Background report – public safety
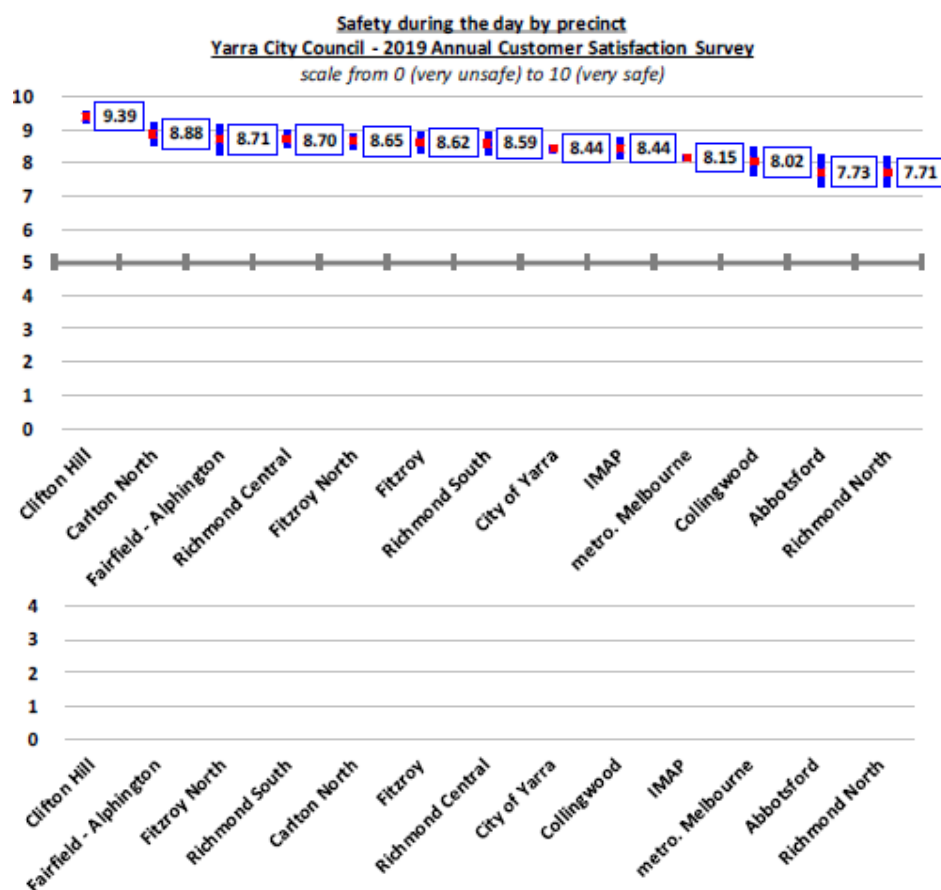
This background report is intended to provide supplementary information to support the response to Council's resolutions of 28 May and 30 July, regarding perceptions of safety in Yarra's public spaces, including issues concerned with gender. It offers an overview of the most pertinent literature and research regarding issues such as lighting and personal security apps and devices and explains the importance of applying a gender lens at all levels of policy and planning. Additionally, it provides information on the most recent research into Yarra residents' perceptions of safety.

Perceptions of safety – findings of the Annual Customer Satisfaction Survey 2019

Annual Customer Satisfaction Survey – safety in public areas

Each year Council conducts an extensive survey of households to gauge importance and satisfaction levels with a range of our services, as well as determining emerging issues and priorities. The latest survey was conducted in February 2019 by Metropolis Research with participation from over 800 households. Scores to a wide variety of questions are provided by survey respondents on a scale of 0 (low) to 10 (high) and averaged to describe results. The averages are also classified into satisfaction categories ranging from 'excellent' (above 7.75) to 'extremely poor' (less than 5).

Respondents were asked: *'On a scale of 0 to 10, how safe do you feel in the public areas in the City of Yarra during the day and at night?'* Overall, respondents identified the same places as feeling the least safe both during the day and during the night: Abbotsford, Collingwood and Richmond North.

Safety during the day by precinct
Yarra City Council - 2019 Annual Customer Satisfaction Survey
scale from 0 (very unsafe) to 10 (very safe)

It is noted that there are minimal large Council parks, gardens and reserves in these three suburbs of City of Yarra. The Council parks, gardens and reserves within these suburbs are listed in the attachments.

The Survey[1] states the following:

A total of 130 responses were received from respondents who felt unsafe in the public areas of the City of Yarra either during the day or at night. The responses have been broadly categorised as follows:

- *Drugs and alcohol related issues – 55 responses.*

- *Lighting and safety at night – 30 responses.*

- *Comments about people – 17 responses.*

- *Crime and policing related – 11 responses.*

- *General perception of safety / other issues – 17 responses.*

In relation to the locations where respondents felt unsafe, 14 percent (12 of 85 respondents) specifically mentioned in and near parks, including near Princes Park, Edinburgh Gardens, and Atherton Gardens. In relation to Abbotsford, Collingwood and Richmond North (where respondents reported feeling the least safe), it is noted that respondents did not specifically mention any parks as the areas they felt the least safe. However, it is important to acknowledge that lighting and safety at night was a common theme raised by respondents. In addition to this, it is useful to report that over the last six months, Council's customer relationship management reporting system has captured a total of one *Community Safety* query related to the adequacy of lighting specific to Council parks, reserves and gardens, in relation to Clifton Hill (Darling Gardens). The vast majority of *Community Safety* queries have related to drug issues (approximately 40 queries).

According to the Survey,[2] the top issue raised by young adults (20–34 years of age) was safety, policing and crime (16.2 percent). No other age groups raised safety, policing and crime as their top issue (or within their top three issues). With regard to gender, females raised concern for safety, policing and crime at a higher percentage than males (11.2 percent compared to 8.2 percent). Multi-lingual speakers also raised concern for safety, policing and crime at a higher percentage to English speakers (16.1 percent compared to 6.6 percent). While most recent studies of fear of crime recognise that gender is a consistent factor in explaining who fears crime,[3] there is a broadly divergent set of explanations as to why women are more likely than men to fear crime.[4]

In terms of how urban public spaces might be made safer and more secure 'safer community' initiatives have been touted as an alternate vision. This approach emphasises activity, land use, and social mix (following the `eyes on the street' rationale[5]) as key ingredients to empower and equip

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[1] Annual Customer Satisfaction Survey, 2019. Yarra City Council
[2] Annual Customer Satisfaction Survey, 2019. Yarra City Council
[3] Grabosky P, 1995, 'Fear of crime and fear reduction strategies', Trends and Issues Paper 44, Australian Institute of Criminology, Canberra hooks b, 1990 Yearning: Race, Gender and Cultural Politics (Between the Lines Press, Toronto)
[4] Whitzman, C, 2007, 'Stuck at the Front Door: Gender, Fear of Crime and the Challenge of Creating Safer Space', *Environment and Planning A: Economy and Space*, 39(11), 2715–2732. doi: 10.1068/a38449.
[5] Jacobs J, 1960, *Death and Life of Great American Cities*, Vintage Books: New York.

people to identify and ultimately improve problematic sites and situations.[6] This approach has been argued in some literature as the preferred approach in direct contrast to the top-down, zero-tolerance policing, CCTV-promoting approach.[7]

At this point, it is essential to highlight that offenders are solely responsible for the perpetration of crime and violence and that blame should never be placed on victims who may not engage in behaviours that reduce vulnerability. Research also suggests that physical design as a stand-alone means of addressing complex and long-term issues of violence and fear, particularly toward women, is a simplistic and inadequate approach.[8] Comprehensive planning and policy interventions (including those related to social aspects and land use) are required to consider the important role and functioning of social spaces beyond the offerings of Council parks, reserves and gardens, for instance, in schools, community health centres, libraries, neighbourhood centres, CALD services, and places of worship, for people to meet, interact and connect.[9] An established, universal and inclusive network of social spaces creates a foundation of behavioural and attitudinal change, cultural change and community empowerment.

Efficacy of provision of lighting for safety and crime, including in relation to public parks

This brief literature review focuses on personal safety in Council parks, reserves and gardens in the context of provision of lighting. It is noted that there is limited research on the efficacy of provision of lighting within public park settings (as opposed to on streets). Further, the correlation between provision of lighting and crime remains inconclusive. Evidence particularly remains limited in relation to safety and lighting in public parks – although it may be a common perception, there is little significant data to support this.[10] However, in one positive example in New York, a randomised controlled trial involving nearly 80 public housing developments with elevated crime found that developments that received new lights experienced lower crime rates than the control.[11] Among other findings, the study concluded that increased levels of lighting led to a seven percent overall reduction in so-called index crimes – at night there was a 39 per cent reduction.[12] Limitations of the study include whether other interventions were considered, such as increased law enforcement.

In the local context, a recent study conducted in Australia found that 30 percent of respondents said they did not feel safe in public places after dark.[13] Applying a gender lens, these results are particularly interesting in terms of considering criminal activity as distinct from perceptions of safety. According to the study, young women particularly thought that public spaces were unsafe for them, especially after dark, despite statistics highlighting women are more at risk of violence at home and at

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[6] White R, 1999, 'Public spaces, social planning, and crime prevention', *Urban Policy and Research* 17 301– 308

[7] Whitzman, C. (2007) 'Stuck at the Front Door: Gender, Fear of Crime and the Challenge of Creating Safer Space', *Environment and Planning A: Economy and Space*, 39(11), 2715–2732. doi: 10.1068/a38449.

[8] Koskela H, Pain R, 2000, 'Revisiting fear and place: women's fear of attack and the built environment' *Geoforum* 31 269–280

[9] Staeheli L, 2003, 'Women and the work of community' *Environment and Planning A 35* 815–831

[10] Ramsay, M and R. Newton. 1991, Crime Prevention Unit Paper No. 29, Better Street Lighting on Crime and Fear: a review. London Home Office, London.

[11] Chalfin, A, Hansen, B, Lerner, J & Parker, L 2019, 'Reducing Crime through Environmental Design: Evidence from a Randomized Experiment of Street Lighting in New York City', *Working paper series*, viewed 30 July 2019.

[12] Chalfin, A, Hansen, B, Lerner, J & Parker, L 2019, 'Reducing Crime through Environmental Design: Evidence from a Randomized Experiment of Street Lighting in New York City', *Working paper series*, viewed 30 July 2019.

[13] https://www.plan.org.au/learn/who-we-are/blog/2016/05/12/a-right-to-the-night

the hands of someone they know.[14] In Melbourne, recent research into tertiary students' public transport experiences of safety equally found gendered-results with high rates of victimisation in relation to public transport experience.[15]

Impact of lighting in public spaces

It has been found that lighting can be utilised as one of a suite of measures used to improve safety, along with the principles of safety in environmental design; however, it does not guarantee safe places in and of itself, and may not always be an appropriate or stand-alone solution. Layered lighting – where there are multiple light sources and the reflective values of surfaces are taken into consideration – may influence perceptions of safety. The provision of quality lighting design can also highlight urban features and enhance the look and feel of the city at night. This has reputational and potentially economic benefits to Council as it ties into the night-time economy.

Research[16] suggests that it is the quality of light, the look, feel and way it interacts with the colours and textures of the surroundings, that is one of the most important factors that influences perceptions of safety for women. The qualitative experience of lighting has a direct influence on the level of comfort felt in a space and can accentuate familiarity or make familiar surrounds seem alien.[17]

Feature lighting has most benefit when it is located in highly visible spaces and connected to city gateways or areas of night-time activity. The design quality of light fixtures also has an impact, and can make a valuable contribution to the aesthetics of open space. In relation to safety and criminal activity, lighting makes up one piece of the puzzle in complementing more traditional deterrence-based strategies, such as police patrols, surveillance cameras or CCTV and 'eyes on the street'[18]. A multi-disciplinary suite of possibilities should be explored when considering both perceptions of safety and deterrence of criminal activity. The importance of tailored, localised responses should equally be considered.

Limitations of lighting

It is acknowledged that lighting can improve perceptions of safety in the community, by encouraging use of certain spaces and passive surveillance provided by the presence of others. However, caution should also be exercised to avoid creating false perceptions of safety by providing lighting in remote or poorly-surveilled locations and recognising the localised context when considering research findings. Research has found that very bright and over-lit spaces do not necessarily correlate with observations of safety and can, in fact, increase perceptions that a site is unsafe.[19] By flooding a space with light, there can be a sharp drop-off of light beyond paths. This contrast can be disorientating and can make people feel less safe.[20] Similarly, types of lighting and general lighting design can play a huge part in the success or perception of safety in public place. For example, illuminance (the measure of light falling on a surface, or lux level) is the only unit of measurement required to comply with the 'P'

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[14] ANROWS, 2015, 'Violence against women: Additional analysis of the Australian Bureau of Statistics' Personal Safety Survey, 2012: Key findings and future directions', *Compass Research to Policy and Practice*, Issue 02, October 2015.

[15] https://msd.unimelb.edu.au/research/projects/current/public-transport-safety-for-tertiary-students

[16] https://research.arup.io/story/cities-for-girls

[17] https://research.arup.io/story/cities-for-girls

[18] Jacobs J, 1960 *Death and Life of Great American* Cities, Vintage Books: New York.

[19] https://research.arup.io/story/cities-for-girls

[20] https://www.plan.org.au/freetobe

Categories of the Australian Standards. The effect of utilising such a singular approach to inform what is considered acceptable under the 'Australian Standard' is that it limits buy-in to consider a more holistic approach to lighting design such as through a combination of lighting designs and techniques, to achieve a more responsive outcome in localised contexts. Similarly, it is an essential to engage those who are utilising the space and who may be making reports of perceptions of feeling unsafe, to ensure new approaches are co-designed in an accessible, multi-faceted and localised manner.

Local research findings

In terms of relevant local research on this issue, Yarra's recently conducted *Annual Customer Satisfaction Survey 2019* found the following results in relation to observed improvements by residents in last two years:

- Parks, gardens and open space (observed by 11.9% of respondents)
- Roads maintenance and repairs (observed by 6.0% of respondents)
- Bike/walking trails and facilities (observed by 3.3% of respondents)

Preferred improvements to the local area observed by residents were as follows:

- Parking (11.3%)
- Traffic management (9.1%)
- Bike tracks, facilities and infrastructure (5.9%)

This provides a useful snapshot of residents' observed improvements in Yarra – notably being parks, gardens and open space. It also highlights that parks, gardens and open space have not been identified as a top preference for improvement, as respondents prioritised parking, traffic management and infrastructure (as outlined above).

Council officers also recently undertook a detailed assessment of customer feedback specifically related to the Abbotsford and Richmond North areas for the period 2017–2019, as illustrated in
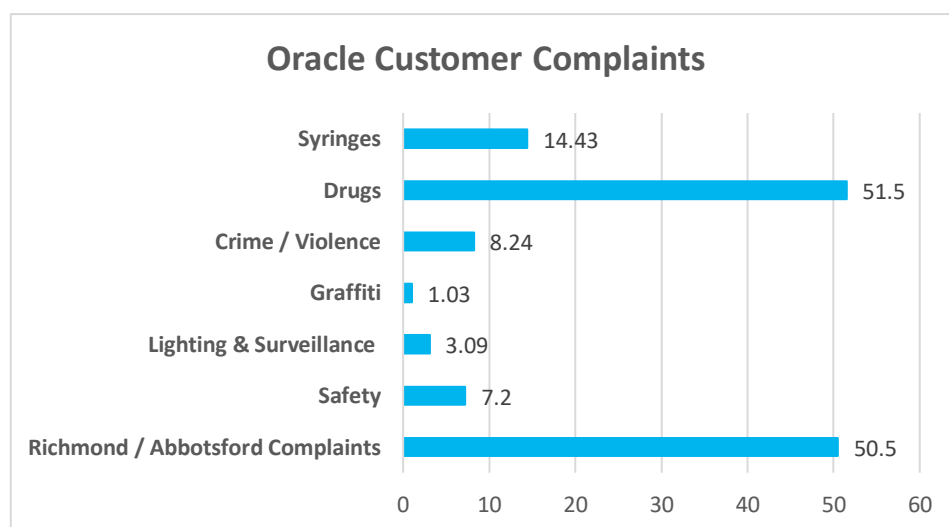

Figure 6: Oracle Customer Feedback 2017–2019

Figure 6. The search parameters were aligned to the key issues highlighted in the 2019 Annual Customer Satisfaction Survey. Results from this assessment once again highlighted drugs and related

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issues as being of greatest concern (51.5% of calls). The locations of Abbotsford and Richmond also featured heavily, with 51% of calls received during this time related to general amenity, liveability and neighbourhood decline of these two areas.

During the *Planning for the Future Survey* of that same year, respondents were asked *'Is there a specific location that comes to mind in Yarra where you feel unsafe at night?'* A total of 41% of responses highlighted Victoria Street as the location, with residents living in Richmond and Abbotsford among the highest proportion of people who felt unsafe at night in Victoria Street. Further analysis of the survey data indicated that drug-related issues were the predominate reasons for identifying Victoria Street (accounting for approximately 72% of responses), followed by dangerous people, the presence of public housing and lighting/surveillance issues. As evidenced in these recent local data findings, it is apparent that the local community is heavily focused on public amenity and safety within the Abbotsford, North Richmond and Collingwood areas, and not within Council parks, gardens and reserves. Nonetheless, prioritisation of public safety applies throughout the municipality and beyond, and efforts should be continued in the form of community partnerships, pursuit of relevant grant applications and targeted advocacy for further improvements.

Use of crowd-mapping to understand and measure gendered perceptions of safety

In terms of measuring and understanding perceptions of public space, the use of crowd-mapping technology is becoming more common. Following a similar model to the crowd-mapping tool 'Free-to-be' undertaken by Plan International,[21] in October 2018 the Victorian Government launched two pilot gender equality maps across Darebin City Council and Melton City Council.[22] People were asked to drop a pin and add a comment on locations where they had experienced gender equality or inequality. During the four months that the maps were available there were nearly 3,000 visitors to the site.[23] Results are currently being gathered and assessed and will be made public once that process is complete.

The Gender Equality Map was an action under the Victorian Government's gender equality strategy, Safe and Strong, a joint project with CrowdSpot and Monash University XYX Lab. The use of 'emotion maps,' as a tool for the participatory crowd-mapping of peoples' perceptions of their environment have been found to attract peoples' attention and also provide valuable, tangible results to policy makers, law enforcement and various tiers of government.[24] The creators of the mapping tools note that in addition to supporting women to share their experiences of public space, the mapping tool provides the opportunity for people who identify as LGBTIQ+ to share a more nuanced view of their experiences.[25]

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[21] https://www.plan.org.au/freetobe

[22] https://www.vic.gov.au/safe-and-strong-victorian-gender-equality

[23] https://www.vic.gov.au/case-study-gender-equality-maps-darebin-and-melton

[24] Pánek, J, 2018, 'Emotional Maps: Participatory Crowdsourcing of Citizens' Perceptions of Their Urban Environment', *Cartographic Perspectives*, no. 91, pp. 17–29, viewed 30 July 2019, <https://search-ebscohost-com.ezp.lib.unimelb.edu.au/login.aspx?direct=true&db=a9h&AN=137007767&site=eds-live&scope=site>.

[25] Kalms, N, 2018, 'Crowd-mapping gender equality – a powerful tool for shaping a better city launches in Melbourne', in *The Conversation*, available at: https://theconversation.com/crowd-mapping-gender-equality-a-powerful-tool-for-shaping-a-better-city-launches-in-melbourne-105648 (viewed 12 Feb 2020)

Personal safety in public parks and efficacy of panic alarms for safety

This brief literature review focuses on personal safety in Council parks, reserves and gardens in the context of public stranger violence (PSV) and the efficacy of panic alarms and other devices. It is important to note that violence experienced by women is overwhelmingly more likely to be perpetrated by intimate partners or family members[26] and a growing body of academics argue the difficulty and inability of mainstream crime prevention to include and focus on violence committed 'behind closed doors,' within families and households, is source for concern.[27] Young adults also represent a large proportion of victims of violent crime.[28]

These data align with the increased risk of victimisation arising from the fact that young adults are more likely to be single, have lower incomes, have lived at their current residence for a year or less, and spend more time engaging in night-time activities.[29] [30] Numerous violent public incidents, particularly involving young people, have been reported in the media including several cases of fatal coward-punches and multiple, highly-publicised PSV homicides in Melbourne (e.g., Jill Meagher, Masa Vukotic, Renea Lau, Eurydice Dixon, and Aiia Maasarwe). It is noted that the majority of these highly-publicised PSV homicides have occurred in municipalities and locations that adjoin the City of Yarra, and also within public parks.

As outlined in the section related to Yarra's *Annual Customer Satisfaction Survey 2019*, it is noted that the top issue raised by young adults (20–34 years of age) was safety, policing and crime (16.2%). No other age groups raised safety, policing and crime as their top issue (or within their top three issues). In terms of gender, females raised concern for safety, policing and crime at a higher percentage than males (11.2% compared to 8.2%), and multi-lingual speakers (as opposed to English speakers) also raised concern for safety, policing and crime at a higher percentage (16.1% compared to 6.6%).

Stranger crimes are considered by law enforcement as some of the most difficult to solve due to an absence of direct links between the victim and the offender.[31] [32] For these reasons, PSV elicits a significant level of fear among the general public, in particular for women, often resulting in them adopting restrictive, avoidance-type behaviours. As such, the increasing prevalence of PSV is an important social issue, and targeted, evidence-based intervention(s) may be required by a number of stakeholders to counteract this trend.

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[26] Phillips, J., & Vandenbroek, P. (2014). *Domestic and family violence in Australia: An overview of the issues* (Parliamentary Library Research Paper). Canberra: Parliament of Australia. Retrieved from <www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/rp/rp1415/ViolenceAust>.

[27] Whitzman, C. (2007) 'Stuck at the Front Door: Gender, Fear of Crime and the Challenge of Creating Safer Space', Environment and Planning A: Economy and Space, 39(11), pp. 2715–2732. doi: 10.1068/a38449.

[28] AIC, Australian Government, 2005.

[29] AIC, Australian Government, 2005.

[30] Daniel R, Lee, Carly M, Hilinski-Rosick, 2012, 'Role of Lifestyle and Personal Characteristics on Fear of Victimization among University Students', *American Journal of Criminal Justice* 37(4), Winter 2012, 647–668.

[31] Hewitt, A N, Beauregard, E & Davies, G, 2016, 'An Empirical Examination of the Victim-Search Methods Utilized by Serial Stranger Sexual Offenders: A Classification Approach', *Journal of Interpersonal Violence*. https://doi.org/10.1177/0886260516675921

[32] Rossmo, D K, 2012, 'Recent developments in geographic profiling', *Policing: A Journal of Policy and Practice*, 6, 144–150.

Efficacy of Panic Apps and Alarms

A number of researchers have undertaken research and evaluation on safety in public spaces including research and the trialling of interventions with focus generally on women's safety. One study conducted in New Delhi[33] explored the efficacy of panic buttons/alarms, particularly regarding women's safety following a particularly brutal and widely publicised gang rape in New Delhi in 2012. In their research they defined personal safety as a state in which *one is protected from or need not feel compelled to think of ways in which to protect oneself from immediate threats to the individual person.* The research found multiple limitations to the efficacy and effectiveness of panic alarms.

This study also highlighted the multiple ways in which panic alarms may be perceived to 'improve' public safety. In one sense, they may be viewed as a means of preventing a crime. In other ways, they may be viewed as preventing the escalation of a crime, and finally, they may be considered as a means of mobilising a law enforcement response if a crime is imminent or in progress. Another study[34] found that the majority of personal safety apps (considered to be interchangeable with the concept of panic alarms) focus on location-based reactionary services. It has been found that while these apps/alarms could be useful in the event that the assigned contact(s) calls emergency services and they reach the user before the crime takes place, the reality of such situations is far from this idealised circumstance. Further, in the first instance, effective use of panic alarms/apps relies overwhelmingly on the victim having access to their phone/device/mechanism to effectively activate the alarm. Accessibility does not relate exclusively to physical access (to a phone, for example), but also the availability of a phone and also basics such as phone signal, battery life and credit.[35] From this point, even if the alarm is successfully accessed and activated by a victim, the research[36] identified a number of flaws. Specifically, the effectiveness assumes that the contact(s) who are informed of an alert/panic alarm signal instantaneously undertake all of the following:

a) Take the alert seriously and continue to follow up if they cannot reach the user by phone;

b) Have the presence of mind to act rationally;

c) Reach the user before the crime has commenced or is completed; or

d) That emergency services (if contacted) will act on the information and can reach the user before the crime takes place.

While it is noted that this particular study was undertaken in a different country, a number of the issues remain relevant to the local context.

Further to this, it is important to consider the diversity in opinions on perceived and actual safety concerns. The debate over the role of the 'individual versus the situation' in the crime production function continues[37]. The results from Yarra's recent *Annual Customer Satisfaction Survey 2019*

[33] Naveena Karusala & Neha Kumar, 2017, *Women's Safety in Public Spaces: Examining the Efficacy of Panic Buttons in New Delhi*, Georgia Institute of Technology: Atlanta.

[34] Maxwell, L., Sanders, A., Skues, J., & Wise, L, 2019, 'A Content Analysis of Personal Safety Apps: Are They Keeping Us Safe or Making Us More Vulnerable?' *Violence Against Women*, https://doi.org/10.1177/1077801219832124

[35] Amnesty International: https://www.amnesty.org/download/Documents/ACT1021332015ENGLISH.PDF

[36] Maxwell, L., Sanders, A., Skues, J., & Wise, L, 2019, A Content Analysis of Personal Safety Apps: Are They Keeping Us Safe or Making Us More Vulnerable?' *Violence Against Women*, https://doi.org/10.1177/1077801219832124

[37] Chalfin, A, Hansen, B, Lerner, J & Parker, L 2019, 'Reducing Crime through Environmental Design: Evidence from a

highlight this. Personal safety can be considered in two stages, where an individual starts to feel unsafe and then, when an individual is confronted with an actual threat. Academics have long posed a question as to whether 'fear of crime' is the constraint here, or whether it is a structural barrier that is (or can be) overcome by individual agency.[38] Unfortunately, research[39] has shown that the entire premise of a panic app or alarm intervenes too late in the timeline and is highly dependent on an individual's conceptualisations of safety and/or danger, making it little more than a reactionary tool at best. There is also a lack of research examining the response times of personal alarm services[40] and resourcing implications. This is critical to determine their efficacy and effectiveness. Further, and perhaps alarmingly, location-based services (i.e. personal apps on smart phones or personal panic alarms) may promote the idea that location data provides meaningful safety information that is sufficient to protect an individual from becoming the victim of a crime.[41] As such, use or reliance on apps or personal panic alarms can provide an illusion and false sense of security that could be potentially dangerous, particularly for those who may then feel safer to engage in riskier behaviour on account of their enhanced perception of safety.[42]

Few apps were found to be preventive in nature, for example, by educating users about the risk factors for victimisation or how to reduce personal vulnerability, which should perhaps be a renewed focus of future personal safety apps.[43] However, again it is essential to highlight that offenders are solely responsible for the perpetration of violence and blame should never be attributed to victims who may not engage in behaviours that reduce vulnerability.

Potential solutions that deserve greater consideration include investigation and implementation of components of a smart city, to ultimately guide a proactive approach to the issue (as opposed to exclusively relying upon reactionary approaches).[44] This has been contemplated and acted upon by officers through research into and trialling of a Crime Prevention through Environmental Design (CPTED) Audit App. The Integrated Safety Auditing for Public Spaces of Yarra (ISAPY) smartphone tool was developed in collaboration between Social Policy and Research and CityLab to assess public spaces in Yarra according to CPTED principles. A first version of the app has been developed and the next step would be to test it out in practice to see if it would be useful to the organisation, and possibly beyond. In addition to this, officers worked with RMIT to develop a survey about the use of

Randomized Experiment of Street Lighting in New York City', *Working paper series*, viewed 30 July 2019, <https://search-ebscohost-com.ezp.lib.unimelb.edu.au/login.aspx?direct=true&db=edsbl&AN=RN620244518&site=eds-live&scope=site>.

[38] Whitzman, C. (2007) 'Stuck at the Front Door: Gender, Fear of Crime and the Challenge of Creating Safer Space', *Environment and Planning A: Economy and Space*, 39(11), pp. 2715–2732. doi: 10.1068/a38449.

[39] Naveena Karusala & Neha Kumar (2017). Women's Safety in Public Spaces: Examining the Efficacy of Panic Buttons in New Delhi. Georgia Institute of Technology, Atlanta, Georgia, USA. ISB: 978-1-4503-4655-9doi>10.1145/3025453.3025532

[40] Maxwell, L., Sanders, A., Skues, J., & Wise, L, 2019, A Content Analysis of Personal Safety Apps: Are They Keeping Us Safe or Making Us More Vulnerable?' *Violence Against Women*, https://doi.org/10.1177/1077801219832124

[41] Rena Bivens & Amy Adele Hasinoff, 2018, 'Rape: is there an app for that? An empirical analysis of the features of anti-rape apps', *Information, Communication & Society*, 21(8), 1050–1067, doi: 10.1080/1369118X.2017.1309444

[42] Maxwell, L., Sanders, A., Skues, J., & Wise, L, 2019, A Content Analysis of Personal Safety Apps: Are They Keeping Us Safe or Making Us More Vulnerable?' *Violence Against Women*, https://doi.org/10.1177/1077801219832124

[43] Simpson, B. (2014). Tracking children, constructing fear: GPS and the manufacture of family safety. Information & Communications Technology Law, 23, 273-285.

[44] Chourabi, H, Nam, T, Walker, S, Gil-Garcia, JR, Mellouli, S, Nahon, K, Pardo, TA & Scholl, HJ 2012, 'Understanding smart cities: An integrative framework', *Proceedings of the 45th Annual Hawaii International Conference on System Sciences, HICSS–45.*, 6149291, IEEE Computer Society, 2289–2297, HICSS 2012, Maui, 1/4/12, https://doi.org/10.1109/HICSS.2012.615

CPTED in Victoria. The survey was designed to gain an understanding of awareness and use of CPTED for crime prevention and community safety, and any gaps in training or application. The survey was released in February 2019 by RMIT to stakeholders and will be provided by RMIT to the Department Of Justice and Community Safety.

Most importantly, there is also an overwhelming need for all people, and particularly those with vulnerabilities, to be free of the cognitive burden of ensuring their personal safety from PSV.[45] Further to this, it is acknowledged that the concept of panic apps/alarms represents a piece in the puzzle of a technology-based strategy for the prevention, mitigation and response to crime. There is positive feedback from countries in the developing world where initiatives such as those previously described have been tested. While not fool-proof, other indirect and positive impacts have initiated: one participant in the Amnesty International project stated, 'Security is community. Having an 'app' (with registered security contacts) gives you a sense of security'.[46]

Despite statistics indicating that men are assaulted by strangers at a much higher rate than women,[47] stranger crimes often elicit the highest levels of fear of crime for women. As such, interventions need to also focus on empowering women to gain some control over their own safety.

One study evaluated the different features of personal safety apps available in Australia, particularly focused on the usefulness of such apps in reducing women's vulnerability to PSV.[48] Apps focusing on panic alarms may be useful in a small number of circumstances (e.g., if the offender is a first-time offender or is inexperienced), where the offender may lack confidence and more likely 'scared off' by the possibility of bystander attention. However, previous research has indicated that offenders may not always be deterred by alarms.[49] [50] [51] This is because alarms do not create a physical barrier to prevent crime from occurring (in the way that locks, window bars, or shutters do, as a preventive measure to burglary), nor do they decrease the risk of offenders approaching and assessing the target, as may be achieved by increased surveillance, public activity or lighting, for example. Instead, they work on the assumption that potential offenders will believe that a suitable guardian will be alerted to the criminal activity and thus increase the risk of apprehension.[52]

In conclusion, it is considered that the viability of panic alarms and apps remains inconclusive, particularly in the local context with limited local evidence and research. Ultimately, public safety technologies (including panic alarms and apps) are only as good as the manner in which it is available,

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[45] Naveena Karusala & Neha Kumar, 2017, *Women's Safety in Public Spaces: Examining the Efficacy of Panic Buttons in New Delhi*, Georgia Institute of Technology: Atlanta.
[46] Amnesty International: https://www.amnesty.org/download/Documents/ACT1021332015ENGLISH.PDF
[47] AIC, Australian Government, 2014.
[48] Maxwell, L., Sanders, A., Skues, J., & Wise, L, 2019, 'A Content Analysis of Personal Safety Apps: Are They Keeping Us Safe or Making Us More Vulnerable?' *Violence Against Women,* https://doi.org/10.1177/1077801219832124
[49] Hockey, D. (2016). Burglary crime scene rationality of a select group of non-apprehend burglars. SAGE Open. doi:10.1177/2158244016640589
[50] Kuhns, J B, Blevins, K R, & Lee, S, 2012, 'Understanding decisions to burglarize from the offender's perspective', Technical report for the Department of Criminal Justice & Criminology, University of North Carolina at Charlotte.
[51] Tilley, N, Thompson, R, Farrell, G, Grove, L., & Tseloni, A, 2015, 'Do burglar alarms increase burglary risk? A counter-intuitive finding and possible explanations', *Crime Prevention and Community Safety*, 17(1), 1–19, doi:10.1057/cpcs.2014.17
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accessed and employed. Panic alarms and apps are not recommended as a stand-alone solution to address public safety in Council parks, reserves and gardens.

Gender mainstreaming

'Gender mainstreaming' refers to the need to bring gender considerations into the societal mainstream for consideration at every level of amenity, policy, governance and social infrastructure.

The UN Economic and Social Council, defines it as follows:[53]

> *Mainstreaming a gender perspective is the process of assessing the implications for women and men of any planned action, including legislation, policies or programmes, in all areas and at all levels. It is a strategy for making women's as well as men's concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of policies and programmes in all political, economic and societal spheres so that women and men benefit equally and inequality is not perpetuated. The ultimate goal is to achieve gender equality.*

The idea of gender mainstreaming was first introduced in 1985[54] and has largely been concerned with the application of a binary gender lens that ensures that the rights and needs of women are considered alongside, but separate from, those of men, as a matter of priority for policy makers. By applying a gender lens to all levels of policy creation and implementation, the aim is to reveal sources of gender inequity to ensure women have an equal right to safety, public spaces and economic participation.[55] In Yarra's case, current gender equity practice is to acknowledge a spectrum of gender and it is through this lens that policy matters are considered.

Yarra officers are currently undertaking a gender impact analysis, as part of a larger state government project, applying a gender lens to policies, programs and services across the whole organisation. This work is compatible with gender mainstreaming principles, which officers are working to embed as part of Yarra's standard work practices for developing policies and programs.

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[53] UN Economic and Social Council (ECOSOC), UN Economic and Social Council Resolution 1997/2: Agreed Conclusions, 18 July 1997, 1997/2, https://www.refworld.org/docid/4652c9fc2.html (accessed 6 February 2020)
[54] Council of Europe (2020) 'What is Gender Mainstreaming?' https://www.coe.int/en/web/genderequality/what-is-gender-mainstreaming (accessed 6 February 2020)
[55] Caroline Moser, 2012, 'Mainstreaming women's safety in cities into gender-based policy and programmes', *Gender & Development*, 20(3), 435–452, doi: 10.1080/13552074.2012.731742