



Hawkesbury City Council

Attachment 12
to
item 1

Working in Hot, Cold or Contaminated
Environments Procedure

date of meeting: 7 September 2021
location: by audio-visual link
time: 5.30 p.m.



1.0 PURPOSE

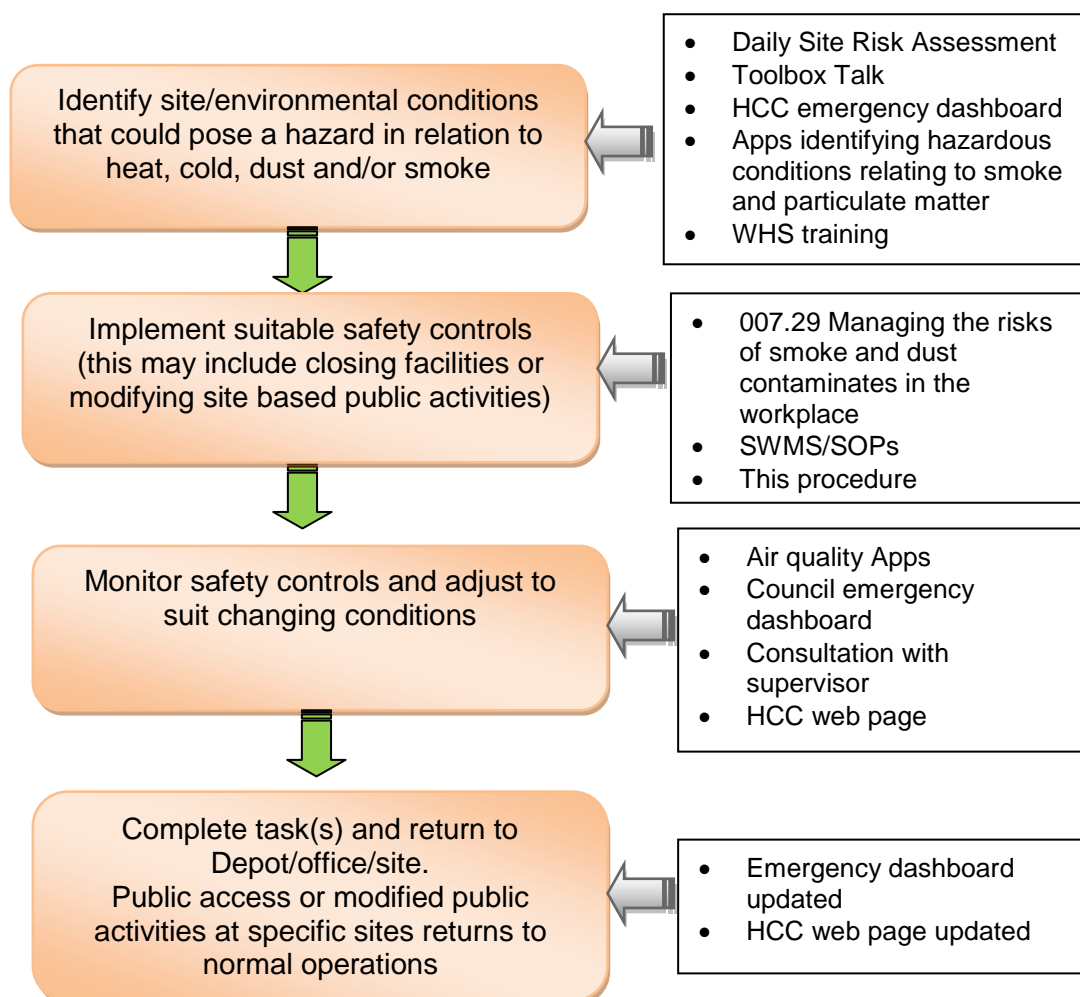
To define how Council will ensure that hot and cold work environments and those affected by poor air quality due to smoke and/or dust are managed in a practical, effective and safe manner in accordance with Legislative requirements.

2.0 SCOPE

This procedure applies to all Council undertakings where workers are required to work in hot or cold work environments or environments contaminated by dust and/or smoke on a regular or ongoing basis. This procedure also includes processes for extended hours of operation at the Richmond Pool, Windsor Library and the Oasis Centre for days above 40°C as well as the closure or modification of activities for the public at specific Council sites (Richmond Pool, Tip, CAS, Nursery) given these conditions.

This procedure should be read in conjunction with 007.29 *Managing the risks of smoke and dust contaminates in the workplace* which deals specifically with contaminates that may exceed safe exposure levels.

3.0 PROCEDURE





3.1 Identifying risks and control measures

Workers will be consulted in implementing this procedure; in particular they will be involved in the carrying out of risk assessments. Part of the risk assessment will be the defining of control measures in relation to the work environment and how the impact can be managed in a practical and effective manner.

Risk assessments, including SWMS are to be carried out or reviewed at relevant times e.g. at the start of works or in the lead up to summer for hot environments.

3.1.1 Step 1 – Identification of sources

The first step is to identify the sources of heat and cold or contaminants such as dust and smoke. You should look at the work environment, environmental conditions, weather predictions, the plant used and work processes and practices.

The effects on the body are influenced by environmental factors including:

- a) **Air temperature** – how hot or cold the surrounding air is.
- b) **Humidity** – the moisture content in the air.
- c) **Air movement**- including air speed (or wind speed) and air circulation.
- a) **Radiant heat**- heat radiating from the sun, or emitted by plant, buildings, fixtures or processes
- b) **Extreme weather events** such as drought, storms and high wind events

3.1.2 Step 2 – Think about your work processes

Are people exposed to risk through?

- a) The physical activities they perform (e.g. increased risk because of a high work rate in hot/smoky/dusty conditions, or low work rate in cold conditions)?
- b) Their proximity to hot or cold plant or substances?
- c) The surroundings (work environment) in which they are located?
- d) Weather predictions including air quality alerts

3.1.3 Step 3 – Review the duration of the exposure

Risks to health and safety will be influenced by the length of time workers are exposed to these conditions. In particular the following should be considered:

- a) Work activity requiring prolonged physical exertion in high temperatures, high humidity or poor air quality due to smoke and/or dust.
- b) Work activity requiring prolonged physical inactivity in low temperatures or wet conditions.

3.1.4 Step 4 – Think about the people who will do the work

- a) Do workers have any pre-existing medical conditions that may be exacerbated by the conditions?
- b) Do workers have access to appropriate PPE and have received training?
- c) What exposure may they have had over previous days, consider cumulative exposures.

3.1.5 Step 5 – Review past issues arising from work in such environments

The Organisation will review incident statistics to assist in identifying factors that may impact on worker safety. Where the hazard posed to staff is clear there may be a need to measure the identified hazard. This measurement will assist in establishing a clearer picture of the potential problem.

3.2 Guidance for Hot Working Environments

3.2.1 Physical effects of hot weather conditions

The human body operates optimally at around 36° Celsius. Body heat is controlled by a number of cooling responses in the body. The evaporation of body heat by perspiring is one effective mechanism when air cooling directly from the skin becomes inadequate. This water loss must be



replaced and the rate of loss and must be carefully controlled so as to allow the water replacement rate to maintain adequate hydration.

Rapid depletion of body fluid in this way causes heat intolerance and this goes beyond the normal sensation of discomfort experienced during high heat conditions. Mild heat intolerance effects include tiredness and irritability but can progress to nausea, cramps and collapse. There is also a risk that as some of these symptoms become apparent, attention to normal safety issues could be affected and serious injuries could occur.

Avoidance of excessive heat exposure with associated fluid loss is vital to managing this potential health hazard. Maintaining adequate fluid levels is the other vital issue that must be addressed and routine and regular fluid intake is of paramount importance.

Some guidelines to help with avoiding staff being affected by the hot weather:

If extreme heat is forecast Managers and Supervisors should schedule [alternate duties](#) if possible.

- a) Drink adequate volumes of cool water throughout the day. Take a cooler with chilled or ice water to work each day.
- b) If outside keep protected by sunscreen and wear suitable clothing
- c) Wear broad brimmed hats and good quality sunglasses which will deflect the hot infrared rays.
- d) Take breaks in the shade every half hour for a drink break.
- e) Consider drinking water with salt/mineral additives to maintain salt intake.
- f) Take a water canteen if in the field or if driving a lot.
- g) Avoid prolonged heavy physical work or working on hot applications in the middle of the day. Pace yourself.
- h) Program works considering environmental conditions and worker limitations.

After working in a kneeling or squatting position rise to standing slowly and take a very deep breath as you rise up. If any hint of dizziness occurs return to the kneeling or squatting position. Take several deep breaths until dizziness goes then rise again. The fainting effect is due to a condition called postural hypotension and is a normal response to getting up quickly in very hot conditions.

3.2.2 Possible effects of hot weather conditions

During hot weather you may experience:

- a) Sudden faintness when changing your posture quickly (usually when getting up).
- b) Dehydration or heat cramp in moderate heat condition.
- c) Heat exhaustion or heat stroke in extreme conditions.

Individual heat responses are variable and staff should self-monitor their responses. A first aid officer should be notified for any signs of heat cramp and dehydration or the development of heat stroke or heat exhaustion.

3.2.3 First Aid

Signs and symptoms are summarised below.

- a) Dehydration - 37° body temperature. Look for headache, drowsiness, fatigue, appetite loss, nausea, dark urine output.
- b) Heat cramp - 37° body temperature. Look for dizziness, tiredness, nausea, vomiting, cool moist skin, painful muscle cramps.
- c) Heat exhaustion - 37° to 39° body temperature. Look for dizziness, faintness, lack of coordination, fatigue, thirst nausea, appetite loss, pale cool skin, profuse sweating, rapid breathing and pulse.
- d) Heat stroke - 40° to 42° body temperature. Look for headache, dizziness, faintness, blurred vision, double vision, irritability, flushed dry skin, rapid strong pulse, decreasing consciousness leading to seizure.



Treatment is to provide shade and give frequent sips of cool water with glucose added and to lie down. Cease work. Medical attention may be required for milder symptoms but certainly would be required for heat exhaustion and heat stroke. An ambulance should be called in such cases because of the serious nature of the condition.

3.2.4 Extending facilities operating times due to extreme heat.

To support the Hawkesbury community in dealing with extreme heat events Council facilities (Oasis Leisure Centre, Richmond Pool and Windsor Library) have provision to provide respite for Hawkesbury residents through extended opening hours. The associated responsibilities, accountabilities and authorities for this are included at the end of this document in Attachment A. This process applies to weekend and Public holiday only. It does not apply on Christmas Day and Boxing Day.

3.2.5 Summary

With due care and avoidance of prolonged exposure to the hot weather in direct sunlight, all of the above conditions can be easily avoided. Outdoor workers should exercise due care and look out for any untoward symptoms in work colleagues as outlined above.

Be particularly careful to pace work output if the nature of physical work is of a type to which you may not be accustomed. Be careful to avoid prolonged exposure to conditions during hot weather where the temperatures may be further increased by:

- Proximity to heat generating equipment.
- Working in areas where there is poor air flow.
- Working in areas in close proximity to metal structures like iron sheeting which generates reflected heat.
- Working in areas where very high humidity is generating, as in steam cleaning operations.
- A workers pre-existing medical condition (medical professional to advise limitations)

3.3 Guidance for cold environments

The following guidance is for use in assessing and controlling the impacts of cold work environments.

Recognise the 'early warning' signs of cold related illness

Work involving cold can lead to physical discomfort without meaning you are at risk of a more serious condition developing. However you must be aware of the early warning signs of hypothermia and take appropriate action if you experience them – or if you observe another person who appears to be in difficulty the warning signs to watch for are:

- a) Hands become numb.
- b) Shivering is not under voluntary control.
- c) Loss of fine motor coordination (particularly in your hands – you may have trouble with buttons, laces, zips etc.)
- d) Slurred speech.
- e) Difficulty in thinking clearly.
- f) Irrational behaviour – sometimes a person will even begin to discard clothing.

Once more than one of these signs has been experienced or observed you should stop work and take steps to safeguard health. For outdoor work this could mean seeking shelter, finding an external heat source, putting on extra layers of clothing, replacing wet with dry clothing or increasing your physical activity.

Steps to consider for outdoor cold conditions

- a) Provide protection from wind and rain – a shelter such as a hut or the cabin of a vehicle will offer relief from extreme conditions.
- b) Monitor environmental conditions and the physical wellbeing of people when work involves prolonged or repeated exposure to cold.



- c) Cease work if conditions become too cold to continue safely. Wind chill can create significant risk even if the air temperature is above freezing point.
- d) Inform and train employees so they will recognise unsafe conditions arising from exposure to cold while working outdoors.
- e) Develop first aid and emergency procedures and make sure they are understood.
- f) Provide appropriate protection through warm clothing. Clothing should be worn in light, loose fitting layers, a waterproof outer layer will provide protection from the rain.
- g) A hat will significantly reduce heat loss as will ear protection.
- h) Slip-resistant boots are preferable to light footwear which may allow the feet to become wet. Gloves or mittens should also be considered.
- i) Monitor the use of tools that cause significant hand-transmitted or whole body vibration as they present an increased risk to the operator in cold conditions.

3.4 Guidance for poor air quality due to smoke and dust

Processes and procedures for dealing with poor air quality are detailed in 007.29 *Managing the risks of smoke and dust contaminates in the workplace* and is paraphrased below;

Particulate matter (smoke/dust) exposure may result in irritated eyes, increased mucous production in the nose or throat, and/or coughing or difficulty breathing, especially during strenuous work. People with existing respiratory or cardiovascular conditions may experience aggravation of these health effects. Chemicals contained in the smoke such as formaldehyde, hydrocarbons or benzene can irritate the eyes and the respiratory system, and may trigger asthma.

If affected report your condition and situation to your supervisor or manager. If you have an existing respiratory condition you should inform your supervisor in advance and have a doctor complete advanced notification via the medical card, follow the advice given by your doctor. Seek medical advice if your condition gets worse. If you have difficulty breathing, call 000. All incidents requiring intervention must be reported via Council's Incident Reporting system in accordance with WHS&IM procedure Incident Reporting, Review and Investigation.

It is important that work schedules and worker pre-existing medical conditions be considered when responding to these conditions. Safety intervention levels are established in this procedure along with suitable responses such as alternative duties to assist the manager/supervisor in responding to ensure the safety of workers including contractors, volunteers and staff as well as visitors to Council places of work.

Table 1 in WHS&IM procedure [007.29 Managing the risks of smoke and dust contaminates in the workplace](#) identifies that for AQI readings above 300 Council facilities visited by the public such as the pool, nursery, CAS, and tip will have their operations reassessed to determine the most suitable response given the circumstances. Under these conditions Council has a duty to ensure the safety of both workers and visitors and [a risk assessment](#) will be completed to ensure a safe working environment.

4 RESPONSIBILITIES

The following table lists the responsibilities, authorities and accountabilities associated with this procedure. Staff with a direct line of report must also ensure those reporting to them are meeting their responsibilities.



Responsibility	Authority	Accountabilities
Position: Officers (managers and above)		
<p>Provide sufficient human and financial resources to ensure that Council's management of hostile environmental conditions is implemented and that all Council personnel are trained in the application and use of this methodology.</p> <p>Monitor compliance and effectiveness</p>	<p>To allocate resources and implement controls that meet legislative responsibilities.</p> <p>To drive continuous improvement in safety in their area of report</p>	<ul style="list-style-type: none"> • Approval of this procedure • Approving budgets to ensure sufficient resources • Review audit and Incident reports • Ensure staff are adequately trained and competent • Driving continuous improvement in WHS and Workers Compensation • Promoting this wellness initiative • Maintain the currency and integrity of the WHS&IM system • Ensuring those organisations with which Council hold WHS joint responsibilities are informed and kept up to date. • Ensure this procedure is applied in the workplace • Participate in discussions and drive continuous improvement through effective consultation • Educate and keep volunteers informed of this procedure • Review safety reports including audits, incident reports, HS Committee and Senior Executive reports • Ensure actions are taken in a timely manner • Ensure supervisory staff are competent to apply this procedure in the workplace. • Download the current AQI alert app to their phone • Monitor the Hawkesbury Disaster and Emergency Dashboard' • To liaise and seek sufficient information and implement suitable controls in relation to facilities operation including closures or modified activities allowed by the public. • Keep Manager Corporate Communications updated <p>Manager ERS</p> <ul style="list-style-type: none"> • To draft procedures in consultation with workers to ensure an effective response is developed and implemented in the workplace



		<ul style="list-style-type: none"> To ensure safety procedures identify and comply with WHS duties as defined in WHS legislation and associated AS & COP To ensure relevant information is included in WHS&IM policy documents as required such as site induction and WHS training packages. To review and report on incident reporting statistics to the Senior Executive team To ensure sufficient resources and competencies to undertake scheduled audits and review accordingly To review training procedures to ensure adequate coverage, content and refresher timeframes To ensure the WHS&IM system remains current and accessible to all staff To initiate level 2 investigations and report to the Regulator any Notifiable or Reportable incident To ensure information on hazards is communicated to Council managers and supervisors. <p>Manager Corporate Communications.</p> <ul style="list-style-type: none"> Maintain the currency of information displayed on HCC website and other information platforms.
Position: Supervisors		
Comply with and enforce WHS&IM System requirements.	<p>To act in accordance with WHS&IM System requirements and associated training.</p> <p>To ensure staff follow safety procedures and are competent in their tasks.</p>	<ul style="list-style-type: none"> To apply this procedure in the workplace To engage in consultation and support continuous improvement strategies To drive safety initiatives such as SWMS reviews, inspections etc. To report any accident, incident, near miss or damage in consultation with relevant staff To attend training and program works to facilitate staff training To induct workers into specific safety processes including this procedure. To work with management to



		<p>assist in the application of this procedure.</p> <p>Corporate Safety and Wellbeing Officer</p> <ul style="list-style-type: none"> Monitor on a daily basis (working days only) the Bureau of Meteorology website and initiate Council community responses to extreme heat events if applicable
Position: Staff including Volunteers.		
Comply with WHS&IM System requirements.	To act in accordance with WHS&IM System requirements and associated training.	<ul style="list-style-type: none"> To apply this procedure in the workplace To engage in consultation and support continuous improvement strategies To report any accident, incident, near miss or damage To attend training and follow instructions

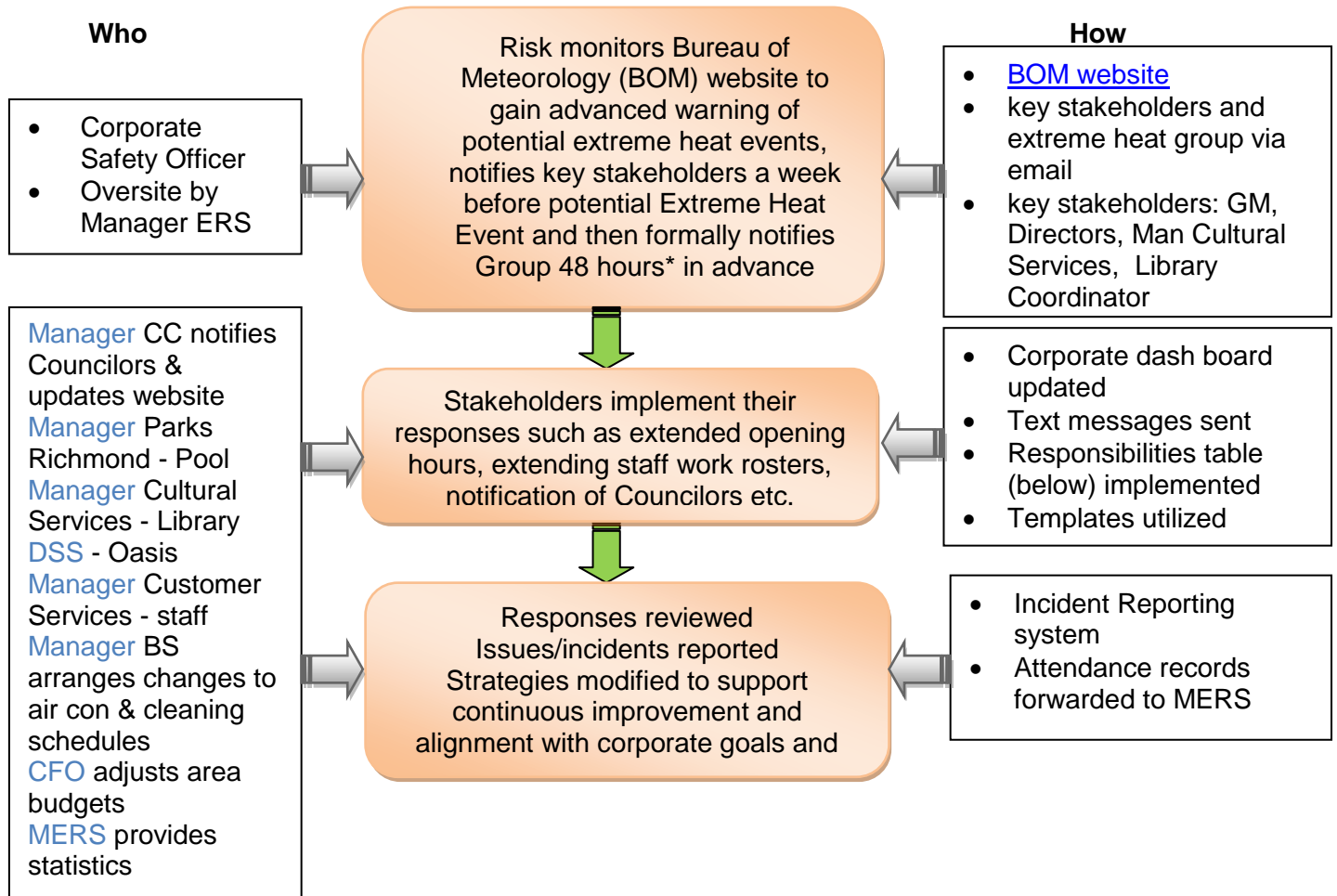
Related Documents

Document
Alternative duties guide
007.29 Managing smoke and dust contaminants in the workplace
007.8 Health Surveillance
005.3.1 Contract Assessment
006.2.1 to 2.7 Risk Assessments
006.3.1 SWMS
006.4.1 SOPs
007.2 Emergency Response
007.22.1 First Aid RA
012.5 WHS Training Matrix
012.2.4 to 012.2.8 Site induction forms
Training packages; PPE, First Day Induction, WHS Inductions



Appendix A

Responsibilities for notification and implementation of Council community responses to extreme heat events (over 40°C).



The BOM site will be monitored by the Corporate Safety and Wellbeing Officer with days predicted to be at 40°C or above identified and the Manager Enterprise Risk Systems notified with a week before and the Extreme Heat Event group notified a minimum 48 hours advanced notice. Please note the 48hrs notice is working days. For events occurring on the weekend the determination will be made on the Thursday. This process applies to weekend and Public holiday only. It does not apply on Christmas Day and Boxing Day.

The Manager Enterprise Risk Systems will approve the Corporate Safety and Wellbeing Officer to contact of the Extreme Heat Event Group as per the responsibilities table below.

RESPONSIBILITIES

Authorised Officer	Roles & Responsibilities
Manager Enterprise Risk Systems	<ul style="list-style-type: none">Implement this policy in terms of advanced notification to Extreme heat Event GroupReport on facility usage rates to the Senior ExecutiveMonitor Incident Reporting system to provide relevant updates to the Senior ExecutiveNotify key stakeholders a week before potential extreme heat days



WHS Coordinator and Corporate Safety and Wellness Officer	<ul style="list-style-type: none">• Monitor BOM website to identify upcoming extreme heat events• Notify the Manager Enterprise Risk Systems a week before potential extreme heat events• Notify Extreme Heat Event Group 48 hours in advance once approval has been granted by the MERS using Attachment B• Check to see that requirements have been implemented by respective managers• Once new hours of operation confirmed inform the Extreme Heat Event Group
Manager Corporate Communications	<ul style="list-style-type: none">• Provide 48 hours' advanced notice by email to Councillors and the Mayor using attachment A• Activate the Facebook post.
Director Support Services	<ul style="list-style-type: none">• Advise the YMCA NSW of the requirement for the extended hours for the Oasis Aquatic and Leisure Centre
Cultural Services Manager/Library Coordinator	<ul style="list-style-type: none">• Implement extended operating hours of the Hawkesbury Central Library, including arranging staff requirements.• Implement Extreme Heat signage.• Repost Council FB notifications on extended hours.
Manager Information Services	<ul style="list-style-type: none">• Extreme Heat Day Webtile to go on website 1 day (24 hours) prior to the subject day.• Extension to telephone line service at the Windsor Central Library.• Extend wi-fi hours for the public at the Library.
Manager Building Services	<ul style="list-style-type: none">• Arrange for any air conditioning, security, cleaners and parking requirements for the extended hours for the Windsor Central Library and the Oasis Aquatic and Leisure Centre.
Chief Financial Officer	<ul style="list-style-type: none">• Arrange for appropriate adjustment to the Library Staff and Richmond Pool Staff Budget.
Customer Services Manager	<ul style="list-style-type: none">• Ensure up to date and consistent information provided to the public.• Implement Extreme Heat signage.



Attachment A – Notice of proposed facilities extended opening hours. To be forwarded to Councillors by the Manager Corporate Communications 24 hours before event after notification by Risk.

Dear Mayor and Councillors

Re: **Extreme Heat**

The Bureau of Meteorology is predicting that on (List days) will be 40 degree plus days at Richmond. To provide residents with the opportunity to stay in a cooler environment and get some relief from the heat we are reminding residents that our facilities will be open on these days:

List Day

Hawkesbury Central Library, Windsor open 9am to 7pm
Richmond Swimming Centre, Richmond 8am to 8pm
Oasis Aquatic and Leisure Centre, South Windsor open 8am to 8pm

List day

Hawkesbury Central Library at Windsor from 12pm to 7pm
Richmond Swimming Centre from 10am to 8pm.
Oasis Aquatic and Leisure Centre from 8am to 8pm

A Facebook post is scheduled for today at 9am (to be shown below) and the extreme heat information will be up on the Council website later today. We would encourage you to share out Facebook post.

Example only.





Attachment B – Notification to Extreme Heat Event group

To be distributed by the Corporate Safety & Wellbeing Officer by means of the established email group - *Extreme Heat Days*

Please be advised that the Bureau of Meteorology is predicting this **(list day(s) and date(s))** to be a 40+ day at Richmond. Could you please activate your Extreme Heat Day procedure as per the table below **{attach responsibilities table found above}**.