

RISK MANAGEMENT ARRANGEMENTS

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1. INTRODUCTION

The application of risk management principles and procedures enables the MEMPC to understand the threats that impact on community safety and to develop control strategies to mitigate or eliminate the identified risks. The MEMPC agreed to use the Victoria State Emergency Service's Community Emergency Risk Assessment (CERA) Guidelines as the methodology for this process. It is based on the International Standard ISO 31000 Risk Management.

The Glen Eira MEMPC is committed to meeting its obligations under the Emergency Management Act 2013. In doing so it acknowledges that the development and implementation of preventative actions require the allocation of resources (human and financial), multi-agency support and broad consultation to ensure a co-ordinated and well-planned approach and outcome.

2. AIM

The CERA process is designed to systematically identify hazards, determine risks and prioritise actions to reduce the likelihood, consequences and effects of an emergency.

3. COMMUNITY PROFILE

3.1 Geography

The City of Glen Eira is located approximately 10 kilometres south east of the CBD of Melbourne and covers an area of 38.7 square kilometres. It is an established area that includes the suburbs of Bentleigh, Bentleigh East, Carnegie, Caulfield, Caulfield South, Caulfield North, Caulfield East, Elsternwick, Gardenvale, Glen Huntly, McKinnon, Murrumbeena, Ormond and part of St Kilda East.

The City of Glen Eira is bounded by the City of Stonnington in the north, the City of Monash in the east, the City of Kingston in the south, and the cities of Bayside and Port Phillip in the west.

The City of Glen Eira extends from Hotham Street and Nepean Highway in the west to Poath Road and Warrigal Road in the east and from South Road in the south to Dandenong Road in the north. It is generally flat, ranging from 10m AHD (Australian Height Datum - mean sea level) to 50m AHD with 90% of the natural water run off draining to Elster Creek in the south west and 10% draining toward the Yarra River in the north.

3.2 History of Emergencies

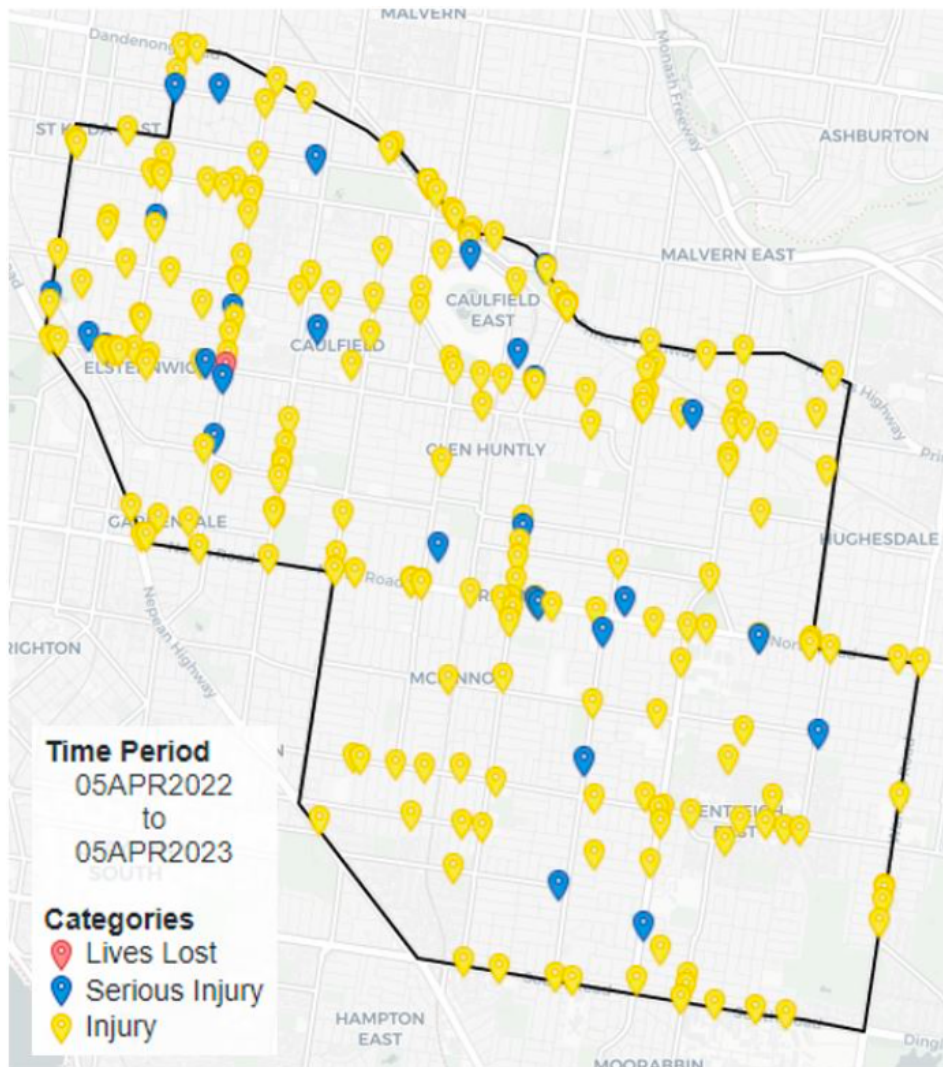
Over the last 10 years there have been few significant emergency events that have impacted on Glen Eira. The types of emergencies that have occurred include road crash, residential dwelling and small industrial facility fires, bomb threat, electricity blackout, industrial accident, gas leak, storm, hazardous chemical, smog air pollution, water pollution.

Recent significant emergencies include:

Date	Incident	Impact
3 Aug 16	Electrical fire in apartment block – Dudley St, Caulfield East	Approx. 90 students displaced. ERC established overnight until power re-established in apartment block
29 Dec 16	Storm / flash flood	4 households received DHHS emergency grants
1-3 Dec 17	Storm / flash flood	1 household displaced and accommodated overnight.
1 Mar 18	House fire – Station Ave, McKinnon,	Resident admitted to Alfred Burns Unit in serious condition. MRM responded and door knocked residents and supported Red Cross to assist affected resident.

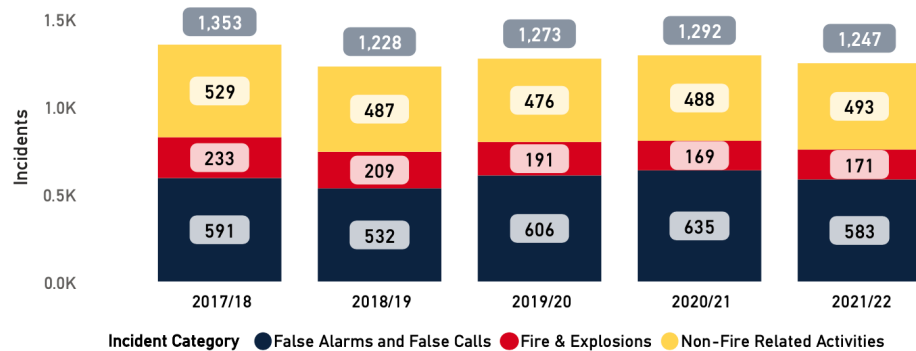
Date	Incident	Impact
7 Dec 18	House fire – Judith St Carnegie	Multi agency response. Neighbouring street (Libna St) affected. A number of local residents provided with emergency accommodation.
1 Mar 19	Heatwave	Heatwave Sub Plan implemented.
26 Jun 19	House fire – Alston Grove, St Kilda East	Residents found alternative accommodation.
30 Jun 19	House fire – Murrumbeena Road, Murrumbeena	Spurway Nursing Home (Council owned and operated) adjacent to fire location evacuated. Emergency accommodation provided to affected family from address of fire.
27 Sep 19	House fire – Mimosa Rd, Carnegie	Significant hoarding issue at address. Resident suffered fatal injuries as a result of fire.
6 Oct 19	Rooming house fire – Hawthorn Road, Caulfield	11 residents displaced. 5 provided with emergency accommodation for period up to 10 days.
19 Jan 20	Storm	1 family accommodated overnight at Crest on Barkley hotel
6 Mar 20 -	COVID-19	Pandemic Sub Committee stood up. COVID-19 Response Team lead by Council established, involving numerous community support relief agencies. Various Incident Action Plans developed to address response, relief and recovery
27 Mar 20	Fuel spill (petrol station into neighbouring basement car park) – Patterson Rd, Bentleigh	4 residents accommodated overnight at Crest on Barkley hotel
27 Aug 20	Broken sprinkler causing flooding – Neerim Rd, Carnegie	Issue resolved without evacuation; nil people relocated
6 Dec 20	House fire Moonya Rd, Carnegie	Household relocated next door. MRM followed up with Salvation Army and Red Cross referrals
2 Apr 21	Fish & Chip shop fire Centre Rd Bentleigh	Matter referred to Public Health for inspection and follow up
14 Apr 21	Report of 'poisoning' at kindergarten – Glen Eira Rd Caulfield	12 children affected; nil transported Event was food poisoning not hazardous materials
10 Jun 21	Widespread storm event across Melbourne and eastern Victoria	Approximately 10 households storm damaged in Glen Eira responded to by VICSES. Subsequent follow up by the MRM did not identify any requiring additional support
3 Aug 21	Apartment building fire – Dunoon St Murrumbeena	27 people displaced. Most able to self-relocate. One family (2 adults and 2 infants) accommodated for 2 nights
28 Jan 22	Widespread storm event across Melbourne	VICSES responded to 124 requests in 24 hours in Glen Eira (Building damage, flooding, trees down and persons trapped by flood water). There were 5 reports of residents self-evacuating, but none required assistance.

Police data in relation to road crashes indicate there has been 1 fatal, 29 serious injury and 211 injury related collisions between April 2022 and April 2023. These equates to significant decreases in both lives lost and serious injuries collisions. Unfortunately collisions with injuries have increased by 39%. The police heat map below reflects the distribution of injury, serious injury and fatal road crashes in Glen Eira over the same period.



Fire Rescue Victoria has provided the following incident data for the Glen Eira district for the period 1 July 2017 to 30 June 2022.

Incidents by Financial Year and Incident Category

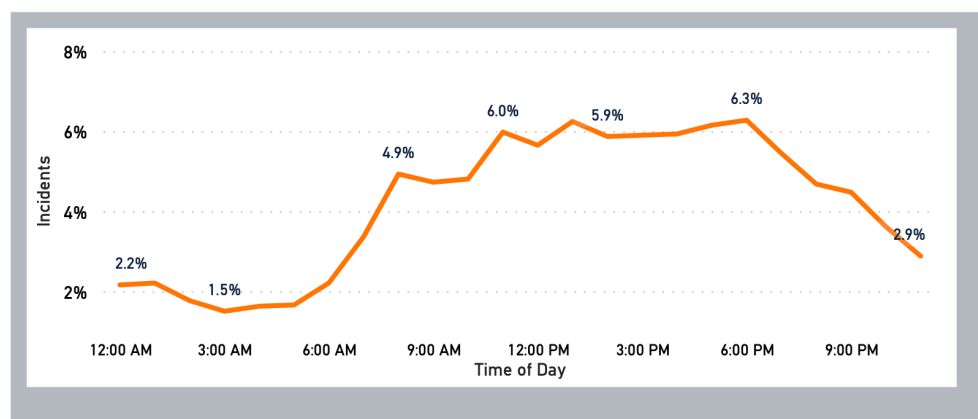


Incidents by Financial Year and Type of Incident

Type of Incident	2017/18	2018/19	2019/20	2020/21	2021/22	Total
False Alarms and False Calls	591	532	606	635	583	2947
EMR	154	150	161	143	137	745
Structure Fires	120	95	104	100	90	509
Hazardous Conditions not HazMat	107	96	105	93	79	480
Motor Vehicle Accidents	81	79	81	104	97	442
Non-Structure Fires	103	106	75	59	71	414
Service Calls	74	60	50	55	77	316
Rescues and Other Medical Assistance Other than EMR	54	48	48	45	57	252
HazMat	30	17	15	30	22	114
Road Crash Rescue	24	20	13	11	22	90
Grass and Scrub Fires	10	8	12	10	10	50
Other	5	17	3	7	2	34
Total	1353	1228	1273	1292	1247	6393

Percentage of Incidents by Time of Day

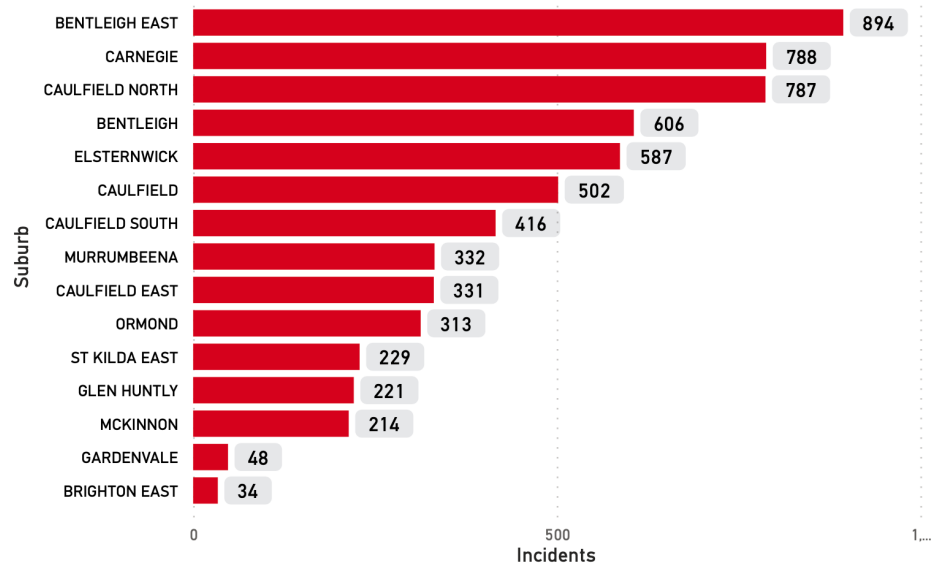
2017/18 - 2021/22



Top 15 Busiest Suburbs - all Incidents Types

2017/18 - 2021/22

Chart shows total number of incidents by suburb over the five year period.



Incidents by Property Type

Note: Table includes all incident types - property type information is not required for False Alarms.

Type of Property	Incidents	%GT Incidents
Not specified	2645	41.4%
Special Property (Landfill, Outdoor properties, Railway, Roads)	1542	24.1%
Residential Property	1387	21.7%
Institutional Property	281	4.4%
Basic Industry, Utility, Defence Property	185	2.9%
Shop, Store, Office Property	133	2.1%
Educational Property	97	1.5%
Public Assembly Property	84	1.3%
Storage Property	37	0.6%
Manufacturing Property	2	0.0%
Total	6393	100.0%

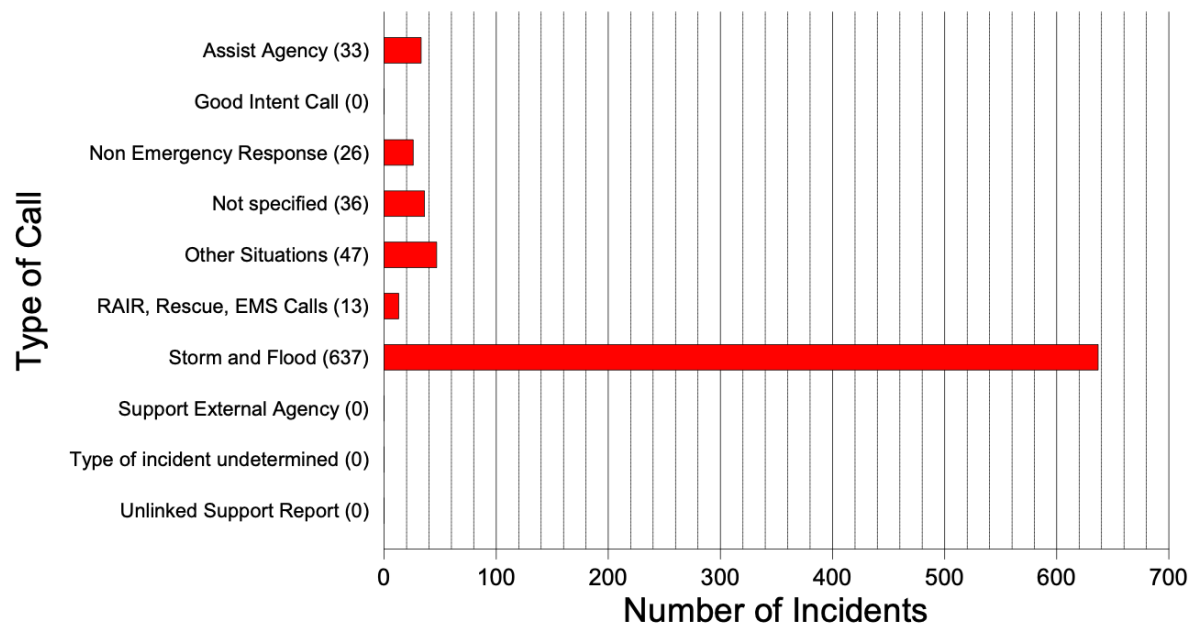
From the period 1 January 2021 to 31 March 2023 VICSES has responded to 792 requests for assistance. These were evenly spread across the entire municipal district. Of the calls during this period 80% were storm flooding related.

Significant events include thunderstorm, wind rain and flash flooding events during June 2021 and again in January 2022.



Unit Response Report by Type of Call

Report Date 05/04/2023 12:45



Ambulance Victoria (AV) has provided a quarterly summary of ambulance cases in the Glen Eira LGA for the last 5 years. There has been a 20% increase in lights and sirens (code 1) cases over the 5 year period, while the overall number of cases has remained more stable. This can partly be attributed to more low acuity 000 calls being referred to alternate care providers and no emergency ambulance dispatch.

In relation to the AV data below, please note:

- The quarters listed are based on a calendar year
- 'Total case' includes all emergency ambulance cases (code 1,2,3 events)

	Code 1	Total case	Annual Code 1	Annual Total
Q1 2018	1308	2731		
Q2 2018	1279	2659		
Q3 2018	1292	2676		
Q4 2018	1314	2709	5193	10775
Q1 2019	1295	2678		
Q2 2019	1326	2766		
Q3 2019	1405	2868		
Q4 2019	1455	2891	5481	11203
Q1 2020	1399	2758		
Q2 2020	1160	2429		
Q3 2020	1188	2587		
Q4 2020	1297	2735	5044	10509
Q1 2021	1322	2728		
Q2 2021	1417	2756		
Q3 2021	1413	2944		
Q4 2021	1544	2746	5696	11174
Q1 2022	1552	2622		
Q2 2022	1678	2775		
Q3 2022	1532	2615		
Q4 2022	1597	2651	6359	10663
Q1 2023	1434	2507		

Ambulance ERP escalations since 2020

Incident Type	Incident Sub Type			Total
Fire	<i>Residential</i>	<i>Other</i>		
	18	2		20
Transport event	<i>Rail/Tram</i>	<i>Road</i>		
	6	5		11
Complex Trauma event				2
Complex medical event	<i>Siege</i>	<i>Mental health</i>	<i>Other</i>	<i>Total</i>
	8	4	3	15

3.3 Infrastructure

The municipality is predominantly residential in character, with some small pockets of industrial and commercial activity in specific areas. In addition there are:

- 3 public train lines, 9 train stations, 3 tram lines and a tram depot.
- 3 public hospitals (Caulfield Hospital, Monash Medical Centre and Calvary Health Care Bethlehem).
- 4 private hospitals (Elsternwick Private Hospital, Masada Private Hospital, Melbourne Day Surgery, Hopetoun Rehabilitation Hospital).
- 1 nursing home (Warrawee).

In addition, the Department of Human Services has 568 public housing properties in municipality of which 127 are transitional housing accommodation.

The GeoTech Urban Fire Risk Profile for Glen Eira reflects the following numbers of facility by type (based on data from their current report attached to this workbook):

Early Education	177	Day Procedure Centre	8
Gallery/Museum/Theatres	3	Disability Services	57
Libraries/Halls/Community Centres	29	Mental Health	9
Other Colleges	20	Private Hospital	6
Other Facility	9	Public Hospital	3
Place of Worship	104	Special Accommodation	2
Primary/Secondary School	85	Bed & Breakfast/Guest House	7
Reception/Function Centre	17	Boarding House/Hostel/Backpackers	67
Sport Facility	52	Camps	1
Sport Stadium	6	Hotel/Motel/Tourist Resort	17
University/TAFE	3	Serviced Apartments	10
Aged Care	110		

The municipality has located within its boundaries electricity, gas and water distribution infrastructure, and sewerage and drainage systems typical of an inner metropolitan council. A small South East Water reservoir, which services the Sandringham area is located on Warrigal Road north of Centre Road.

3.4 Community Capacity

In comparison to Greater Melbourne the City of Glen Eira population is highly educated, skilled and has a greater proportion of persons earning a high income.

Approximately 71.2 per cent of the population have completed Year 12 (or equivalent) and 56 per cent hold a formal qualification (Tertiary). Professionals, clerical and administrative workers and managers account for 63 per cent of the population.

Overall, 21.3 per cent of the population report performing voluntary work, compared with 17.6 per cent for Greater Melbourne.

Just over 66,047 people are employed in the City of Glen Eira. The highest number of employees work in professional, scientific, and technical services (13.3 per cent), health and social assistance (12.1 per cent), retail trade (10.3 per cent) education and training (9.9 per cent) and manufacturing (6.9 per cent).

Following the 2021 census, the job participation rate for Glen Eira sat at 70%, with female participation increasing by 4% to 67%.

3.5 Industry

In 2016, there were 13,521 businesses registered in Glen Eira, 8,589 of these businesses were non-employing businesses, 3,432 businesses employed one to four employees, and 1,500 businesses employed five or more employees.

The City has more than 300 health service providers ranging from general practitioners, chemists and dentists to optometrists and naturopaths.

3.6 Demography

Based on the 2021 Australian Bureau of Statistics data, the population (usual residence) of the municipality was 148,908, living in 66,233 dwellings coming from a variety of religious and ethnic backgrounds. There are an above average proportion of persons of some sectors of the population in Glen Eira when compared with the Greater Melbourne averages as detailed in the table below:

Sector	Glen Eira	Greater Melbourne
Jewish religion	16.8%	0.9%
Age (above 65)	15.1%	14.7%
Single person household	25.0	22.0%
Rental	32.6%	28.8%
Hindu religion	4.0%	2.9%

Conversely, some sectors are underrepresented when compared with the Melbourne average:

Sector	Glen Eira	Greater Melbourne
Christian religion (all denominations)	35.2%	46.3%
Buddhist religion	2.1%	3.8%

Bentleigh East has the largest population at 25,454 followed by the area comprising Caulfield North and Caulfield East (15,816), Bentleigh (15,611) and Carnegie (15,683). St Kilda East has the smallest population (3,969).

Since 2016, Glen Eira's population has grown by approximately 8,000 people. The biggest percentage changes in age structure between 2016 and 2021 was an increase of 44% in 60+ age categories.

It should be noted that the COVID-19 pandemic has had a significant impact. International student numbers are well down, as is immigration. Whilst work from home rates rocketed with approximately 45% of the working population stating that they worked from home during the 2021 census (6th highest rate in an LGA across greater Melbourne).

Older persons

Glen Eira has an older population with more than 28,000 residents (20.1%) over 60 years of age. This is greater than the Greater Melbourne figure of 19% (*Source: 2016 ABS Census Data*).

Older adults are most vulnerable in the heat due to a combination of factors. These include impaired physiological response to heat, such as a reduced thirst response and reduced ability to sweat, low fitness levels, immobility, visual impairment, varying degrees of cognitive decline and waning social connectedness and support.

Infants and young children

There are 8,601 children aged 0-4 years old living in Glen Eira (*Source: 2016 ABS Census Data*). Infants and children are sensitive to the effects of high temperatures and rely on others to regulate their environments and provide adequate liquids.

People with an illness or taking medications

People who are physically ill, or who take medications, may be more prone to dehydration and heat exhaustion during a heatwave. The most prevalent health conditions affecting Glen Eira residents include heart disease, dementia, stroke, cancer (lung and breast) and diabetes.

People with a disability

In Glen Eira approximately 5% of the population reported requiring daily assistance due to disability and 14% acting as carers to a person with a disability. People living with a disability rely on the people caring for them, to assist in cooling them down in the heat and providing appropriate hydration.

People living alone and social isolation

Glen Eira has a higher proportion of lone person households (27.3%) and fewer families with children, compared to the Melbourne metropolitan area. (*Source: 2021 ABS Census Data*)

People living alone, particularly older persons may be isolated or lack social support. If they come under difficulty in the heat, they may not be able to access medical help, or be noticed by others. Social support can be critical during a heatwave. Access to services and the willingness of the community including family and friends to check on vulnerable individuals is important to ensure heat related illness is treated quickly and effectively.

The 2008 Community Indicators Survey shows that 90.4 per cent of persons living within Glen Eira reported that they could definitely get help from friends, family or neighbours if they needed it.

Housing Tenure

Housing tenure also plays a role in a person's vulnerability in the heat. The housing insecure, those who are experiencing housing stress, difficulty paying the bills or lack of control of their living environment are also more vulnerable in the event of a heatwave.

Housing Tenure in Glen Eira		
Tenure Type	Number	Percentage
Owned outright	17,100	31.2%
Owned with a mortgage	16,114	29.4%
Rented	17,842	32.6%
Other	391	0.7%
Not Stated	3,280	6.0%

(*Source: 2016 ABS Census Data*)

Housing Density

Housing density within Glen Eira increased significantly since 2016. Almost 700 new households were created north of Caulfield Racecourse, equating to approximately 1,200 residents. While over 400 residents were added to the east side of McKinnon Station.

Data suggest that the south east suburbs of Glen Eira (Bentleigh, McKinnon) had the largest increase in residents since 2016.

Culturally and linguistically diverse backgrounds

Messages and health information delivered to people from culturally and linguistically diverse backgrounds must be in a format that can be interpreted and understood.

When compared to Greater Melbourne, Glen Eira has a larger proportion of people born overseas as well as a (larger proportion of people from non-English speaking backgrounds). 62 per cent of Glen Eira's residents were born in Australia. More than one quarter (27.5 per cent) of Glen Eira residents were born in a non-English speaking country. Most common countries of birth other than Australia are China (5.1%), India (4.4%), and England (3.6%).

Other than English, the most common languages spoken in Glen Eira are Mandarin, Greek, and Russian.

3.7 Health

The Glen Eira community enjoys a higher level of good health and wellbeing than the Victorian average. The Glen Eira population also enjoys a higher than average life expectancy at birth than the Victorian average.

The health protection priority issues for the Glen Eira are environmental health, food safety, immunization, water quality and infectious disease. Local health development issues which can be advanced within statewide frameworks include prevention of injuries, cancer, cardiovascular disease and tobacco control.

3.8 Climate and Weather

Melbourne has a moderate oceanic climate and is well known for its changeable weather conditions. This is mainly due to Melbourne's location situated on the boundary of the very hot inland areas and the cold southern ocean. This temperature differential is most pronounced in the spring and summer months and can cause very strong cold fronts to form. These cold fronts can be responsible for all sorts of severe weather from gales to severe thunderstorms and hail, large temperature drops, and heavy rain.

As a general rule, Melbourne enjoys a temperate climate with warm to hot summers, mild and sometimes balmy springs and autumns, and cool winters.

3.9 Public Buildings Spaces and Events

Major features of Glen Eira City Council include Caulfield Racecourse, Monash University (Caulfield Campus), Rippon Lea Historic Mansion, Labasaa Historic Mansion, Monash Medical Centre (Moorabbin Campus), Yarra Golf Club, Glen Eira Sports, and Aquatic Centre (GESAC), Caulfield Park, Princes Park, Bailey Reserve, Centenary Park, Duncan MacKinnon Reserve, McKinnon Reserve and various shopping strips along several of the main roads.

Glen Eira offers a variety of recreational opportunities across the City's 68 parks, 45 playgrounds and 45 sportsgrounds that collectively cover 163 hectares. In addition, the Council supports a variety of local festivals, cultural and sporting events throughout the year. Some of the Jewish culturally specific events attract crowds as large as 10,000. There are also a number of Council planned and managed events including:

Event	Location	Annual Date	Average Attendance	Nature of Event
Groove & Graze	Halley Park, Bentleigh	Early April	6,000	Music and food
Under the Stars	Packer Park, Carnegie	Mid January	7,000	Family friendly entertainment and food vendors
Carols in the Gardens	Rippon Lea Estate	Mid December	5,000	Culturally specific entertainment (1730 to 2030 hours)

Each of these and the larger community conducted events have their own risk assessments and event specific emergency management plans.

3.10 Essential Services

Essential Services in Glen Eira City Council include:

- Services delivered by identified Critical Infrastructure
 - Train, Tram and Bus Lines\Routes
 - Public Hospitals
 - Private Hospitals
 - Nursing Homes
- Emergency Services and Community Emergency Organisations
 - Caulfield Police Stations
 - FRV Station 32
 - Caulfield Ambulance Station
 - Glen Eira SES Unit
 - Community Security Group (CSG) – Jewish community security and crisis/emergency management
- Community Services delivered by Council
 - Refer to Community Plan on Council's web site

3.11 Hazardous Sites

Nil.

4. CERA PROCESS

The CERA process comprises of a five-step framework, which includes Risk Assessment and Risk Treatment. The CERA process underpins the MEMP by providing a mechanism for the identification of hazards, the determination of risks associated with those hazards and how those risks are to be managed. The CERA process aims to reduce the incidence and impact of risks within the community by identifying the risks that face the community, assessing the vulnerability of those at risk and providing options, treatments and/or elimination of the risks.

The last CERA process was completed in December 2022.

Step 1 - Establish the Content

- Establish the objectives of the CERA process.
- Define how CERA will benefit and respond to the needs of community, regional and state level stakeholders.
- Define the approach and identify key participants.
- Define the risk assessment criteria that will be used.
- Develop a municipal profile.

Step 2 - Identify Emergency Risks

- Through primary and secondary sources, identify and review the universe of potential emergency risks.
- Based upon historical data, loss events and other relevant analysis (e.g. Urban Fire Risk Profile) select a short list of risks for further assessment relative to the municipality.

Step 3 - Analyse Emergency Risks

- Estimate ratings of consequence, likelihood and mitigation/preparedness for each risk.
- For each risk - determine high-level changes required, if any, in collaborating with other municipalities and state-level agencies.
- For each relevant share attribute group, facility and/or location - estimate the level of action, if any, relative to emergency risks.

Step 4 - Evaluate Emergency Risks

- Review the preliminary analysis to determine the extent of actions to be taken relative to risks and/or shared attribute groups.
- Determine if further, in depth analysis is required for certain risks and/or shared attribute groups.
- Determine best approach, resources and participants required to develop specific actions relative to each risk.

Step 5 - Treat Emergency Risks

- Determine specific actions for improving controls and preparedness, generally.
- Define specific actions to enhance collaboration with other communities and/or state level agencies.
- Determine specific actions to better control/mitigate the risk and related impacts, particularly across shared attribute groups.
- Leverage the results of the CERA to inform your MEMP and other related documents and processes.

The outcome of this process has identified the following risks to the community of Glen Eira and their respective ratings.

Risk	Rating Confidence	Residual Risk Rating	Next Review
Storm	High	High	13 Jul 2025
A warlike act (bomb threat, act of terrorism, hijack, siege or riot)	Medium	High	13 Jul 2025
Human disease (pandemic)	High	High	26 Oct 2025
Extreme Temperatures (heat and cold)	High	High	26 Oct 2025
Structural failure	High	Low	19 Dec 2025

The following risks were reviewed by the MEMPC, and it was agreed that they did not pose a significant risk to the community of Glen Eira. Should an emergency occur they would be handled through 'business as usual' arrangements.

- Transport Incident- Rail
- Essential Services Disruption
- Hazardous Materials Release - land

Note: Following the implementation of a new CERA tool by VICSES, a program of rolling review of risks in MEMPC meetings has been established by the Glen Eira MEMPC. This will replace the 'once every 3 years' approach. As such, those risks with a review date in the past will be reviewed at forthcoming MEMPC meetings.

5. OUTCOMES OF THE CERA PROCESS

The heat map reflects the emergency risks identified in the Glen Eira community. Based on the opinion of the MEMPC members, on advice from the relevant subject matter expert, the risks have been rated using the CERA process. The heat map reflects the MEMPC's collective subjective opinion of each risk's maximum foreseeable consequence (i.e. worst 'foreseeable' outcome) and existing control effectiveness. The key to the numerical ratings on the axes is as follows:

Maximum Foreseeable Consequence (Vertical axis)		Mitigation / Control Effectiveness (Horizontal axis)	
1	Insignificant	1	Effective
2	Minor	2	Moderately effective
3	Moderate	3	Neither effective nor in-effective
4	Major	4	Moderately ineffective
5	Extreme	5	Ineffective

Heat Map



For full details of each risk, including:

- Hazard description
- Hazard Assessment
- Causes
- Impacts
- Mitigations and their owners

Contact the MEMO.

6. TREATMENT PLANS

A number of sub plans and other statutory plans have been developed to treat risks in the community of Glen Eira. For more detail refer to Part C12 of the MEMP: Special Plans and Arrangements.

For more information login into the CERA platform at: <https://cera.ses.vic.gov.au/login>