated in hospitals.

Councils have responsibility for preparing for, responding to and recovering from extreme events that impact on council assets and services. They also need to ensure that Council operations and infrastructure do not negatively impact on residents or businesses.

## **SPECIAL IDEA 1**

It is November 2017. The Bureau of Meteorology 3-month outlook has advised that El Nino conditions are likely to continue into the summer of 2017-18, meaning that there is a higher than average chance of heat wave conditions.

On Monday 15 January 2018, the forecast daily maximum temperature is 41°C. The Bureau of Meteorology advises that there is a high chance of heatwave conditions developing across all parts of the State during the course of the week.

On Wednesday 17 January 2018, the Bureau of Meteorology forecast is for temperatures in the Barossa region to reach 40°C. This represents the third day in succession with daily maximum temperatures across the region exceeding 40°C and daily minimums exceeding 24°C.

The SES has issued an extreme heat warning to the public via a media release. The public are advised to exercise care during the hot weather and to take a range of precautions including the following:

- Keep homes cool by closing blinds and curtains during the day and making good use of fans or air conditioners (which are on the cool setting);
- Limit outdoor activities to mornings and evenings;
- Make use of air conditioned public facilities such as shopping centres, cinemas and libraries; and
- Be aware of the symptoms of heat stress and if they develop take cool baths or showers and use cool packs or wet towels to cool down.

Libraries and other council facilities open to the public have experienced high visitation rates on Monday and Tuesday by people looking to escape high daily temperatures.

### **Questions**

1. How is your Council informed about the event and its potential impacts?
2. What do you do with this information (organisationally)?
3. What plans are in place for preparing for a heat wave?
4. What organisational structure will you put in place to deal with this?
5. What resources do you think you will need, especially in managing public facilities?
6. What coordination is there with neighbouring Councils?
7. Who is in charge?

## **SPECIAL IDEA 2**

The time is now 12.30 pm on Wednesday 17 January 2018. Temperatures across the Barossa region have already reached the forecast maximum of 40°C.

An updated forecast from the Bureau of Meteorology advises that temperatures are likely to rise further with a revised forecast of 42°C for later in the afternoon. Relief is on the way with a cool change arriving later in the evening. However, winds are expected to increase from the north in advance of the change before moving to the south.

The Tanunda War Memorial Hospital is reportedly treating several elderly people for heat stroke. Patients were reportedly at home but had not switched on the air-conditioning systems in order to save money.

High numbers of visitors have been reported in the region's libraries and in other public facilities such as swimming pools and council chambers. Some members of the public have presented with conditions symptomatic of heat stress, including thirst, tiredness, nausea and dizziness.

### **Questions**

1. How do you ensure that your Council is informed about the event and its ongoing impacts?
2. What do you do with this information (organisationally)?
3. What plans are in place for responding to the event as it unfolds?
4. What ongoing coordination/management is in place at an organisational level?
5. What resources do you think that you will need? How long will you need them?
6. What issues do you foresee for this incident?
7. Where will your organisation manage this incident from?
8. What information are you communicating to residents and businesses?
9. What level of assistance are you providing to people presenting with heat stress symptoms?
10. What about business as usual?

### **SPECIAL IDEA 3**

The time is 4.30 pm on Wednesday, 17 January 2018. Temperatures have dropped slightly to 39°C, however, northerly winds in advance of the cool change are approaching gale force. There are reports of smoke near Kapunda and CFS warnings have advised that several grass fires have been sparked as a result of dry lightning strikes.

Given the fire risk, tourists visiting the wine region have been directed to seek shelter in public facilities. A number of tourists do not have English as their primary language.

A media release and social media tweet by SA Power Networks indicates that rolling power blackouts will occur throughout the Barossa region to reduce the risk of winds causing power lines to make contact with vegetation which could spark fires.

SAPOL has advised that due to high fire risk and smoke in the region, some roads between towns in the region have restricted access.

The library is set to close at 5 pm and preparations are now being made to advise people that they need to leave the facility.

### **Questions**

1. What is the current situation? Describe the impacts in major towns for each Council.
2. Does the library close?
3. What information do you provide to people in the library who are now looking to head to their home? Do you have any liability for their safety if you send them home?
4. What plans are in place for back-up power generation? Can you continue to operate?
5. What ongoing coordination/management is in place at a cross-Council level?
6. What resources do you need? Where is the money coming from for overtime and plant acquisition?
7. What plans are in place for responding to and recovering from an extreme heat event?
8. What ongoing public information plans are in place? How does your Council deal with residents' concerns?
9. Have your resources and assets been able to cope?

## Extreme Heat Planning – Workshop Agenda

30 Sept 2016 – Hewett

**Facilitators:** Andy Chambers and Brad Flaherty

<b>9:00 – 9:30</b>	Arrival and coffee
<b>9:30 – 10:00</b>	Introduction <ul style="list-style-type: none"><li>• Welcome</li><li>• Overview of the project to date</li><li>• Today's workshop</li></ul>
<b>10:00 – 10:10</b>	Overview of the extreme heat planning exercise
	<b>Extreme heat planning exercise – Special idea 1</b>
<b>10:10 – 10:30</b>	Discuss Special idea 1 in Council groups
<b>10:30 – 10:50</b>	<b>Morning tea</b>
<b>10:50 – 11:20</b>	Group presentation on special idea 1
	<b>Extreme heat planning exercise – Special idea 2</b>
<b>11:20 – 11:40</b>	Discuss Special idea 2 in Council groups
<b>11:40 – 12:15</b>	Group presentation on special idea 2
<b>12:15 – 12:45</b>	<b>Lunch</b>
	<b>Extreme heat planning exercise – Special idea 3</b>
<b>12:45 – 13:10</b>	Discuss Special idea 3 in Council groups
<b>13:10 – 13:30</b>	Group presentation on Special idea 3
<b>13:30 – 14:00</b>	Group debrief
<b>14:00</b>	Close

## List of Invitees to Scenarios Planning Workshop, 30/9/16.

<b>General</b>		
<b>First name</b>	<b>Last name</b>	<b>Organisation and position</b>
Jamie	Gladigau	JBG Architects
Simon	Taylor	Chair of the Southern Barossa Alliance (Community and Business).
Chris	Pfeiffer	Chair Tourism Barossa, Board of Tanunda Lutheran Homes.
Chris	Linden	Chair of Nuri Futures Association
		Manager - Barossa Aquatic and Fitness Centre
Ian	Tooley	Climate Change Advocate and Ex Nuriootpa High School Principal
Tom and Rachel	Brdanovic	Climate Adaption Consultant and member of transition Gawler
Alex	Zimmermann	Pinery Fire Recovery Coordinator
Graeme	Longmuir	CEO - The Co-op Barossa
Greg	Mennie	SES Manager Community Engagement
Chris	Jones	Health S.A.
		S.A. Ambulance Service
Matthew	Patterson	S.A. Police (Nuriootpa)
Helen	Hennessy	CFS Community Engagement Officer
Gerry	Dowling	Two Wells CFS
		MFS (Tanunda)
Beth	Reid	Barossa Zone Emergency Management Committee
Bridgett	Leopold	Zone Emergency Management Program Officer, SES
Anita	Bowen	Barossa Region Residents' Association
Craig	Grocke	RDA Barossa
Dianne	Picard	Springton Progress Association (Secretary)
Genevieve	Hebart	Mount Pleasant Inc (Secretary)
<b>Light Regional Council</b>		
Andrew	Philpott	Project Committee Member
Richard	Dodson	General Manager - Infrastructure and Environment
Megan	Renzella	Properties and Facilities Manager
Lorinda	Bayley	Community Development Officer
Bill	O'Brien	Mayor
<b>The Barossa Council</b>		
Gary	Mavrinac	Project Committee Member
Tania	Paul	Manager Library and Heritage Services
Alan	Jackson	Manager Risk
Bob	Sloane	Mayor
<b>Adelaide Plains Council</b>		
Carol	Muzyk	Project Committee Member
James	Miller	CEO
Paul	Cleghorn	Acting General Manager Infrastructure and Assets
Lynetter	Seccafien	Community Development Officer
Angie- Marie	Fuss	OH&S Officer
Tom	Jones	Acting Infrastructure Services Coordinator
<b>Consultants</b>		
Mark	Siebentritt	Director, Seed Consulting Services
Andy	Chambers	Director, Seed Consulting Services
Paul	Hughes	Project Officer, Seed Consulting Services
Brad	Flaherty	Director, BNJ Group

## Attachment C

Attending Extreme heat planning workshop - Hewett, Friday 30th September 2016		
	<b>Name</b>	<b>Representing</b>
Yes	Andy Chambers	Seed Consulting
Yes	Brad Fleherty	BNJ Consulting
Yes	Andrew Philpott	Light Regional Council
Yes	Craig Grocke	RDA Barossa
Yes	Tania Paul	Barossa Council Public Library
Yes	Helen Hennessy	SA Country Fire Service
Yes	Paul Amos	The CO-OP Barossa
Yes	Alex Zimmermann	Recovery Coordinator - Pinery Fire (DCSI)
Yes	Beth Reid	Zone Emergency Management Project Officer
yes	Lorinda Bayley	Light Regional Council

**The Barossa Council – Adverse Weather Process**

# THE BAROSSA COUNCIL



## ADVERSE WEATHER PROCESS

<b>Strategic Plan Outcome:</b>	<b>4.1 Governance and Organisation</b>	<b>Document Number / Code:</b>	<b>TBCPR3809</b>
<b>Process Owner:</b>	<b>CEO Executive Services</b>	<b>Last Revised Date:</b>	<b>27 February 2013</b>
<b>Document Control:</b>	<b>Risk Management Team</b>	<b>TRIM Reference:</b>	<b>B1977</b>
<b>Date Approved:</b>	<b>27 February 2013</b>	<b>Next Review Date:</b>	<b>27 February 2016</b>

<b>1.</b>	<b>Overview</b>
<p>The Barossa Council ("Council") as a Person Conducting a Business or Undertaking ("PCBU") has a Duty to ensure Council Workers are provided with safe systems of work which protect them from the Hazards posed by Adverse Weather.</p> <p>This Process allocates accountabilities and defines the actions which shall be undertaken by all Council Workers to ensure that as far as is Reasonably Practicable, Workers required to operate in Adverse Weather conditions are provided with a safe and healthy system of work.</p>	

<b>2.</b>	<b>Core Components</b>
<p>The core components of Council's Adverse Weather Process aims to ensure:</p> <ul style="list-style-type: none"> <li>• Hazards associated with Adverse Weather conditions are identified;</li> <li>• Risk Assessments are undertaken to determine controls for Adverse Weather conditions;</li> <li>• Clear requirements are in place for operating under Adverse Weather conditions;</li> <li>• Appropriate records are maintained and available.</li> </ul>	

<b>3.</b>	<b>Definitions</b>
Access	The method of gaining entry to a particular location
Adverse Weather	Is severe weather conditions such as high ambient temperature, low temperature, frost, snow, hail, heavy rain, strong wind, electrical storms, fog, high to extreme ultraviolet radiation exposure or a high level bush fire danger.
CMT Corporate Management Team	Corporate Management Team (CMT) is comprised of the CEO, all Directors, the Manager Organisational Development (MOD) and the Manager, Strategic Projects (MSP)
Consultation	The sharing of information and the exchange of views between Council and the persons or bodies that must be consulted and the genuine opportunity for them to contribute effectively to any decision-making process to eliminate or control risks to health or safety.

Egress	The method of exiting from a particular location						
EPF	Eye Protection Factor						
Fire Danger Rating	<p>As determined by the South Australian Country Fire Service:</p> <table border="1"> <tr> <td> <b>CATASTROPHIC</b>  <b>Total Fire Ban</b> </td> <td> <ul style="list-style-type: none"> <li>• These are the worst conditions for a bush or grass fire.</li> <li>• If a fire starts and takes hold, it will be extremely difficult to control and will take significant fire fighting resources and cooler conditions to bring it under control.</li> <li>• Spot fires will start well ahead of the main fire and cause rapid spread of the fire. Embers will come from many directions.</li> <li>• Homes are not designed or constructed to withstand fires in these conditions.</li> <li>• The safest place to be is away from bushfire prone areas.</li> </ul> </td> </tr> <tr> <td> <b>EXTREME</b>  <b>Total Fire Ban</b> </td> <td> <ul style="list-style-type: none"> <li>• These are very hot, dry and windy conditions for a bush or grass fire.</li> <li>• If a fire starts and takes hold, it will be unpredictable, move very fast and very difficult for fire fighters to bring under control.</li> <li>• Spot fires will start and move quickly. Embers may come from many directions.</li> <li>• Homes that are prepared to the highest level, have been constructed to bushfire protection levels and are actively defended <b>may</b> provide safety.</li> <li>• You must be physically and mentally prepared to defend in these conditions.</li> <li>• The safest place to be is away from bushfire prone areas.</li> </ul> </td> </tr> <tr> <td> <b>SEVERE</b>  <b>Total Fire Ban</b> </td> <td> <ul style="list-style-type: none"> <li>• These are hot, dry and possibly windy conditions for a bush or grass fire.</li> <li>• If a fire starts and takes hold, it will be hard for fire fighters to bring under control.</li> <li>• Well prepared homes that are actively defended can provide safety.</li> <li>• You must be physically and mentally prepared to defend in these conditions.</li> </ul> </td> </tr> </table>	<b>CATASTROPHIC</b> <b>Total Fire Ban</b>	<ul style="list-style-type: none"> <li>• These are the worst conditions for a bush or grass fire.</li> <li>• If a fire starts and takes hold, it will be extremely difficult to control and will take significant fire fighting resources and cooler conditions to bring it under control.</li> <li>• Spot fires will start well ahead of the main fire and cause rapid spread of the fire. Embers will come from many directions.</li> <li>• Homes are not designed or constructed to withstand fires in these conditions.</li> <li>• The safest place to be is away from bushfire prone areas.</li> </ul>	<b>EXTREME</b> <b>Total Fire Ban</b>	<ul style="list-style-type: none"> <li>• These are very hot, dry and windy conditions for a bush or grass fire.</li> <li>• If a fire starts and takes hold, it will be unpredictable, move very fast and very difficult for fire fighters to bring under control.</li> <li>• Spot fires will start and move quickly. Embers may come from many directions.</li> <li>• Homes that are prepared to the highest level, have been constructed to bushfire protection levels and are actively defended <b>may</b> provide safety.</li> <li>• You must be physically and mentally prepared to defend in these conditions.</li> <li>• The safest place to be is away from bushfire prone areas.</li> </ul>	<b>SEVERE</b> <b>Total Fire Ban</b>	<ul style="list-style-type: none"> <li>• These are hot, dry and possibly windy conditions for a bush or grass fire.</li> <li>• If a fire starts and takes hold, it will be hard for fire fighters to bring under control.</li> <li>• Well prepared homes that are actively defended can provide safety.</li> <li>• You must be physically and mentally prepared to defend in these conditions.</li> </ul>
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	<p><b>VERY HIGH</b></p> <p><b>HIGH</b></p> <p><b>LOW-MODERATE</b></p>	<ul style="list-style-type: none"> <li>• If a fire starts, it is likely to be controlled in these conditions and homes can provide safety.</li> <li>• Be aware of how fires can start and reduce the risk.</li> </ul>
Hazard	Anything that has the potential to cause injury or illness [as defined in the <i>Occupational Health, Safety and Welfare Regulations 2010</i> ].	
Hazardous Manual Task	<p>Means a task that requires a person to lift, lower, push, pull, carry or otherwise move, hold or restrain any person, animal or thing involving one or more of the following:</p> <ul style="list-style-type: none"> <li>• repetitive or sustained force</li> <li>• high or sudden force</li> <li>• repetitive movement</li> <li>• sustained or awkward posture</li> <li>• exposure to vibration.</li> </ul> <p>These factors (known as characteristics of a hazardous manual task) directly stress the body and can lead to injury.</p>	
Health	Means physical and psychological health	
Health and Safety Representative (“HSR”)	<p>A Health and Safety Representative (“HSR”) is elected by a Designated Work Group (“DWG”) to represent Workers in the work group on matters affecting their health, safety and welfare.</p> <p>[<i>Occupational Health, Safety and Welfare Regulations 2010</i>]</p>	
Minimise	<p>To reduce to the lowest level that is reasonably practicable to achieve.</p> <p>[as defined in the <i>Occupational Health, Safety and Welfare Regulations 2010</i>]</p>	
PCBU	Person Conducting a Business or Undertaking	
Personal Protective Equipment (PPE)	<p>Personal Protective Equipment is specialized clothing or equipment worn by Workers for protection against health and safety hazards. Personal protective equipment is designed to protect various parts of the body.</p>	

Reasonably Practicable	Reasonably practicable in relation to a duty to ensure health and safety, means that which is, or was at a particular time, reasonably able to be done in relation to ensuring health and safety, taking into account and weighing up all relevant matters including: <ul style="list-style-type: none"> <li>(a) the likelihood of the hazard or the risk concerned occurring; and</li> <li>(b) the degree of harm that might result from the hazard or the risk; and</li> <li>(c) what the person concerned knows, or ought reasonably to know, about: <ul style="list-style-type: none"> <li>(i) the hazard or the risk; and</li> <li>(ii) ways of eliminating or minimising the risk; and</li> </ul> </li> <li>(d) the availability and suitability of ways to eliminate or minimise the risk; and</li> <li>(e) after assessing the extent of the risk and the available ways of eliminating or minimising the risk, cost associated with available ways of eliminating or minimising the risk, including whether the cost is grossly disproportionate to the risk.</li> </ul>
Risk	The probability and consequences of occurrence of injury or illness [as defined in the <i>Occupational Health, Safety and Welfare Regulations 2010</i> ]
Risk Assessment	The process of evaluating the probability and consequences of injury or illness arising from exposure to an identified hazard or hazards. [as defined in the <i>Occupational Health, Safety and Welfare Regulations 2010</i> ]
Risk Control	Means taking action to first eliminate health and safety risks so far as is reasonably practicable, and if that is not possible, minimising the risks so far as is reasonably practicable. Eliminating a hazard will also eliminate any risks associated with that hazard. [as defined in <i>Code of Practice – Managing Noise and Preventing Hearing Loss at Work – December 2011</i> ]
Safe Work Instruction (“SWI”):	A Safe Work Instruction (SWI) is a document that records the process to be followed to conduct an activity safely (may have alternative names such as; Safe Operating Procedure or Safe Work Method Statement). The document should have the steps to be followed to complete the activity safely recorded in a logical progression along with any controls/safety measures that need to be used
Safety	The condition of being protected from or unlikely to cause danger, risk, or injury.
SOP	Safe Operating Procedure
SPF	Sun Protection Factor

Supervisor/Supervision	A person with management and control such as any direct line supervisor, including Chief Executive Officer, Director, Team Manager, Line Manager, Coordinator, Supervisor or Leading Worker who are responsible for Worker(s) reporting to them.
TRIM	Council's chosen Record Management System (TRIM - Total Records Information Management)
UPF	Ultraviolet Protection Factor
UV Index	<p>Is a rating system adopted from the World Health Organisation that describes the amount of solar UVR at the earth's surface. The values of the UV Index range from zero upward. The higher the number, the stronger the levels of solar UVR and the less time it takes for damage to occur.</p> <p>The UV Index has five categories:</p> <p><b>Low:</b> UV Index of 1-2</p> <p><b>Moderate:</b> UV Index of 3-5</p> <p><b>High:</b> UV Index of 6-7</p> <p><b>Very High:</b> UV Index of 8-10</p> <p><b>Extreme:</b> UV Index of 11 and above.</p> <p>When the UV Index is at 3 or above, the amount of solar UVR reaching the earth's surface is strong enough to damage the skin, which can lead to skin cancer.</p>
UVR	Ultraviolet Radiation
Worker	<p>A person is a worker if the person carries out work in any capacity for a person conducting a business or undertaking, including work as:</p> <ul style="list-style-type: none"> <li>(a) an employee; or</li> <li>(b) a contractor or subcontractor; or</li> <li>(c) an employee of a contractor or subcontractor; or</li> <li>(d) an employee of a labour hire company who has been assigned to work in the person's business or undertaking; or</li> <li>(e) an outworker; or</li> <li>(f) an apprentice or trainee; or</li> <li>(g) a student gaining work experience; or</li> <li>(h) a volunteer; or</li> <li>(i) a person of a prescribed class.</li> </ul>

4.	Process
4.1.	<p><b>Determination of Adverse Weather Conditions</b></p>
4.1.1.	<p>Relevant Supervisors will determine the weather conditions at the beginning of each work period, where Adverse Weather conditions are present, using information sourced from the Bureau of Meteorology and the South Australian Country Fire Service. This information will also be provided via Council's Record Management System. The relevant Supervisor will also monitor weather condition changes and adjust work allocations accordingly.</p>
4.1.2.	<p>Upon the identification of Adverse Weather, the relevant Supervisor must implement control measures to ensure the Risk of exposure to Adverse Weather conditions is Minimised and to support Council decisions regarding alteration, re-deployment and cessation of work.</p>
4.1.3.	<p>Whilst planning work schedules the relevant Supervisor shall consider the following Risk factors:</p> <ul style="list-style-type: none"> <li>• The Fire Danger Rating as issued by the South Australian Country Fire Service;</li> <li>• Access and Egress to areas of Total Fire Bans;</li> <li>• Characteristics and terrain of the task and work site;</li> <li>• UV Index: <ul style="list-style-type: none"> <li>- For real time readings go to the Australian Radiation Protection and Nuclear Safety Agency website: <a href="http://arpana.gov.au/uvindex/realtime/adl_rtr.htm">http://arpana.gov.au/uvindex/realtime/adl_rtr.htm</a>;</li> <li>- For forecasts go to the Bureau of Meteorology website: <a href="http://www.bom.gov.au/sa/forecasts/nuriootpa.shtml">http://www.bom.gov.au/sa/forecasts/nuriootpa.shtml</a></li> <li>- For weather observations go to the Bureau of Meteorology <a href="http://www.bom.gov.au/sa/observations/saall.shtml">http://www.bom.gov.au/sa/observations/saall.shtml</a></li> </ul> </li> <li>• Air temperature, Humidity and Radiant Heat (including effects on plant operators in enclosed cabins with large glass areas);</li> <li>• Precipitation (including effects of visibility, moisture, slips, soil stability, traffic and plant movement, communications);</li> <li>• Storm activity such as electrical or hail;</li> <li>• High wind conditions;</li> <li>• Use of protective equipment, clothing and sunscreen SPF 30+; or</li> <li>• Any other Hazards that are present which are not adequately dealt with by Safe Work Instructions ("SWI") or Safe Operating Procedures ("SOP").</li> </ul>
4.2.	<p><b>Adverse Weather Controls</b></p>
4.2.1.	<p>Whilst scheduling work for specific locations/situations where Adverse Weather conditions are anticipated, the relevant Supervisor shall give consideration to the following controls:</p> <ul style="list-style-type: none"> <li>• Provision of cool drinking water;</li> <li>• Re-scheduling of work to cooler times of the day (the sun is most intense between 10.00am and 2.00pm (11.00am and 3.00pm when there is daylight saving);</li> <li>• Provision of sun shades/shelters on work sites;</li> <li>• Availability of air-conditioned buildings and vehicles;</li> <li>• Modifying the rate at which work is performed and using unscheduled rest breaks;</li> <li>• Rotation of Workers engaged in physical tasks;</li> </ul>

- Altering the location of work;
- Where possible, providing alternative work indoors;
- Provision of appropriate protective safety clothing and Equipment;
- Provision of battery powered radio, torch and fire blanket.

#### 4.2.2. UVR Exposure and Hot Ambient Conditions

Ultraviolet Radiation (“UVR”) is emitted by the sun. It can be divided into three types: UVA, UVB and UVC, two of which are known causes of skin cancer. Specific controls for Minimising UVR exposure include:

- Use of natural and artificial shade where possible during the work day;
- Modify reflective surfaces to reduce the effect of indirect solar UVR by either having soft and rough surfaces or painted surfaces with less reflective colours;
- Applying window tinting to the side windows of vehicles;
- Scheduling of work tasks to Minimise exposure during peak UVR exposure periods, usually between 10.00am and 2.00pm (11.00am and 3.00pm when there is daylight saving);
- Requirement for UVR protection also applies to indoor Workers whilst operating any more than 15 minutes (accumulatively in any one work period) in an outdoor environment;
- Checking the SunSmart UV Alert on a daily basis to indicate the sun protection measure requirements via [www.bom.gov.au](http://www.bom.gov.au);
- Wearing PPE in relation to sun protection that includes:
  - **Clothing**  
When selecting clothing the following should be considered:
    - (a) Selection of fabrics that carry a Ultraviolet Protection Factor (“UPF”) rating of 50+; and
    - (b) Selection of long pants and shirts with a collar and long sleeves; and
    - (c) Selection of materials that are suitable for climatic changes.
  - **Hats**  
When selecting hats the following should be considered:
    - (a) Selection of hat fabrics that carry a UPF rating of 50+; and
    - (b) Selection of broad brimmed, bucket or legionnaire style hat;
    - (c) Selection of broad brimmed hats that have a brim of at least 7.5cm;
    - (d) Selection of bucket hats that have a deep crown, sit low on the head and have an angled brim of at least 6cm;
    - (e) Selection of legionnaire style hats that have a flap that covers the neck. The side of the flap should meet with the peak to provide protection to the side of the face;
    - (f) Selection of attachable brims and neck flaps for hard hats or helmets.
  - **Sunglasses**  
When selecting sunglasses the following should be considered:
    - (a) Selection of sunglasses that have a eye protection factor (“EPF”) Rating of 8 - 10 and complies with the sunglass standard AS/NZS 1067:2003: Sunglasses and Fashion Spectacles;
    - (b) Selection of close fitting sunglasses;

(c) Selection of sunglasses that meet the impact standard for safety glasses AS/NZS 1337:1992: Eye protectors for industrial applications;

(d) Selection of fit-overs or insert ready sunglasses for eye prescription requirements.

- **Sunscreen**

Sunscreen should always be used with other sun protection measures. It is important to realise that no sunscreen offers 100% protection from solar UVR and that different skin tones/pigment will require different levels of protection.

When selecting and using sunscreen the following should be considered:

(a) Selection of sunscreen with a sun protection factor ("SPF") rating of 30+, broad-spectrum and water resistant;

(b) Sunscreen should be applied twenty (20) minutes before going outdoors to allow for active absorption into the skin. The first application may need to be prior to work time commencement;

(c) Sunscreen should be reapplied every two (2) hours or more often if perspiring;

(d) Apply sunscreen to clean, dry skin;

(e) Use a generous amount of sunscreen – 35ml of sunscreen for one full body application;

(f) Check the expiry date and store sunscreen in a cool place below 30 degrees Celsius;

(g) Lips also need to be protected with a lip balm containing SPF 30+.

#### 4.2.3. Wind Conditions

- Consideration of flying particles, materials, tools and temporary signage or structures;
- Consider the need for alternative means of communication, whether visual or vocal, depending on noise and visibility at the time;
- Scheduling of work tasks to Minimise exposure;
- Ensure a vehicle is present to provide temporary shelter for breaks to be taken during the most extreme periods;
- Implement safe driving practice.

#### 4.2.4. Precipitation Conditions

- Use wet weather clothing that permits bodily evaporative cooling;
- Use wet weather boots;
- Wear gloves;
- Implement safe driving practice;
- Consider the need for additional visibility for example, an observer to warn of traffic or other hazards;
- Consider the need for alternative means of communication, whether visual or vocal, depending on noise and visibility at the time;
- Scheduling of work tasks to Minimise exposure;
- Rotation of Workers where possible;
- Provision of temporary or permanent shelter such as buildings or vehicles for breaks or during the most extreme periods;
- Consideration of additional lighting – either personal or site;

- Any other relevant PPE.

#### 4.2.5. Electrical Storms

- Getting indoors or to shelter that is an enclosed building with wiring and plumbing. Keep away from windows and refrain from using electrical equipment or telephone landlines. Avoid touching metal, brick or concrete;
- If unable to get indoors get into a hardtop vehicle. Do not touch the car frame, steering wheel, ignition, gearshift or radio;
- Keep clear of tall objects or metal objects such as trees and goal posts;
- Avoid wide open areas such as sports fields;
- If outside and unable to access shelter, move at least five (5) metres away from other people put your feet together, squat down, head tucked in and ears covered to protect your hearing from the noise. Do not lie on the ground or allow hands or knees to touch the ground.

#### 4.2.6. Bush Fire Danger

On days where Extreme or Catastrophic fire ratings are issued by the South Australian Country Fire Service, Council services and duties may be affected. Services that present an unacceptable risk and generally require the attendance of Council Workers in the Mount Lofty Region Fire District may be postponed until the next appropriate day. However, any emergency matters will be assessed by CMT and may be attended to, based on risk level assigned to the emergency. The change to Council services and duties on days of Extreme and Catastrophic fire danger rating may impact on Council Workers and affiliated programs in The Barossa Council district. Council services that may be affected include:

- Library service, Council customer service and facilities;
- Waste collection;
- Animal management and other general compliance;
- Community Transport;
- Home and Community Care (HACC), Leisure Options and other social programs;
- Emergency assistance; and
- Appointments, meetings and general office operations.

### 4.3. **Alteration of work due to Catastrophic Fire Danger Rating**

4.3.1. CMT will instigate the Emergency Response Plan on days where a Catastrophic fire danger rating affects the Barossa Council district. Relevant Supervisors will be responsible for ensuring that Council's planning requirements are implemented in relation to the scope, location or timings of the scheduled work. Through consultation with Workers, relevant Supervisors should determine the best work option for the work period with the last option being cessation of work. To provide direction and clarity for staff where possible work options are to be developed in advance of the announcement of a catastrophic day:

- Rotation between tasks;
- Modifications of the task;
- Change the location of work;
- Utilise additional rest breaks;
- Temporary cessation of task on site;
- Temporary cessation of task, return to Council;
- Re-deployment to other work out of the weather;

- Remaining at a work site until it is safe to leave;
- Re-deployment to training or like activity;
- Cessation of work for the day.
- Where staff take leave to enact their fire plan, services may be reduced;
- Where staff take carers leave to care for children due to school closure on catastrophic days services may be reduced.

4.3.2. Once the decision is made to cease work Workers must ensure that the work site is left in a safe, tidy and secure state.

#### 4.4. **Cessation of unacceptable risk activities due to Hot Ambient Conditions**

4.4.1. Workers carrying out work in extreme heat or cold must be able to carry out work without a Risk to their Health and Safety so far as is Reasonably Practicable. It is important to distinguish between a condition that threatens Health and Safety, and a feeling of discomfort. Heat strain/Heat stress can arise from working in high air temperatures, exposure to high thermal radiation or high levels of humidity.

4.4.2. The relevant Supervisor is responsible for regularly monitoring the ambient external air temperature for work sites within their control. This monitoring process will be undertaken by accessing the Bureau of Meteorology website [www.bom.gov.au](http://www.bom.gov.au). When the temperature reaches 37 degrees Celsius alternative work options must be instigated for work being undertaken outdoors.

4.4.3. All Workers instructed to finish outdoor work under the direction of their relevant Supervisor must then return to their relevant Council facility to undertake programmed training or other predetermined duties.

4.4.4. In the case of weather conditions other than high temperatures, the relevant Supervisor may similarly decide to cease work where conditions make it unsafe to continue.

#### 4.5. **Essential Services**

4.5.1. The operation of essential or emergency services shall continue as required so long as the appropriate controls allocated to the tasks remain effective. Priority shall be given to rostering Workers involved in essential or emergency services.

#### 4.6. **Emergency Services**

4.6.1. In the event of Council Workers responding to an emergency, maintenance or repair situation, the Safety of those Workers must be the first consideration. Emergency situations in extreme or catastrophic fire danger days that require the attendance of Council Workers in The Barossa Council district will be assessed by the relevant Supervisor in Consultation with CMT.

Consideration is to be given to:

- Any known fire events, the location of the emergency, the distance of safer precincts, Access and Egress points and the urgency of the situation;
- The requirements of Council's Involvement in Emergency Response Operations in Support of Country Fire Service Policy;
- Requesting South Australian Country Fire Service to send an appliance if possible to provide fire protection to Workers.

4.6.2. In every emergency situation, the relevant Supervisor must perform and document a Risk Assessment, which, in the case of Adverse Weather must include the Hazards of that weather, in addition to the Hazards of the emergency situation such as the danger or potential danger to life, property or the environment.

5.	Accountabilities
5.1.	<p>The Corporate Management Team (“CMT”) must exercise due diligence to ensure their duties as Officers under the <i>Work Health and Safety Act 2012</i> by:</p> <ul style="list-style-type: none"> <li>5.1.1. Updating their knowledge of working in Adverse Weather; and</li> <li>5.1.2. Understanding the nature of the operations and of the hazards and risks associated with operating in Adverse Weather; and</li> <li>5.1.3. Ensuring that the PCBU has available for use, and uses, appropriate resources and processes to eliminate or Minimise Risks to Health and Safety from work carried out during Adverse Weather; and</li> <li>5.1.4. Ensuring that the PCBU has appropriate processes for receiving and considering information regarding Incidents, Hazards and Risks and responding in a timely way to that information; and</li> <li>5.1.5. Ensuring that the PCBU has, and implements, processes for complying with any duty or obligation associated with working in Adverse Weather conditions; and</li> <li>5.1.6. Verifying that the above requirements are resourced appropriately;</li> <li>5.1.7. Recommending any additional Reasonably Practicable budgetary expenditure necessary for this Adverse Weather Process;</li> <li>5.1.8. Checking that Supervisors have been provided with appropriate training to ensure they can effectively conduct Risk Assessments around working in Adverse Weather;</li> <li>5.1.9. Checking that Workers who are required to work outdoors have been provided with training to ensure they understand and can apply this Process within the limits of their responsibility.</li> </ul>
5.2.	<p>Supervisors are accountable for:</p> <ul style="list-style-type: none"> <li>5.2.1 Regularly monitoring weather conditions including the ambient external air temperature;</li> <li>5.2.2. Providing information to Workers via induction and ongoing training regarding Adverse Weather;</li> <li>5.2.3. Conducting Adverse Weather Risk Assessments, in consultation with Workers;</li> <li>5.2.4. Communicating regularly with the Worker throughout the day to assess conditions and actions;</li> <li>5.2.5. Re-scheduling work around Adverse Weather conditions;</li> <li>5.2.6. Controlling the rate at which work is performed;</li> <li>5.2.7. Providing appropriate regular additional rest breaks;</li> <li>5.2.8. Providing appropriate shelter;</li> <li>5.2.9. Rotating Workers through tasks to reduce an individual’s exposure to Adverse Weather conditions;</li> <li>5.2.10. Providing alternative work locations;</li> <li>5.2.11. Retaining records;</li> <li>5.2.12. Advising Workers in a timely manner of any decision to alter or cease work;</li> <li>5.2.13. Organising and checking that appropriate PPE has been provided to all Workers under their supervision.</li> </ul>
5.3.	<p>Workers are accountable for:</p> <ul style="list-style-type: none"> <li>5.3.1. Taking reasonable care for his or her own Health and Safety; and</li> <li>5.3.2. Taking reasonable care that his or her acts or omissions do not adversely affect the Health or Safety of other persons;</li> <li>5.3.3. Complying, so far as reasonably able, with any reasonable instruction that is given by the PCBU to allow the person to comply with this Act;</li> <li>5.3.4. Co-operating with this Adverse Weather Process including:</li> </ul>

- Taking appropriate regular rest breaks as directed by their relevant Supervisor;
- Maintaining hydration by taking regular small drinks (avoiding caffeine drinks);
- Attending and participating in training when required;
- Participating in Adverse Weather Risk Assessments;
- Wearing and maintaining appropriate PPE or clothing as required;
- Applying and re-applying 30+ Sun Protection Factor water resistant sunscreen as required;
- Communicating with their relevant Supervisor any changes in the conditions;
- Informing their relevant Supervisor if experiencing any issues as a result of Adverse Weather.

<b>6.</b>	<b>Training</b>
6.1.	All Council Workers shall be provided with information and training regarding this Adverse Weather Process including, the Risks associated with Adverse Weather, the use of relevant PPE and any other Adverse Weather provisions provided.

<b>7.</b>	<b>Records Management</b>
The following records shall be maintained in accordance with Council's Records Management Policy:	
7.1.	Completed Risk Assessments;
7.2.	Training Records;
7.3.	Record PPE provided to Workers; and
7.4.	Weather alert records.

<b>8.</b>	<b>Related Documents</b>
TBCPO3800 - Hazardous Work Policy	
TBCPR3810 - Remote or Isolated Work Process	
TBCPOC2050 - Records Management Policy	
TBCFO3315 - Risk Assessment Form	

<b>9.</b>	<b>References</b>
<i>Work Health and Safety Act 2012</i>	
<i>Work Health and Safety Regulations 2012</i>	
<i>Safe Work Australia Codes of Practice</i>	
SAI Global – Australian Standards	
Country Fire Service website	
Bureau of Meteorology website	
Skin Cancer and Outdoor Work – A Guide for Employers (SafeWork SA and Cancer Council of Australia) – January 2007	
WorkCoverSA Performance Standards for Self-Insurers	

<b>10.</b>	<b>Review</b>
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This Council Adverse Weather Process shall be reviewed by Council's WHS Committee within three (3) years of Issued Date (or on significant change to legislation or aspects included in this Process that could affect the Health, Safety or welfare of Workers).

SIGNED: .....

Chief Executive Officer

Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

.....

Chairperson, WHS Committee

Date: \_\_\_\_/\_\_\_\_/\_\_\_\_