Benchmarking Flood Ready Behaviour
REPORT

Prepared for:

Melbourne Water

Prepared by: Monica Greenwood, Tabitha Lucas, Victoria Parr and Adam Franks

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EXECUTIVE SUMMARY

Background, objectives and methodology

Melbourne Water, in its capacity as the managing authority for the waterways, floodplains and drainage systems in the Port Phillip and Westernport region, has put in place the Flood Management and Drainage strategy 2015, aimed at minimising flooding risks as well as minimising the impact of floods by undertaking a number of initiatives, including increasing community preparedness. The strategy identifies community preparedness as a key element of reducing tangible and intangible damage as well as promoting a speedy recovery after flooding.

To date, extensive work has been done in conjunction with its main partner, VICSES, in educating those in areas deemed to be of high risk across the region. However, despite these vigorous education programs and the potential for significant personal loss from flooding events, the risk of flooding has very little saliency across the broader Port Phillip and Westernport community. To this end, Melbourne Water has undertaken to develop a 'whole of community' strategy to improving the levels of awareness and preparedness associated with flooding. Ultimately, the goal will be for this initiative to change attitudes and behaviours towards flood preparedness at a community wide level.

As such, information was needed by Melbourne Water to feed directly into the development of a target in the Flood Management Strategy, setting a baseline level of flood awareness and to shape the scope and messaging of a Flood Education Plan. It was also important for Melbourne Water to confirm that the proposed definition of 'flood readiness' resonates with the broader community and to clarify what the action points might be that deliver on this definition.

To this end, a program of focussed and fit-for-purpose research met all of these needs for Melbourne Water, the overarching aim of which was to deliver insights to Melbourne Water and its stakeholders around the understanding of 'flood readiness' and factors that can motivate a change in behaviours of those who are not prepared for flood events, along with establishing benchmark measures of awareness, attitudes and behavioural change with respect to flood readiness.

Following a project inception meeting with Melbourne Water and its stakeholders, we conducted two streams of research activities consisting of:

- Qualitative exploration comprising 9 focus groups;
- Quantitative benchmarking comprising n=2,789 online interviews with residents of the broader Melbourne area (n=82 were identified as flood prone) plus n=200 CATI interviews with those identified as flood prone.

We incorporated Behaviour Change theories to this research, as this is the ultimate goal for the initiative, using a model that explores capability, motivation and opportunity as three core elements to changing behaviour.

Qualitative Exploratory Findings

<u>Understanding of a 'flood'</u>

Attitudes towards floods are driven by definition. Overwhelmingly most identified flood as 'riverine flooding' or rivers breaking their banks and flooding the nearby properties; more so in the country, than for the cities. Flooding is perceived as being 'extreme', so strong in force that property can be torn from foundations and carried away. As such, the key challenge is to address perceptibly that 'low severity' flooding does not have high impact or that there is nothing that can be done about flooding events, that they are a force of nature that is out of their control.

In contrast, storms are the natural disaster most likely to directly affect Melbourne and highlighting storms as a catalyst for a flooding event will make the threat of flooding more relatable and thus believable for Melbourne residents.

Consequently, communications will need to provide context to be relevant and believable. Context can be provided by: showing them about their town, their suburb, demonstrating the difficulty in getting around, conveying the anxiety and emotional stress caused and comparing floods with something they CAN relate to (for example the damage caused by fires).

Responsibility for Flood Management

Responsibility for flood management was largely seen as that of council or the government in general. In particular, ensuring adequate storm water drains and maintaining them, building controls, and making people aware that they are building/ buying in a flood prone area.

Evaluating Melbourne Water 'Flood Ready' definition

Part of the research objectives required evaluating the meaning of 'flood ready', as defined in the Flood Management Strategy, Port Phillip and Westernport, (October, 2015) which is *"People who understand their flood risk and know what actions they can take to minimise them, such as building appropriately, taking out insurance and being emergency ready"* [1]. This proposed definition is congruent with perceptions among the community and as such the definition will work as an overarching direction for communications as these messages are more likely to be accepted.

There were three 'Flood Ready' definition areas that were also evaluated:

1. **Preparation by building and maintaining appropriately:** There was strong agreement with this as part of flood readiness. It was further broken out into two streams 1) self managed including things that the community can do themselves around their home and 2) managed by others, in particular councils.
2. **Taking out insurance:** This was a key issue raised spontaneously and was seen to be highly appropriate as a key factor to being 'flood ready'. That said, many (even in flood prone areas) were not aware whether their insurance covered them for flood or not.
3. **Being emergency ready:** This comes in many different forms but includes having an evacuation plan, having an emergency kit, putting valuables up high, knowing how to look and listen for updates, switching power off and looking out for others.

This relates to the Behaviour Change Wheel in terms of:

- "Capability": building and maintaining speaks to environmental restructuring and restriction
- "Opportunity": understanding their flood risk is about education and persuasion
- "Motivation": Taking out insurance is about incentivisation and coercion while being 'emergency ready' is about enablement, training and modelling

Perceptions of flood readiness

There are three areas that form a pathway to 'flood readiness':

1. Awareness: Many misinterpret that if you are not near a river or creek or that it is not a catastrophic event, you are not at risk. A knowledge gap of the impact that even a small amount of flood water can cause exists. A further element impacting on awareness is confirming at what water level it becomes 'a flood'. The overwhelming majority of those in at risk areas were not

[1] Flood Management Strategy, Port Phillip and Westernport, October 2015.

aware they were at risk and believed it was the responsibility of council, real estate agents or insurance companies to inform them.

2. Acceptance: On face value, all could identify and accept the possible impact of a flood (damage to property, loss of possessions, mould and smell). However, there was a lack of appreciation as to the extent of the damage caused, and the length of time to recover with many expressing unrealistic expectations that insurance will fix everything. The emotional impact following flooding needs to be strong in future communications to add to message credibility.
3. Action: There is a challenge to overcome the perception that there is nothing that can be done as the event itself is unpredictable. However, people were very open to being given guidance and knowledge on how to prepare and what to do during a flood, once they had accepted the idea that they could be at risk. This involved (a) knowing what action to take, and (b) being able to achieve that action. As such, people responded positively to the FloodSafe Brochure.

Three broad elements are evident to influence behaviour change in accordance with the Behaviour Change Wheel Model in respect to flood readiness:

- "Capability": particularly at a physical level to enable some of the actions required to be Flood Ready as evidenced by the positive response to the SES FloodSafe brochure
- "Opportunity": presented via the communications strategy and Education Plan being developed by Melbourne Water to make people aware of flood risk and implications for them personally
- "Motivation": changing behaviour will be driven by awareness they have of the implications of a flood event, both at a physical, but also emotional, level.

<u>Informing communications</u>

A series of different 'flood facts' were evaluated for their resonance and credibility:

1. *The annual average damage of flooding in Australia is 7.8 times more costly than bushfires.*
   Comparison to bushfires provides context and relevance and is surprising, while still believable. It provides enough 'shock value' to engage with the message. But, the context of 'Australia' (as opposed to Melbourne) could allow people to easily dismiss the fact as not relevant.
2. *In Melbourne there are over 40,000 residential homes that are prone to flooding*
   To most this seems large leading many to question, "could I be one of those?" It is believable credible. However, it lacks context as many do not know the total number of residential homes.
3. *In the greater Melbourne region there are over 100,000 properties that are prone to flooding (including houses and businesses)*
   This even larger number (compared to 40,000) makes it even more compelling. Again, not knowing the total number in Melbourne means it loses some context and relevance.
4. *The annual average damage of flooding in Melbourne is around $245 million*
   This seems high so is surprising. It has some context (i.e., know the value of money) and as it is about Melbourne, relevance increases. But, upon reflection, the value seems low, particularly in the context of rebuilding roads / infrastructure so lacks some context and 'shock value'.
5. *Only 37% of people who are in a flood prone area are aware that they are in a flood prone area*
   Challenges the belief that you would know that you were in a flood prone area and is therefore highly motivating. However, can be dismissed if message is not delivered within the context of their personal situation.
6. *48% of people who are in a flood prone area don't know whether their insurance covers them for a flood*
   This disturbs those who are uncertain about their insurances. Combined with the fact that they

are in a flood prone area, is a definitive prompt for them to take action and check. However, can be dismissed without a definite message of 'your house is in a flood prone area'.

7. *During the 2001 floods in Victoria, 3 people died including a man who fell off the roof of this Glen Waverly home trying to stem a leak that was attributed to flash flooding*
   Some emotive connection given there was a death. For those living in a nearby suburb, there was a greater resonance. However, while there is empathy for the deaths, 3 seems minimal and is easily dismissed, particularly when compared to the lives lost in QLD floods or during bushfires. Being on the roof during the storm is seen as a risky and foolish action.

Evaluation of the 'Andrew Serratore case study video'

The benefit of this is that it highlights the emotional impact and stress of a flood. For those close to Albert Park, the video has a stronger impact, making it more 'real' and relevant. However, if the content is not relatable or not in their area it could be easily dismissed and is therefore limited in this aspect.

Implications for communications and education development

There are a number of ways that communications can impact behaviour. In particular, touching on elements of the Behaviour Change Wheel to enact that change:

- Capability: Environmental Restructuring through building, maintenance and regulation is complex and not suitable for an immediate campaign, but could be used for longer term strategies.
- Opportunity: There is a distinct gap in knowledge and understanding (Education) and in emotional connection (Persuasion) which communications would be ideal to correct.
- Motivation: Strong opportunity to utilise the potential of cost through not being covered by insurance (Coercion) and the safety net of knowing you are covered (Incentivisation). Additionally, large gaps exist in skills (Training) and beliefs (Enablement) that people can take action to prepare. There is also opportunity to provide examples of what to do (Modeling).

Quantitative Benchmark Findings

Flood Awareness, Experience and Understanding

Four in ten (42%) of the flood prone are aware they are at risk of flooding. For subsequent waves, an increase of 7% (from the benchmark of 42%) will be a statistically significant improvement.

Those at flood prone addresses are significantly more likely to define water levels as a flood before it goes above ground floor level (32%) compared to those not at flood prone addresses (22%) suggesting greater saliency of the risk of flooding amongst those at flood prone addresses. Of concern, is that 21% of the total feel that water levels a few centimetres above the ground floor level is not yet a flood.

Not unsurprisingly, those at flood prone addresses have more experience with flooding, but this experience is generally low level. Only 8% of these have experienced flooding above ground floor level.

Perceived likelihood of future flooding is significantly higher for those at risk of flooding. However, perceived risk is still relatively low (less then 5 out of 10). Those who are flood prone but who do not feel at risk, report that this is because they have not had a problem before (51%), have effective drainage (40%), and do not live near a body of water (39%). Of concern is the perception that if residents are at risk of flooding, they would be actively told about that. More than one in three who do not feel they are at risk claim it is because they have never been told they are in a flood prone area.

Perceived Impact of a Flood

Perceived impact of a flood increases substantially once water levels are 2-3 centimetres above the ground floor level. That said, the perceived impact of 2-3 centimetres of water above the ground floor level is still well below the impact of water levels halfway up the ground floor. This confirms the qualitative findings, that many underestimate the potential impact of a low level flood.

Amongst those who are flood prone, 28% rate the perceived impact of 2-3 centimetres of water above ground floor level as a 5 or lower on the scale of '0' (no impact) to '10' (catastrophic impact). The bulk of those who are flood prone rate this flood level a 6 or 7 (43%) with only 29% rating impact 8 or higher.

Further evidence of the lack of saliency of a flood 2-3 centimetres above ground floor level, is that nearly half (48% of those who are flood prone and 47% of those who are not) agree (rate 8-10) that 'being flooded wouldn't be as bad as being caught in a bushfire'. Similarly, 38% agree that 'it would be a hassle to be flooded but there are worse things'.

Preparedness for a Flood

One in three (32%) of those who are flood prone feel they are prepared for a flood (extremely or mostly prepared). This drops significantly to 23% amongst those not flood prone. Further, regardless of current flood risk, about two in three (65% of those who are flood prone and 62% of those who are not) agree (rate 6-10) that if they were prepared they would be able to cope with a flood.

Importantly, for those who feel they are prepared for a flood, the feeling of being able to cope with a flood is significantly greater (36% rate 8-10 versus 20% of those not prepared). However, amongst those who do not feel they are prepared, 23% feel preparedness would not help them cope. This suggests that the link between preparedness and the ability to cope should be addressed in communications in order to encourage residents to take more action towards flood readiness.

For those who are flood prone but do not feel prepared, the most common reason they feel this way is simply because they have not thought about it before (38%). However, beyond simply raising awareness of preparing for a flood, results indicate that the need to be prepared also needs to be communicated: 29% who are flood prone are unprepared as they do not think it is necessary.

The most well known flood risk minimisation strategies are cleaning and maintenance of gutters and drains. For those who are flood prone, awareness is significantly higher. That said, there is still a great deal of room to improve awareness amongst both the flood prone and those not flood prone. Fewer than half (41%) of those at a flood prone address were aware that having an emergency action plan and preparing an emergency kit (33%) are risk minimisation strategies.

Attitudes Towards Flooding

Overall perception of flood risk is largely neutral. Of concern is that, on average, there is not strong disagreement with 'a flood a few centimetres above ground floor level that happened really quickly but then subsided really quickly wouldn't really affect me'. Further, both those who are flood prone and those who are not, believe the responsibility for minimising risk lies elsewhere (rating 6.4 out of 10).

Encouragingly, there is some agreement that individuals are also responsible for protecting their property from the risk of flooding (6.2 out of 10 on average for both the flood prone and not flood prone). However, there is also a sense of some helplessness with a lack of strong agreement that 'there are lots of things I can do to minimise the risk of flooding to my home' (5.3 out of 10 for those not flood prone and 5.0 out of 10 for the flood prone), and that 'floods are not something that you can prepare for' (4.4 out of 10 for those not flood prone and 4.5 out of 10 for the flood prone); and 'there is nothing I can really do to avoid damage to my home and property from a flood' (4.7 out of 10 for those not flood prone and for the flood prone).

There is also lack of knowledge with relatively few agreeing they 'know where to find information about being prepared for a flood' (4.2 out of 10 for those not flood prone and 4.5 out of 10 for the flood prone) and 'I know what to do to protect my property if there is a flood' (4.4 out of 10 for those not flood prone and 4.3 out of 10 for the flood prone).

These results indicate that communications need to educate Melburnians as to what they can actually do to minimise their risk that will, in turn, likely give them a stronger sense of control.

Communication Channels

In case of flood the SES is clearly the first point of call for help (76%) followed at quite a distance by emergency services (45%). Overall this indicates that the community has confidence about whom they would contact during a flood. But there is a wide range of information sources mentioned when thinking about who to contact to find out more information about preparing for a flood. Local council is most often mentioned (53%) followed by SES (46%) and Melbourne Water (32%). This suggests there is some uncertainty about whom to contact for information about preparing for a flood.

A letter box drop is the preferred communication channel for nearly half (47%); chosen significantly more often than other channels including television. A wide range of information is also desirable in communications. The least helpful information is felt to be 'what items to put in an emergency / evacuation kit'. This suggests the value of having a kit prepared needs to be raised.

Guiding Communications for the Wider Melbourne Audience

Using Principle Components Analysis, four distinct attitudinal segments emerged, each representing one quarter of the wider Melbourne community.

Segment 1: "It's all under control"

This segment feels in control when it comes to flooding and flood risk, have taken steps to minimise risk and protect themselves, know where to find information, and know that it is up to them to protect their property. They are likely to be receptive to communication and content if it is thorough and goes beyond what they have already done / are aware of. For example, while residents in this segment have done far more than others, relatively few have an emergency action plan or evacuation kit. More 'basic' or 'beginner' communications might be disregarded as something they already know or have already done.

While this segment feels responsible for taking action, they also have some sense of false security about the impact of a flood 2-3 cm above the ground floor level. It will be important to educate this segment about the potential impact of this to motivate more risk minimisation actions.

Segment 2: "No worries"

This segment feels less in control, less informed and less prepared simply because they do not feel they need to be. They believe flooding and flood risk is largely to do with environmental features (e.g. proximity of bodies of water, residing in a low lying area). The focus of communications should be on raising awareness of flood risk and that there are actions they can take. Initially focusing on the simplest, lowest effort risk minimisation strategies would likely have the most success. Communications also need to address the false sense of security that they are not at risk because they are on a hill, do not live near a body of water, etc.

This segment also expects to get warnings that a flood is coming and lacks understanding of the potential impact of a flood 2-3 cm above flood level.

Segment 3: "Look after me"

This segment believes that responsibility for minimising risk and preparation belongs to others – to warn them of an impending flood, to warn them if you are not covered by insurance, and to provide the necessary infrastructure to minimise their risk. So while they are more aware of the potential impact of a

flood 2-3 cm above floor level, they do not believe that they themselves are primarily responsible for taking steps to protect themselves and minimise their risk.

While those in this segment have taken some action, they could do far more. Communications need to emphasise that leaving it to others is not enough and that personal action and responsibility is also important.

Segment 4: "It's out of my hands"

This segment are highly disengaged; giving little thought to flood risk. They also have little sense of control over flood risk, feeling that there is nothing they can really do to prepare or minimise their risk, and not knowing where to find information. Communications need to focus on raising awareness of flood risk generally and then focus on empowerment: making them aware that they do have some control over their flood risk / control over protecting their home and property from damage.

While this segment does not necessarily feel that they are protected by not living near a body of water or in a low lying area, this is because they have given little thought to flood risk. Similarly, they also do not feel that others should be responsible for minimising the risk, because they do not feel that there is anything that can be done or that anything should be done.

While they also need to be educated about risk minimisation strategies generally, it will be critical to convince this segment that those strategies are something that they can do and something that will actually benefit them.

1. BACKGROUND

1.1 Overview

Melbourne Water is the management authority for the Port Phillip and Westernport waterways, floodplains and drainage systems, in addition to providing wholesale water and sewage services to Melbourne's water retailers. As part of this remit Melbourne Water manages flooding and flood risks for Port Phillip and Westernport using a variety of strategies ranging from urban planning to flood warning systems, to upgrading and maintaining infrastructure. Equally important is Melbourne Water's focus on sharing information on flood risk with the community. To accomplish this goal Melbourne Water supports community education and awareness programs designed to inform the community and reduce the economic and social impact of flooding. One of the ways it does this is in a strong partnership with VICSES.

Despite having these projects in place, Melbourne Water faces large challenges in relation to managing flood risk. Significant flooding occurred in 2011 in metropolitan Melbourne, and major riverine flooding as recently as 2005. Annually flooding causes an estimated $399 million[2] in tangible damages in addition to emotional stress, loss of life, and sentimental value of items lost. This is a significantly greater financial impact than any other natural disaster, including bushfires. Compounding this issue is the fact that going forward, the risks and costs of flooding in Port Phillip and Westernport are predicted to increase. Leading work on climate change suggests that Melbourne will experience more extreme weather events in coming years, bringing with them an increased chance of flooding. Additionally, rapid population increases are expected to push the Melbourne metro population to 6.4 million by 2026[3], putting further pressure on existing areas and resources such as drainage systems.

At present, it is known that 127,000 properties in the Port Phillip and Westernport region are prone to flooding. Since 2008, Melbourne Water has been working in partnership with VICSES to fund and run an education program to assist in raising awareness and understanding of the risks of flooding and how to prepare for such an event, particularly in high risk areas. Additionally, in partnership with local councils and SES, Melbourne Water has seen successes in the Maribyrnong area through direct contact and consultation. This community consultation included information sessions, flood markers, and an SMS warning system along with a door knocking campaign and information kit handout in 2011 and 2013.

However, despite these vigorous education programs and the potential for significant personal loss from flooding events, the risk of flooding has very little saliency across the broader Port Phillip and Westernport community. Factors such as low risk perception, self efficacy and optimism bias offer some explanation for the difficulty facing communications regarding high risk, low frequency natural disasters. In addition, efforts have naturally focused on high risk areas with low risk areas logically not receiving the same amount of attention in raising awareness and education of the risks of flooding.

To further combat the risks associated with floods, Melbourne Water has developed in consultation the Flood Management Strategy, 2015, which has a shared vision for flood management for the region: *Together we are resilient*. Communities, business and government understand flooding, plan for challenges, and take action to manage risks. The strategy identifies the need to engage communities and build awareness to support resilience and preparedness, and in turn reduce the consequences of floods. As such, Melbourne Water is now looking at developing a Flood Education Plan and associated communications designed to increase sustained awareness and preparedness for flooding. Importantly however, this Flood Education Plan is a community-wide initiative, targeting not only high risk areas but

[2] "Flood Management Strategy, 2015, Melbourne Water

[3] "Waterways and Drainage Strategy 2013", Melbourne Water. pg. 10.

medium and low or no risk areas as well. Ultimately, the goal will be for this initiative to change attitudes and behaviours towards flood preparedness at a community wide level.

1.2 The Need for Research

Information was needed by Melbourne Water to feed directly into the development of a target in the Flood Management Strategy, setting a baseline level of flood awareness and to shape the scope and messaging of a Flood Education Plan. It was important for Melbourne Water to confirm that the proposed definition of 'flood readiness' resonates with the broader community and to clarify what the action points might be that deliver on this definition.

Beyond this, an understanding of key factors and drivers for flood preparedness is vital to ensure that any education activities developed by Melbourne Water are targeted and relevant for its intended audience. Importantly, all and any measures need to be benchmarked and repeatable so that long term measurement of the success of any initiative can be monitored.

A program of focussed and fit-for-purpose research met all of these needs for Melbourne Water. The findings from the research are being used not only by Melbourne Water, but its key partner in flood readiness, VICSES, to execute the relevant initiatives.

2. OBJECTIVES

2.1 Research Aim

Findings from the research are being used as direct input into the development of a Flood Education Plan aimed at building awareness and preparedness. Furthermore, a baseline was set through this research so the effectiveness and impact of the education can be measured and Melbourne Water can track performance against the target in the strategy, which is a 40% increase in the number of people, directly affected by flooding, who are aware of their risk (by 2021). As such, the overarching aim of the research was to deliver insights to Melbourne Water and its stakeholders around the understanding of 'flood readiness' and factors that can motivate a change in behaviours of those who are not prepared for flood events, along with establishing benchmark measures of awareness, attitudes and behavioural change with respect to flood readiness.

2.2 Research Objectives

The brief clearly outlined three core areas of knowledge seeking. As such, the specific research objectives were:

1. Test the Flood Management Strategy definition

Evaluate the definition of a 'flood aware' and 'flood prepared' community, as identified in the Flood Management Strategy, Port Phillip and Westernport which is *"People who understand their flood risk and know what actions they can take to minimise them, such as building appropriately, taking out insurance and being emergency ready"*[4]. In particular, this needed to explore the community's understanding of:

- what is the definition of a "flood"?
- what are the differences between a tolerable and intolerable flood?
- how does a riverine flood differ from a land overflow flood or a tidal flood?
- where does the responsibility for flood management lie?
- does the draft definition of being 'flood aware' or 'flood prepared' resonate with the broader community, both those in flood-prone and non flood-prone areas?

Furthermore, this definition was compared amongst those who are considered 'flood ready' versus those who are not, in order to identify any fundamental gaps in the strategy definition which may ultimately lead to the communications campaign being misguided.

2. Explore perceptions of flood preparedness of the community

Gain an in depth understating of how people respond to the idea of flood readiness both at an individual and community level. In particular, perceptions around how people are affected by flooding, the degree of the impact and thoughts on how to prepare for such an event. In addition, it was important to fully understand peoples' underlying beliefs around the need for flood readiness. Do they even perceive it as a 'real' threat? Is it in the same category as the threat of fire or some other natural disaster? It was important at this stage to identify the key factors that motivate people, and the wider community to respond with positive action towards flood readiness.

3. Set baseline levels of awareness and behaviours

[4] Flood Strategy: Port Phillip and Westernport, April 2015.

To develop and quantify a set of relevant and repeatable measures that can be used as a benchmark against which to evaluate the success of the proposed education. Ultimately, the aim was to change levels of awareness, attitudes and behaviours within the community with respect to flood readiness and this objective was fundamental to being able to evaluate that goal.

3. RESEARCH METHODOLOGY

3.1 Overview of Methodology

Our approach to the research was determined by the need to provide a methodology that allowed the research objectives to be achieved within time constraints for the project. Following a project inception meeting with Melbourne Water and its stakeholders, we recommended two streams of research activities consisting of:

- Qualitative exploration comprising 9 focus groups;
- Quantitative benchmarking comprising n=3,000 online interviews.

These stages were followed by a comprehensive stage of analysis before final delivery of reporting and presentations.

The diagram below highlights the sequential nature of the research program.

Table 1. Overview of Methodology

3.2 Approach to Qualitative Exploration

The main purpose of this stage of the research was to answer both the Stage 1 and Stage 3 objectives, namely to (a) "test the definition of a flood aware and prepared community" and (b) to "understand how prepared the community needs to be and how to get there"[5].

To this end, we developed a program of qualitative research consisting of a total of 9 group discussions among people throughout the communities of Port Phillip and Westernport. Importantly, these group discussions were separated to represent different levels of 'flood preparedness' and represented different demographic sections of the community. Group discussions involved 6-8 participants each and were up to 2 hours in duration. The group discussions were conducted in 3 different locations across the greater Melbourne metropolitan region.

Respondents included in this stage of research were defined as:

- permanent residents of the Port Phillip and Westernport region (boundaries of which were identified by a list of postcodes);
- who is a residential person (i.e. answering as a resident, not as a business owner on behalf of their business);
- who is solely or jointly responsible for managing their household (e.g. paying bills, making

[5] Social Research Project Brief, Melbourne Water, April 2015, pg. 2-3.

decisions on services for their property, purchasing insurance, etc.).

Our sample structure for the 9 focus groups, were split to accommodate not only the differences in flood preparedness but also to account for different areas across Port Phillip and Westernport region and to allow for demographic representativeness of the community.

Group	Segment	Location	Age & household structure	Gender
1	**'Not at risk'** *Not at risk of flooding*	Central	51+ y.o. No more than half with kids	Mix of males and females in each group
2		East	20 – 35 y.o. No more than half with kids	
3		West	36 – 50 y.o. At least half with kids	
4	**'At risk, unprepared'** *At risk of flooding but are not aware or prepared*	Central	36 – 50 y.o. At least half with kids	
5		East	51+ y.o. No more than half with kids	
6		West	20 – 35 y.o. No more than half with kids	
7	**'At risk, prepared'** *At risk of flooding and are prepared for it*	Central	20 – 35 y.o. No more than half with kids	
8		East	36 – 50 y.o. At least half with kids	
9		West	51+ y.o. No more than half with kids	

One of our key strategies in approaching these discussions was to apply the Behaviour Change Wheel theory, to ensure effective coverage of the potential issues that may be at play, as highlighted in the table below.

Table 2. Behaviour Change Wheel Model

We explored three key areas with respondents in light of the Behaviour Change Wheel Model:

1. Understanding Capability – do people know how to prepare or be ready for a potential flood? Do

people know how they would be informed of a potential flood?

2. Understanding Opportunity – do people have the necessary means to prepare for a potential flood? If they need to purchase items or prepare their homes in any capacity, are the means to do so accessible in terms of price and availability?
3. Understanding Motivation – do people understand the potential damage to property (personal and business) that floods cause and the implication of this both in terms of the economic and social or emotional impacts?

It was also important that the discussions explored the flood issues at both a personal and community-wide level, highlighted differences between 'flood prone' and 'non-flood prone' areas and captured the emotional attachment to the topic at hand. A copy of the Discussion Guide used in the group discussions can be found in the Appendix.

3.3 Approach to Quantitative Benchmarking

The overall objective of the quantitative component of the research was to benchmark awareness, understanding and flood readiness behaviours amongst those in the Port Phillip and Westernport region. The findings will inform the development of a target in the regional flood management strategy. Importantly, the quantitative research will enable on-going measurement of the impact and success of education and engagement activities by tracking changes over time.

This report contains the findings for this first, benchmark wave of interviewing.

For the benchmark, we conducted n=2,789 online interviews of 15 minutes in length amongst residents of the Port Phillip and Westernport region in August 2015. All respondents were the person in the household who is either solely or jointly responsible for managing their household (such as paying bills, making decision for services on their property, purchasing insurance, etc.). An industry screener was also applied to exclude those who work in marketing (including market research) and the water industry.

The survey design was largely informed by the qualitative component of this research program to ensure relevant attitudes, behaviours and awareness measures were included. We also conducted 6, 45-minute face-to-face cognitive interviews to further test and refine the questionnaire prior to the commencement of fieldwork. The final questionnaire is included in Appendix 1 of this report.

Within that overall sample, n=2,084 respondents provided a valid address. From the addresses provided by respondents, we identified those who are at risk of flooding by matching addresses with those provided by Melbourne Water. Using address matching we identified n=82 in the overall sample who were at a 'flood prone' address at the time of the survey.

To provide a robust benchmark measure of awareness of flood risk, we also conducted n=200, 5 minute CATI interviews amongst those at flood prone addresses in early September 2015. Sample was provided by Melbourne Water and respondents were contacted randomly from that sample list.

The table below, Table 3 Final Sample Structure, outlines the final sample structure by age and gender for the online survey.

Table 3. Final Sample Structure

n	Total	Female	Male	18 - 34 years	35 – 44 years	45 – 54 years	55 – 64 years	65 +
Online Survey								
Not flood prone	2002	1204	798	409	394	404	420	373
Flood prone	82	56	26	11	19	17	17	18
No valid address	705	444	261	195	179	160	111	59
Total	2789	1704	1085	615	592	581	548	450
CATI Survey								
Flood Prone	200	113	87	2	19	37	50	92

4. QUALITATIVE EXPLORATION RESEARCH FINDINGS

4.1 Understanding a 'flood'

Attitudes towards floods are driven by definition. Overwhelmingly most identified flood as 'riverine flooding' or rivers breaking their banks and flooding the nearby properties. This association is stronger in the country, than the cities. This definition tends to drive perceived susceptibility to being prone to flood. As such, it is believed you are less likely to experience flooding if you are not near a river or creek, you are on high ground (for example a hill) or you are not in the country.

"They had some in regional Victoria, Warracknabeal. I associate flooding with country areas." (AT RISK, UNPREPARED)
"When I think flood prone, I think country, a river bursting its banks. I couldn't even tell you where in Melbourne is a flood prone area." (AT RISK, UNPREPARED)

Flooding is perceived as being 'extreme' in nature, so strong in force that property can be torn from foundations and carried away. Images of houses floating down the street and cars being washed away are what typically come to mind. These perceptions are of major flooding events and are largely driven by the Queensland floods some years ago. Few think of the damage that can be caused by a 'minor' flood.

Once prompted, most could identify with the definitions of 'overland' and 'flash' flooding and an understanding these definitions did increase susceptibility for some. However, until provided with definitions (in the SES brochure), few thought of these causes when thinking of a flood.

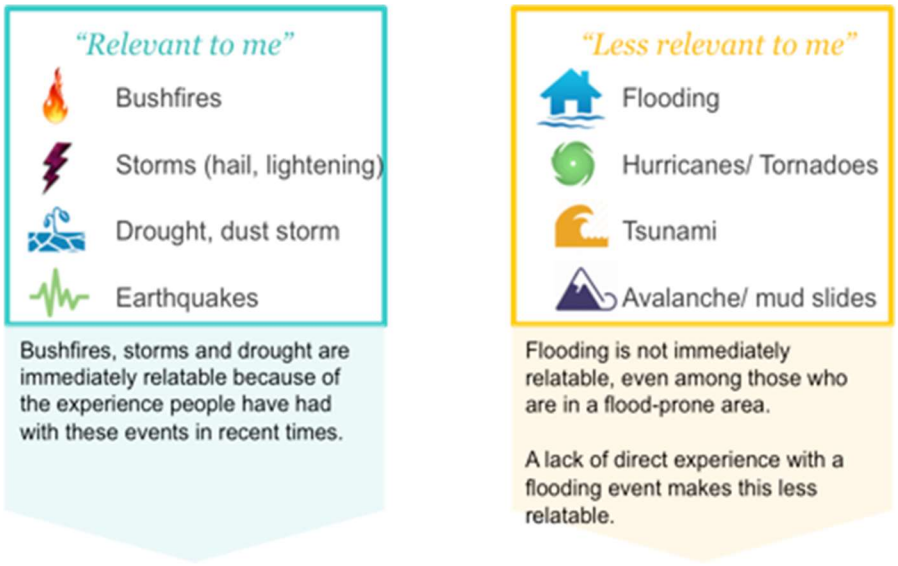
The key challenge is to address perceptibly that 'low severity' flooding doesn't have high impact. This impacts directly on credibility of any communications. Any flood damage that might affect some areas of Melbourne was seen as likely to be of lesser severity than that experienced by the floods they see happening in Brisbane. 'Low severity' floods are perceived as unlikely to cause any significant damage. This perceived low severity of flooding events in Melbourne impacts on how people define 'a flood' even among those in flood prone areas.

Of more concern is the perception among Melbourne residents that there is nothing that can be done about flooding events, that they are a force of nature that is out of their control. They are perceived as unpredictable, and need to be coped with after the fact rather than preparing beforehand. This idea could impact on the likelihood of taking action. This is of course, different for the Expert group who feel more in control of a flood outcome.

"It's a massive amount of water that you can't cope with. That can be produced by weather or things you can't control." (AT RISK, PREPARED)
"To me it's something way beyond your control and you can't control it in the sense that it's chaos and a chaotic event. Cars speed along and it's moving and there's nothing to do about it and it's the power of nature." (AT RISK, UNPREPARED)

Moreover, a flood event is perceived as less relevant than other 'disasters'. Within this context, there is a clear lack of relevance or ability to relate to a flooding event over other 'catastrophic' events or disasters experienced.

Figure 1. Environmental events and disasters relevant to oneself



In contrast, storms are the natural disaster most likely to directly affect Melbourne and storms impact on Melbourne properties for example strong winds and soaking soil causing trees and branches to fall on property, torrential rain causes traffic and transport disruptions due to water across roads, 'king tides' develop that could potentially threaten coastal properties. Highlighting storms as a catalyst for a flooding event will make the threat of flooding more relatable and thus believable for Melbourne residents.

"Melbourne has massive storms and they always cause damage. You get water across roads…tiles blown off houses." (AT RISK, UNPREPARED)
"The only disaster really that Melbourne has to deal with is storms. Big winds, hail, rain…lots of rain." (AT RISK, PREPRARED)

A number were aware that a lot of Melbourne was built on low laying areas or swampland and could therefore have some risk of flooding, particularly those in more 'central' locations or closer to the beaches as well as those particularly prone to flooding (such as the Laburnum pocket). This notion is easily dismissed as unlikely to be severe, likely to be over quickly, likely to be able to recover from it fast and preventable by not buying in low lying areas.

For some, they refer to their insurance policy in order to clarify the definition of what a flood might be. Confusion prevails around whether water rising from the 'bottom up' or water leaking in from the 'top down' constitutes a flood. Both are considered flooding from the perspective of the community. This will however need clarification.

"I saw the rain coming in the roof and down the walls. You think of it (flood) from the floor not the roof. I hadn't really thought about it." (AT RISK, UNPREPARED)
"It's above and below ground and that's something they don't think about. Up through the floor or down from the sky." (AT RISK, PREPARED)

Consequently, communications will need to provide context to be relevant and believable. Context can be provided by: showing them about their town, their suburb, demonstrating the difficulty in getting around, conveying the anxiety and emotional stress caused and comparing floods with something they CAN relate to (for example the damage caused by fires).

4.2 Responsibility for Flood Management

Responsibility for flood management (overland and flash) was largely seen as that of council or the government in general. In particular, ensuring adequate stormwater drains and maintaining them, not allowing building to occur that then minimises the natural drainage of water from the area, and making people aware that they are building/ buying in a flood prone area were all responsibilities assigned to the council/ government. That said there is some recognition that in older areas, there may not have been the knowledge to cater for this when the area was growing.

When questioned about personal responsibility, initial responses were largely around avoiding being in that situation in the first place, for example don't buy a house in a flood prone area, don't buy a house in low lying areas, and you should know before you buy/ rent. To some degree, even the 'experts' who are well prepared for flooding, believe others have a great responsibility for flood management. Therefore low perceived personal responsibility equates to lack of motivation to take action.

"As an individual, probably not. But you would expect within the city and street, you would expect the drainage and maintenance of infrastructure would be an ongoing concern for councils and they would live up a charter and be mindful and responsible." (AT RISK, UNPREPARED)
"A bit of responsibility has to go back to the insurance company. They have a duty of care to tell you. I'd be pissed off if they knew and I didn't know I wasn't covered. That's a load of BS that you should have to read 8,000 pages of fine print." (AT RISK, UNPREPARED)
"Bad planning by the government. They know the flooded areas so you think there would be more precautions or not allow builders to build." (AT RISK, PREPARED)

4.3 Evaluating Melbourne Water 'Flood Ready' definition

Part of the research objectives required evaluating the meaning of 'flood ready', as defined in the Flood Management Strategy, Port Phillip and Westernport, (October, 2015) which is *"People who understand their flood risk and know what actions they can take to minimise them, such as building appropriately, taking out insurance and being emergency ready"*[6].

This proposed definition is congruent with perceptions of being 'flood ready' among the community. The spontaneous word association exercise highlighted that the definition provided is consistent with their own thinking around what being 'flood ready' could mean and that the three areas highlighted are intuitive to people.

The definition will work as an overarching direction for communications as messages in communications are more likely to be accepted. Further, there were no differences across groups in terms of those who are considered 'flood ready' and those that are not.

The following diagram shows the three 'Flood Ready' definition areas, as evaluated below.

Figure 2. Flood Ready Definition Areas

[6] Flood Management Strategy, Port Phillip and Westernport, October 2015.

4.3.1 Preparation by building (and maintaining) appropriately was necessary for flood readiness

There was strong agreement with the need to build and maintain appropriately as part of flood readiness. It was further broken out into two streams based on responsibilities 1) self managed including things that the community can do themselves around their home such as cleaning gutters and clearing debris from their property and 2) managed by others, in particular councils who can ensure that natural waterways aren't blocked and maintaining storm water drains properly.

This was highlighted by the outcomes of the 'post-it' note exercise conducted in the groups that asked respondents to provide examples of what it means to be 'flood ready' and how this is demonstrated. Examples of elements of the 'building and maintaining appropriately' part of the definition are shown below.

Figure 3. Spontaneous Elements that Relate to 'Building and Maintaining Appropriately'

4.3.2 Taking out adequate insurance was a prevalent element of flood readiness

This was a key issue raised spontaneously and was seen to be highly appropriate as a key factor to being 'flood ready'. That said, many (even in flood prone areas) were not aware whether their insurance covered them for flood or not. Some commented that insurance companies might not cover you if you were at risk.

Again, the 'post-it note' exercise bore this out quite strongly with many groups claiming insurance as a key 'flood ready' strategy for them.

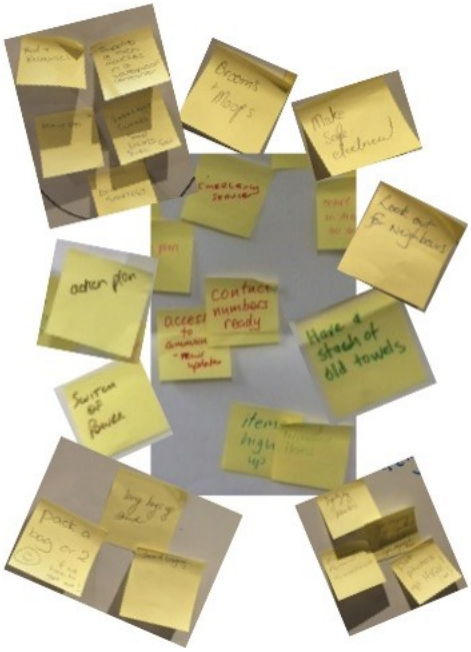
Figure 4. Spontaneous Elements that Relate to 'Insurance'

4.3.3 Being emergency ready

Again, being 'emergency ready' came up spontaneously in many different ways, including:

- having an emergency or evacuation plan;
- having an emergency kit (gumboots, important papers, mobile phone and chargers, medicine);
- putting valuables up high;
- knowing how to listen for & look for updates;
- switching off power;
- looking out for others (kids, elderly, pets);
- having items on hand to stem the flow (sandbags, mops, old towels); and
- moving cars & caravans to higher ground.

Figure 5. Spontaneous Elements that Relate to 'Being Emergency Ready'



4.3.4 Relating this to the behaviour change wheel

The definition was also evaluated in line with the Behaviour Change Wheel and was found to be consistent with its elements as demonstrated in the figure below.

Figure 6. 'Flood Ready' Definition and its Impact on the Behaviour Change Wheel

4.4 Perceptions of flood readiness

The exploratory qualitative research highlighted three core components that together create a 'pathway' to being 'flood ready'. The pathway to 'flood readiness' is defined by the three A's: awareness, acceptance and action as highlighted in the figure below.

Figure 7. The Three 'As' in the Pathway to Flood Readiness

4.4.1 Awareness

Many misinterpret that if you are not near a river or creek you are not at risk. As highlighted previously, a flood for most is seen as a catastrophic event, caused by natural forces that are usually totally out of someone's control, like other 'natural disasters'. Furthermore, they are often associated with 'riverine' flooding and less associated with flash flooding or overland flooding. This brings perceptions that you would be well aware of the potential flood as the river rises, before it impacts you directly.

"I can't say I think I will ever be flooded in my life. I live in the suburbs, not near a river and really doubt if it will ever be that far under water." (AT RISK, UNPREPARED)
"A flood is where it has a serious impact like the one a year or two ago in Queensland." (AT RISK, PREPARED)

As such a knowledge gap of the impact that even a small amount of flood water can cause exists. A further element impact on awareness is confirming at what water level it becomes 'a flood'. As most perceive 'a flood' to be a raging torrent of water there is a misperception that a few inches of water throughout your home is 'tolerable' as the impact will be minimal and easily recoverable from.

"I don't think 3 inches of water would affect me." (AT RISK, UNPREPARED)

The key barrier to understanding is a lack of awareness of risk. It was highly expected that people would be aware if they had bought or rented in a flood prone area, so it was then their risk. There was often a strong sense of superiority demonstrated when discussing whether people should be aware they are in a flood prone area, particularly among those who did not believe they were in a flood prone area themselves.

"I think it's up to them to find out and if they aren't interested in their own investment and safety, then….yeah….." (AT RISK, UNPREPARED)
"I can't understand why people wouldn't know that. It's irresponsible." (AT RISK, UNPREPARED)

"I was being harsh. I thought silly people, they should know." (AT RISK, UNPREPARED)

Moreover, the overwhelming majority of those in at risk areas were not aware they were at risk. Of further concern is the adamant belief that real estate agents and insurance companies have a 'duty of care' and responsibility to inform residents that they are buying or renting in a flood prone area. If not, then the council should be informing them.

"I'd expect the insurance company to send me an SMS if it's flooding." (AT RISK, UNPREPARED)

For those who are 'at risk', there was incredible surprise when they were told they were in a flood prone area, and that one day it could impact on them.

We must all be in flood zones. I'm surprised that Brunswick is." (AT RISK, PREPARED)
"I think that's me (one of the 40,000 at risk homes) and I didn't know and now it's made me think I don't know what's going on." (AT RISK, UNPREPARED)
"I think I'm flood prone but hadn't thought of it. I didn't think I was in a flood zone are despite the lake (nearby) overflowing." (AT RISK, UNPREPARED)

However, an understanding that flooding is more than just 'riverine' or catastrophic events (such as the event in Queensland) assists in the credibility of this message to them. Information about flash and overland flooding, and that it had occurred in Melbourne before (water across the road or on / in properties nearby) makes it more relatable.

Therefore the knowledge gap needs to be corrected in the Behaviour Change Wheel Model. The lack of awareness and expectation that others would inform them of their flood risk highlights a knowledge gap that can be filled with appropriate education in both: what a definition of a flood is and their own personal risk of experiencing that event (i.e. that it can happen via a storm), and they have a duty and responsibility to inform themselves, not rely on others to share that knowledge. The challenge will be to fill the knowledge gap without causing widespread 'panic' about the implications of being in a flood risk area.

4.4.2 Acceptance

On face value, all respondents could identify and accept the possible impact of a flood. These include:

- damage to property;
- loss of valuables / personal possessions;
- mould and smell;
- possible relocation for a while;
- having to replace furnishing and flooring in the house; and
- possible loss of employment for those in businesses that flood.

Conversely, there was a lack of appreciation as to the extent of the damage caused by flooding, and the length of time to recover. However, much of it was thought of as a physical fix that could be repaired in time. The case study video shown (Andrew Serratore) to respondents emphasised the length of time that it would take to deal with insurance companies and for the damage to be fixed (up to 36 months). This fact was shocking to many as they had not imagined the length of time would be so great.

"I didn't realise how long it would take. I just thought that after a week I would clean it up and go back in." (NOT AT RISK)

Moreover, some expressed an unrealistic expectation that insurance will fix everything. The general perception is that as long as you have insurance you will be OK, as "insurance pays out" and your

carpets and furnishings can be easily replaced. There is also an expectation that this will happen in a timely manner.

However, the emotional impact following flooding needs to be strong in future communications from Melbourne Water to add to message credibility. And there was great deal of empathy for people who may have experienced this in the past, as evidenced when a case study video was shown.

"Poor bugger. And it took so long as well, 36 months!" (AT RISK, PREPARED)
"The hardship and the 36 months of insurance and it wasn't just him but probably 100 thousand more." (AT RISK, UNPREPARED)

While thought to be potentially devastating, the emotional impacts were initially underestimated. It was not until viewing the case study video that the potential emotional impacts were more fully understood. In particular:

- the impact on children's lives, for example loss of their familiar bedroom and possessions, the displacement from having to live and go to school elsewhere; and
- the impact on the couple's personal relationship.

Additionally, long term emotional impact needs to be recognised by the broader community too. Those who are in an extreme flood prone area (i.e. the 'Expert' group) highlighted the long term emotional impact of experiencing a flood that was clearly missing from perceptions of other 'at risk' groups. In particular, the emotional and psychological response that is elicited every time it rains or storms. Furthermore, the fear and anxiety experienced during a flood that is not appreciated by those who have not experienced it.

"I suffer from anxiety and get panic attacks now every time it rains." (EXPERT)
"What was so terrifying is that it was in the middle of the night. The lights are out and you can't see anything." (EXPERT)

Emotive elements in communications are critical to responding to the 'Motivation' element of the Behaviour Change Wheel. During the discussion groups, people were exposed to the Andrew Serratore case study video. The reactions to this video were quite powerful, particularly in terms of bringing to life the emotional impact of a flooding event – both in the short term and long term.

"This is now so real. This feels real, you can touch it, you can feel it. And it's only 5km out of the city." (NOT AT RISK)
"I think the flooding comes to mind and that half you can live with but then when you hear of this story it adds to the importance of it and it becomes personal." (AT RISK, UNPREPARED)
"He (man in video) still feels vulnerable now." (AT RISK, PREPARED)

4.4.3 Action

The next challenge after gaining acceptance that they may be affected, is to overcome the perception that there is nothing that can be done as the event itself is so unpredictable. Many question "How do you stop a storm?" or "How do you know how much rain is going to fall? This highlights a perception of helplessness.

However, once prompted to think about it, it was obvious that they can take action once they know how.

"After being made more aware about it (tonight) then yes, I'm capable of doing it. It's a do-able thing. It's not rocket science. There's nothing on here (SES Plan) that is not achievable." (AT RISK, UNPREPARED)

People were very open to be given guidance and knowledge on how to prepare and what to do during a flooding event, once they had accepted the idea that they could be at risk.

Thus, taking action is a two-step process through:

1. Knowing what action to take
    - Providing an easy way of checking for flood risk
    - Remind about insurance coverage
    - Provide tips on preparing before the event (cleaning gutters, document storage, handy torches)
    - Develop emergency plan / what to do
2. Being able to achieve that action
    - Early actions need to be easy to engage or they will be dismissed as too difficult and not relevant
    - Initial direction for action needs to be highly achievable or they will not continue

Additionally, people responded positively to the FloodSafe Brochure provided by the SES, as an indicator of what actions to take to prepare and survive a flooding event. In particular, the following elements were well received:

- An emergency kit especially the visual imagery of what to include;
- list of numbers to contact in a flooding emergency;
- a reminder of the danger of flood water so as to never drive or walk through flood water; and
- an emergency plan which acts as a good reminder for a flood.

"I think the checklist is fantastic and great. It's clear what to do in the flood and I like the checklist. I can imaging doing this with my family. (AT RISK, UNPREPARED)

That said, there were some elements that were seen to lack credibility or achievability on the SES FloodSafe plan, including:

- three days food and clothing, as many believe this was unnecessary;
- too many numbers, as it was felt that in an emergency you need a 'one stop shop' number to call;
- details on the types of flooding, as it was questioned whether this was necessary information as part of an emergency plan; and
- felt text heavy, as the visual elements were the most well received.

As such, three broad elements are evident to influence behaviour change in accordance with the Behaviour Change Wheel Model, as shown in the diagram below.

Figure 8. Elements of 'Action' and the Behaviour Change Wheel

4.5 Informing communications

As a way of exploring the potential communications strategy, a series of different 'flood facts' were evaluated for their resonance and credibility. These provided useful insights into the potential messages that could be motivating for the community to become more flood aware and prepared.

The table below outlines the perceived benefits and limitations for each flood fact presented.

4.5.1 Evaluation of seven 'Flood Facts'

Flood Fact	Benefits	Limitations
The annual average damage of flooding in Australia is 7.8 times more costly than bushfires	Comparison to bushfires provides some context and relevance, given the prominence of bushfires in Victoria It is a surprising fact which is believable, yet provides enough 'shock value' for people to engage with the message *"People know how serious bushfires are and this just makes it more relevant."* (NOT AT RISK)	The context of 'Australia' (as opposed to just Melbourne) could allow people to easily dismiss the fact as not relevant to them (especially when taking into consideration the Queensland floods which were catastrophic) *"We've had a lot more flooding than bushfires in QLD and therefore that's why it costs more."* (AT RISK, UNPREPARED)

Flood Fact	Benefits	Limitations
In Melbourne there are over 40,000 residential homes that are prone to flooding	To most this seems like a large number leading many to question, "could I be one of those?" It is believable and holds credibility *"WOW! That's surprising. You want to do your research where you live."* (AT RISK, UNPREPARED)	Lacks context as many do not know or cannot estimate the total number of residential homes in Melbourne. They are unsure whether this is a high or low proportion, allowing it to be easily dismissed. *"How many are there in Melbourne though?."* (AT RISK, UNPREPARED)
In the greater Melbourne region there are over 100,000 properties that are prone to flooding (including houses and businesses)	The larger number (compared to the 40,000 residential homes) makes it an even more compelling fact.	Again, not knowing the total number of properties in Melbourne means it loses some context and relevance.
The annual average damage of flooding in Melbourne is around $245 million	As a dollar figure, people have some context (i.e., they know the value of money). As it is contained to Melbourne, its relevance increases. At first glance, the figure seems high and therefore is surprising. *"The initial thought is 'oh my goodness' but without thinking of the bigger picture."* (AT RISK, PREPARED)	Upon further reflection, the value seems low, particularly in the context of rebuilding roads or other infrastructure. As such, lacks some context and 'shock value' and can be easily dismissed. *"What does it mean though? Property damage or structures? It's not all that much money, in all of Melbourne*." (AT RISK, UNPREPARED)
Only 37% of people who are in a flood prone area are aware that they are in a flood prone area	Challenges the belief that you would know that you were in a flood prone area and is therefore highly motivating. If coupled with an authoritative confirmation of being 'at risk', can be a powerful trigger into action. *"Not knowing if you're in a prone area is a big one. There's no way to be prepared if you don't even know."* (AT RISK, UNPREPARED)	Can be dismissed if the message is not delivered within the context of their personal situation. Requires 'a flood' to be clearly defined or they may ignore the message. *"What about Edithvale? They built on a swamp area. Would that be considered as loving in a flood prone area?"* (AT RISK, UNPREPARED)

Flood Fact	Benefits	Limitations
48% of people who are in a flood prone area don't know whether their insurance covers them for a flood	Disturbs those who are uncertain about their insurances. Combined with the fact that they are in a flood prone area, is a definitive prompt for them to take action and check. *"If you buy online like a lot of people do, they look at the cheapest price, not what it covers."* (AT RISK, PREPARED)	Can be dismissed without a definite message of 'your house is in a flood prone area'. For some unsurprising as the blame is shifted to insurance companies not alerting people to their flood prone risk. *"That doesn't surprise me. They don't tell you. It might be built into your premium and not be told about it."* (AT RISK, UNPREPARED)
During the 2001 floods in Victoria, 3 people died including a man who fell off the roof of this Glen Waverly home trying to stem a leak that was attributes to flash flooding	Some emotive connection given there was a death involved. For those living in a nearby suburb, there was a greater resonance. *"The part that hits me is that it's Glen Waverley. It's here."* (AT RISK, UNPREPARED)	While there is empathy for the deaths, 3 seems a minimal number and is easily dismissed, particularly when compared to the lives lost in QLD or during the bushfires. Being on the roof during the storm is seen as a risky and foolish action. *"As you say, it's only 3 deaths. Compared to bushfires, it's only 3."* (AT RISK, PREPARED)

4.5.2 Evaluation of the 'Andrew Serratore case study video'

The benefit of the case study video is that it highlights the emotional impact and stress on the individual depicted and his family. For those close to Albert Park, the case study video has a stronger impact, making it more 'real' and relevant to residents personally. However, if the content is not relatable to viewers or depicted in their area it could be easily dismissed and is therefore limited in this aspect.

"It just highlighted the emotional stress it causes between the family." (NOT AT RISK)

4.5.3 Implications for communications

There are a number of ways that communications can be used to impact on behavior. In particular, touching on elements of the Behaviour Change Wheel to enact that change, as highlighted in the figure below.

Figure 9. Elements of Informing Communications and the Behaviour Change Wheel

4.6 Implications for education program development

4.6.1 Key Implications

Facts and figures can provide context and suggest authority and therefore credibility to the information. They are useful to educate and provide knowledge. However, they also are impersonal so communications will also require emotional triggers for persuasions.

Combining emotional triggers with messages about insurance could increase the effectiveness of the education program. Essentially, in order to change behaviour with respect to flood readiness, any program should directly target those at risk, speaking to elements of the Behaviour Change Wheel:

4.6.2 Education program interventions

A series of proposed program interventions, could be considered for inclusion in the 'flood-ready' strategy development, as highlighted in the Table below.

Intervention function	Definition	Implications for Communications
Education	Increasing knowledge or understanding	Educate with Facts Directly target those at risk Be direct about telling them they are in a flood prone area **Example** *"Only 37% of people in flood prone areas know they are in one, and over 100,000 properties get flooded in Melbourne every year by flooding caused from heavy rain. Your house is in a flood prone area. Do you know if you are at risk? Go here to find out"*
Persuasion	Using communication to induce positive or negative feelings or stimulate action	Using imagery readily identifiable to Melbourne residents to highlight the damage flood can cause and motivate to action. Ensure messages have a powerful personal and emotive impact. **Examples** *Show a tram going through floodwater, an inner city home, a suburban home near a key landmark* *Show a child's bedroom flooded and them losing all their toys and personal possessions.* *"Even if only the floors are covered, the building is unliveable until fixed and it may take as long as 12 months for insurance to pay. Where will you and your children live?"*
Incentivisation	Creating expectation of reward	Challenge them to check their insurance policy and indicate the length of time it could take for insurers to pay out **Example** *"Nearly half of people who live in a flood prone area don't know whether their insurance covers them for a flood. Does yours?"*
Coercion	Creating expectation of punishment or cost	

Intervention function	Definition	Implications for Communications
Training	Imparting skills	Provide actions via a checklist that people can complete easily, using visual cues and simplified language and instructions **Example** • *Check if house is at risk – visit this website* • *Check insurance – is it covered?* • *Have an emergency plan and be aware of what you need in an emergency kit* • *Here is one important phone number in case of emergency* • *Sources of further information if you want to better prepare your home*
Enablement	Increasing means or reducing barriers to increase capability or opportunity	
Modeling	Providing an example for people to aspire to or imitate	
Restriction	Using rules that limit engagement in the target behaviour or competing or supporting behaviour	A regulatory tool. This should not be a point of communications and something to consider for longer term implications for Melbourne Water.
Environmental restructuring	Changing the physical or social context	Offer of information on building practices for new dwelling in flood prone areas Provide a source of secondary information for those who may wish to more actively engage with the topic and make structural changes to their houses in preparation. Again, not necessarily a point for communications but may have long-term implications.

5. QUANTITATIVE RESEARCH FINDINGS

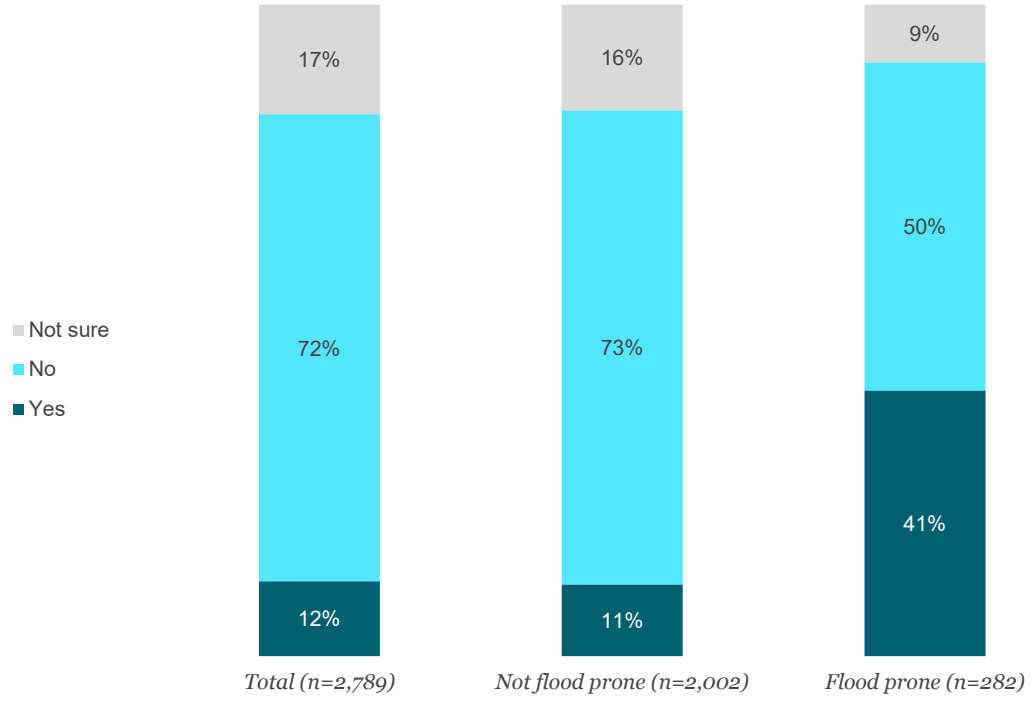
As discussed, a key requirement for the Flood Management Strategy, PPWP is to set a baseline based on the current level of community flood awareness and preparedness. To that end, respondents were identified as 'flood prone' or 'not flood prone' by matching addresses to data provided by Melbourne Water. Of the total 2,789 respondents, 2,084 agreed to provide their address. Of those who provided an address, 82 were identified as 'flood prone'.

Differences between these 2 key groups have been the focus of the quantitative benchmarking. Where possible, results from the CATI component (n=200) have been added to the n=82 flood prone identified in the online survey for a flood prone sample of n=282. Note that the 'total' figure shown on all charts following refers to the total of the online survey responses.

5.1 Flood Prone Awareness

As shown in Figure 10 Flood prone awareness below, 41% of those at a flood prone address are aware that they are at risk of flooding. While for those not at a flood prone address, 11% of these respondents believe that they are at risk of flooding. Encouragingly, awareness of being at risk of flooding is significantly higher amongst those at a flood prone address. For subsequent waves of research, an increase of 7% (from the benchmark of 41%) will be a statistically significant improvement in awareness levels.

Figure 10. Flood prone awareness

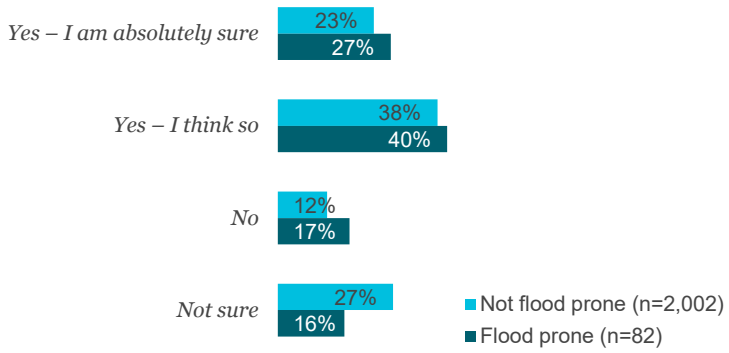


Base: Total, n=2,789 + Total CATI, n=200. "To the best of your knowledge, is the home or property where you currently live at risk of flooding or may be affected by flooding? That is, are you in a 'flood prone' area?"

In addition to a level of uncertainty about their flood risk, as shown in Figure 11 Insurance cover below, a relatively small proportion of respondents are 'absolutely sure' that their insurance covers them in case of flood. While those who are flood prone are significantly more certain about their insurance cover

(27% not flood prone report being not sure, compared to 16% of those who are flood prone) there is clearly room for improvement amongst this at risk group.

Figure 11. Insurance cover



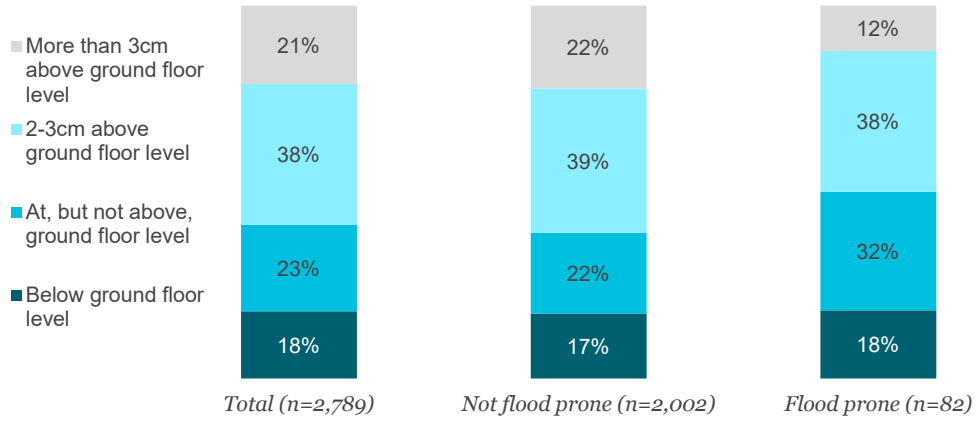
Base: Those who provided a valid address, n=2,084. "If you did experience damage / loss to your home or other property from a flood, would your house and / or contents insurance cover you for that? "

5.2 Experience and Understanding of Flooding

As shown in Figure 12 Flood definition level below, 41% of the total define water levels as a flood when the water has reached, but not gone over, floor level. However, those at flood prone addresses are significantly more likely to define water levels as a flood before it goes above ground floor level (32%) compared to those not at flood prone addresses (22%). Encouragingly, this suggests greater saliency of the risk of flooding amongst those at flood prone addresses: water levels become a 'real' flood sooner for these residents.

Of concern, given the likely impact and property damage, is that 21% of the total feel that water levels a few centimetres above the ground floor level is not yet a flood. These residents define a flood as water at much higher levels. While significantly less frequent, this perception of what constitutes a flood is reported by 12% of those who are flood prone. Consistent with the qualitative findings, this suggests that understanding of the impact of water levels only 2-3 centimetres above floor levels is a key area to address in communications.

Figure 12. Flood definition level

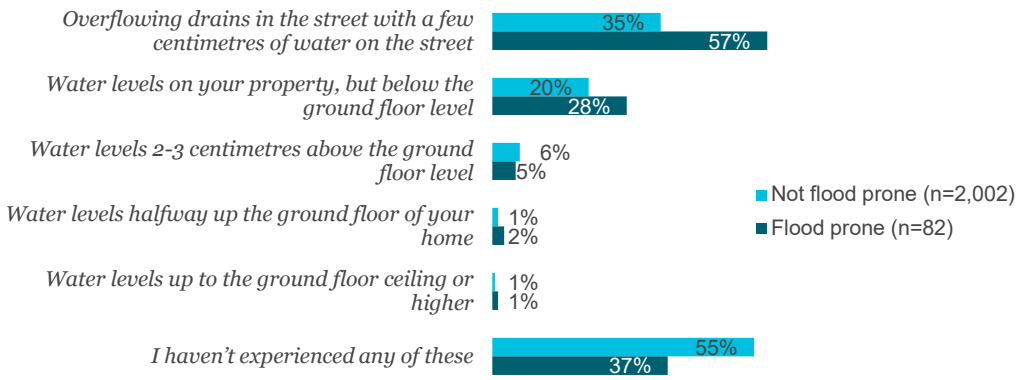


Base: Total, n=2,789. "Thinking about the home or property at which you live, at what point do you believe the amount of water would be classified as a 'flood'?"

As shown in Figure 13 Experience with flooding below, not unsurprisingly, those in flood prone areas have more experience with flooding: significantly fewer who are flood prone (37%) report having not experienced any flooding, compared to 55% of those who are not flood prone. That said, this experience is generally low level flooding. Specifically, significantly more at flood prone addresses (57% vs. 35% not flood pone) have experienced overflowing drains in the street with a few centimetres of water on the street. However, at higher water levels than this, experience is consistent amongst those at flood prone addresses and those who are not flood prone.

Overall, even amongst those at flood prone addresses, there is very limited experience (8%) with flooding above the ground floor level. This lack of experience with flooding will be contributing to perceptions of lower flood risk.

Figure 13. Experience with flooding

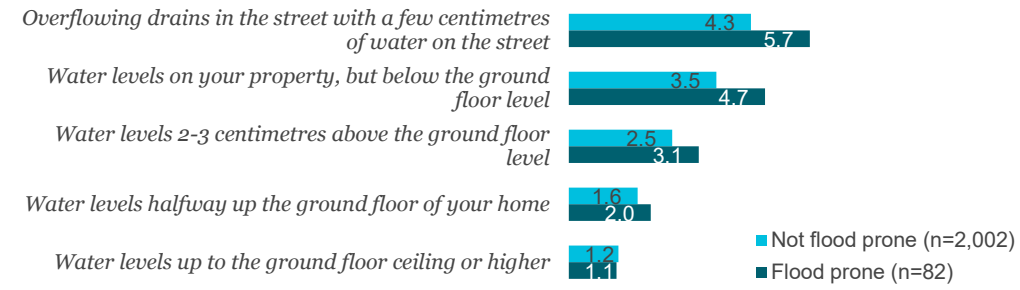


Base: Those who provided a valid address, n=2,084. "Which of the following have you ever experienced at your current home or property where you live?"

5.3 Perception of Flood Risk

Consistent with more of those in flood prone areas having experienced flooding, as shown in Figure 14 Perceived likelihood of flooding (mean score out of 10) below, the perceived likelihood of future flooding is significantly higher for those at risk of flooding for water levels of 2 to 3 centimetres above floor level and lower. Above this level, perceived risk is the same for both those who are and are not flood prone. However, of note, is that despite perceived risk being greater for those who are flood prone, perceived risk is still relatively low even for flood levels below ground floor level.

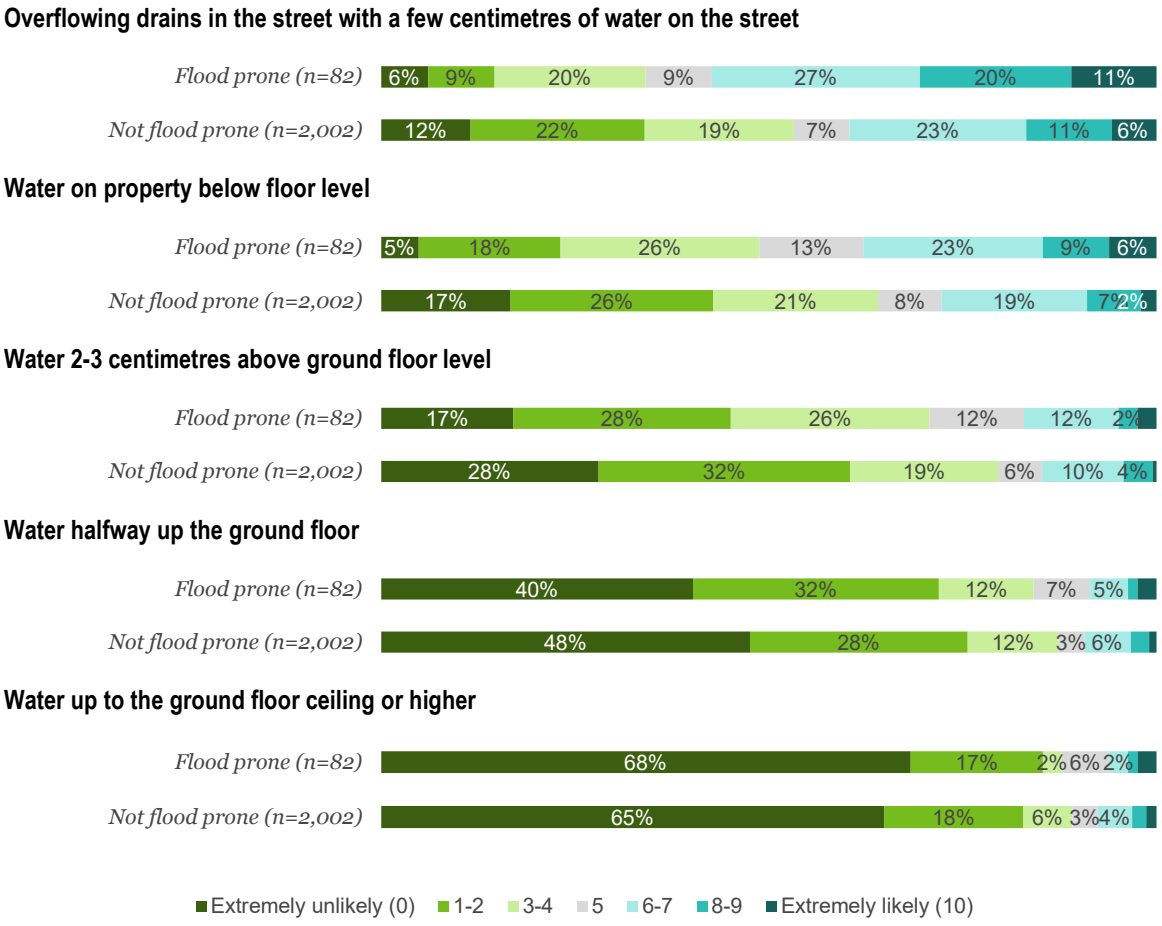
Figure 14. Perceived likelihood of flooding (mean score out of 10)



Base: Those who provided a valid address, n=2,084. "On a scale from 0 to 10, where 0 is 'extremely unlikely and 10 is 'extremely likely', how likely is it that the home or property where you live will experience one of the following flood levels in the next 10 years?"

As shown in Figure 15 Perceived likelihood of flooding (detailed responses) below, when looking at responses in detail, only 31% of those who are flood prone rate their risk of experiencing 'overflowing drains in the street with a few centimetres of water on the street' in the next 10 years as very likely (8 out of 10 or higher). Perceived likelihood drops dramatically as water levels rise: only 4% of those who are flood prone feel that experiencing water levels 2-3 centimetres above floor level in the next 10 years is very likely (8 out of 10 or higher).

Figure 15. Perceived likelihood of flooding (detailed responses)



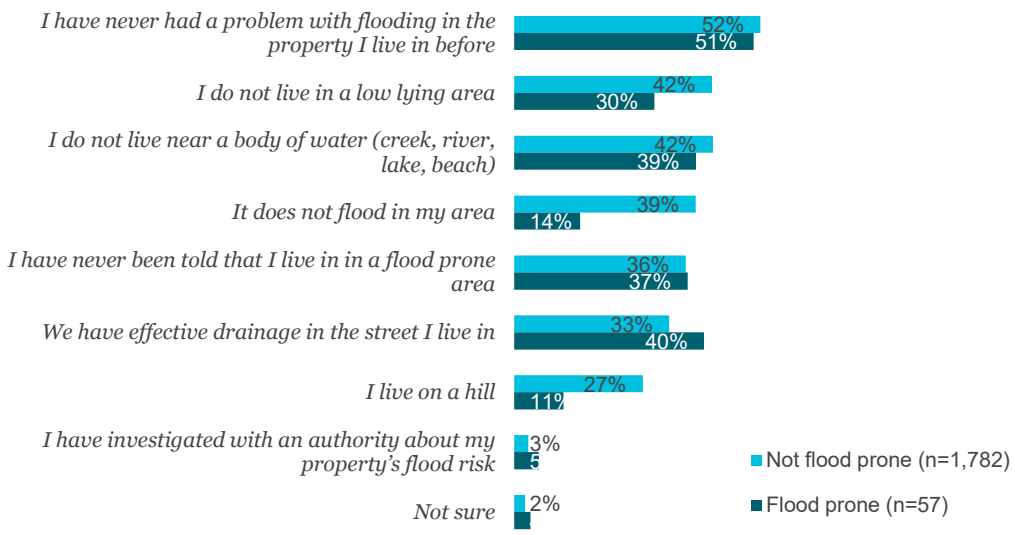
Base: Those who provided a valid address, n=2,084. "On a scale from 0 to 10, where 0 is 'extremely unlikely and 10 is 'extremely likely', how likely is it that the home or property where you live will experience one of the following flood levels in the next 10 years?"

Those who feel that they are not at risk of flooding were asked why they felt that way. As shown in Figure 16 Reasons do not believe at risk of flooding below, the key drivers of risk perceptions are largely the same regardless of whether they are at a flood prone address or not. Perceived lack of risk is based primarily on a lack of past experience, environmental features, and infrastructure. For those in a flood prone address that do not perceive a flood risk, they appear to know that it does 'flood in their area' (as only 14% claim this as a reason for not feeling at risk). However, those who are flood prone report that they do not feel at risk because they have not had a problem before (51%), have effective drainage (40%), and because they do not live near a body of water (39%).

Of concern is the perception that if residents are at risk of flooding, they would be actively told about that risk. More than one in three who do not feel that they are at risk claim it is because they have never been told that they live in a flood prone area. This is consistent amongst those who are flood prone (37%) and those who are not (36%). This suggests that these residents believe that it is someone else's

responsibility to communicate any flood risk to them and are thus, at the time of the survey, unlikely to take any proactive steps to protect themselves and minimise their risk.

Figure 16. Reasons do not believe at risk of flooding



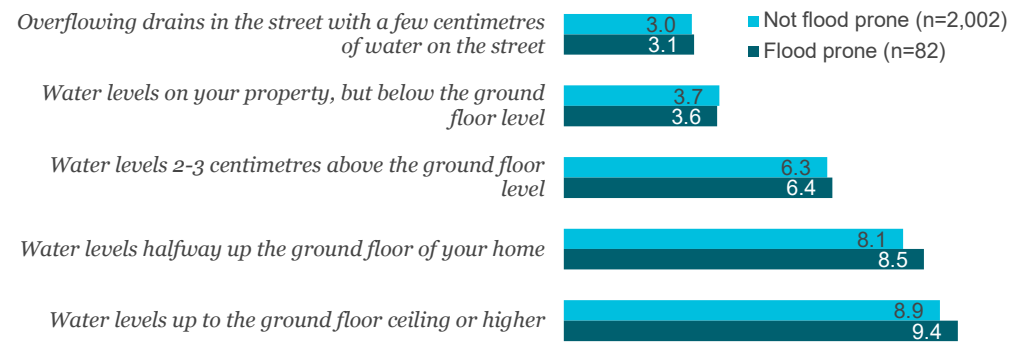
Base: Those who believe they are not at risk of flooding, n=1,839. "What makes you feel you are not at risk of flooding?"

5.4 Perceived Impact of a Flood

As shown in Figure 17 Perceived impact of flood levels (mean score out of 10) and Figure 18 Perceived impact of flooding (detailed responses) below, the perceived impact of a flood increases substantially once water levels are 2-3 centimetres above the ground floor level. That said, the perceived impact of 2-3 centimetres of water above the ground floor level is still felt to be well below the impact of water levels halfway up the ground floor. This indicates, as was found in the qualitative research, that many underestimate the potential impact of a flood of 2-3 centimetres of water above ground floor level.

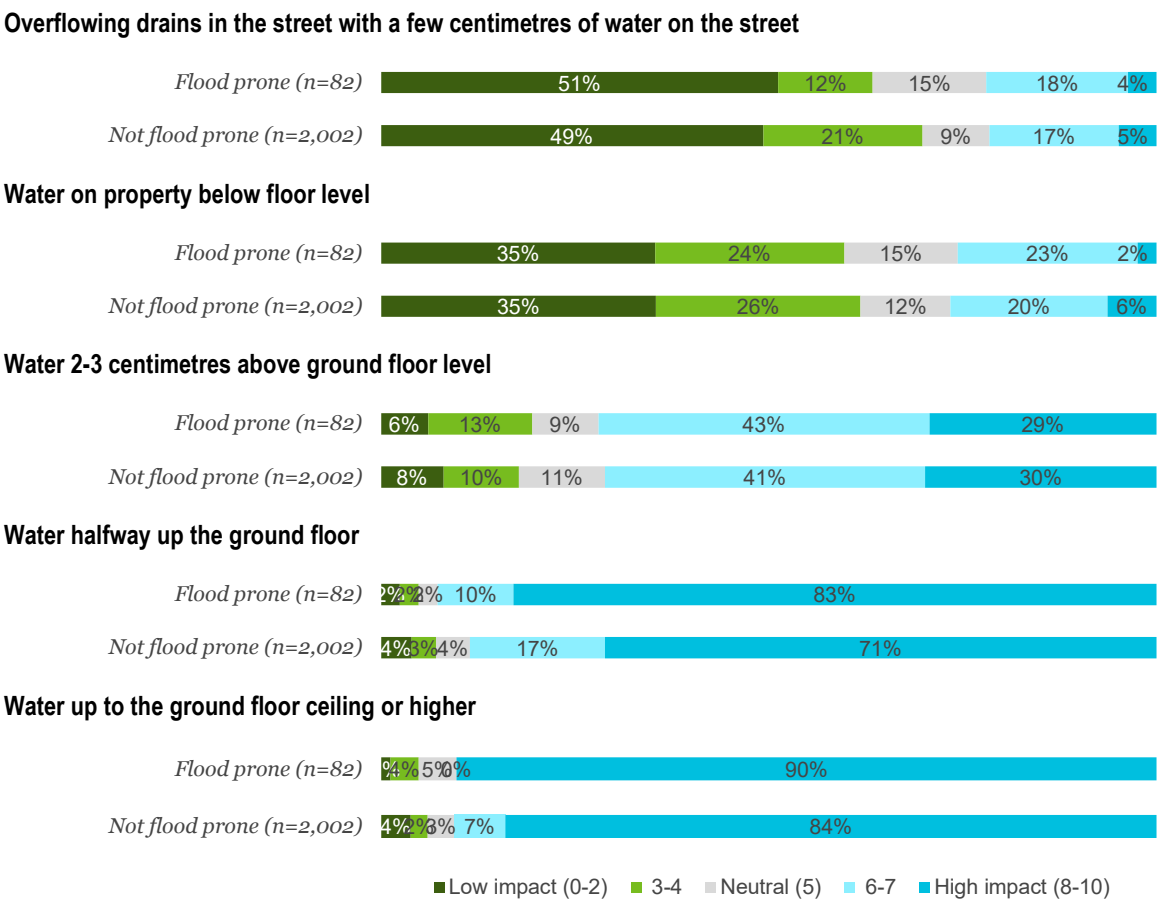
In fact, amongst those who are flood prone, 28% rate the perceived impact of 2-3 centimetres of water above ground floor level as a 5 or lower on the scale of '0' (no impact) to '10' (catastrophic impact). The bulk of those who are flood prone rate the impact of 2-3 centimetres of water above the ground floor level a 6 or 7 on this scale (43%) with only 29% rating the impact as 8 or higher.

Figure 17. Perceived impact of flood levels (mean score out of 10)



Base: Those who provided a valid address, n=2,084. "We are interested if the impact on you would be different with different levels of flooding. Think about the impact on you, your family, your day-to-day life and your house and contents. Use the scale below where 0 is 'no impact at all' to 10 being 'catastrophic impact' to rate the amount of impact for each level listed."

Figure 18. Perceived impact of flooding (detailed responses)



Base: Those who provided a valid address, n=2,084. "We are interested if the impact on you would be different with different levels of flooding. Think about the impact on you, your family, your day-to-day life and your house and contents. Use the scale below where 0 is 'no impact at all' to 10 being 'catastrophic impact' to rate the amount of impact for each level listed."

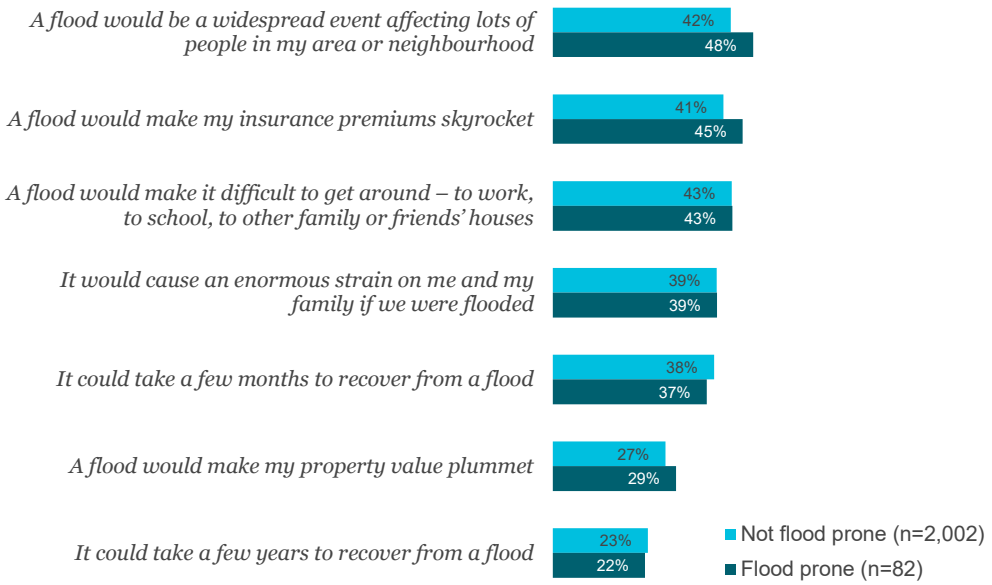
As the misunderstanding of the perceived impact of a low level flood was revealed in the qualitative research, for the quantitative benchmarking this was measured in depth. To that end respondents were asked how strongly they agreed or disagreed with a number of statements. All of these attitudinal statements were asked specifically in relation to a hypothetical flood 2-3 centimetres above ground floor level.

As shown in Figure 19 Attitudes towards impact of a flood below, there are mixed levels of agreement with a number of attitudinal statements about the impact of a flood 2-3 centimetres above ground floor level. Consistent with the perceived impact ratings discussed earlier, only 39% agree (rated 8-10 on a scale from 0 being strongly disagree to 10 being strongly agree) that a flood 2-3 centimetres above ground floor level 'would cause enormous strain on me and my family'. Other results also reinforce the current lack of understanding of the impact of this level of flooding with only 22% of those who are flood prone and 23% of those who are not flood prone agreeing that 'it could take a few years to recover from a flood'.

The only significant differences in attitudes when comparing those who are flood prone versus those who are not is that those who are flood prone are more likely to agree that 'a flood would be a widespread event affecting lots of people in my neighbourhood' (48% versus 42% of those who are not flood prone). As past experience has a big impact on attitudes, the lack of differences in attitudes is

likely due to the fact very few (both flood prone and not) have experienced flooding above ground floor level.

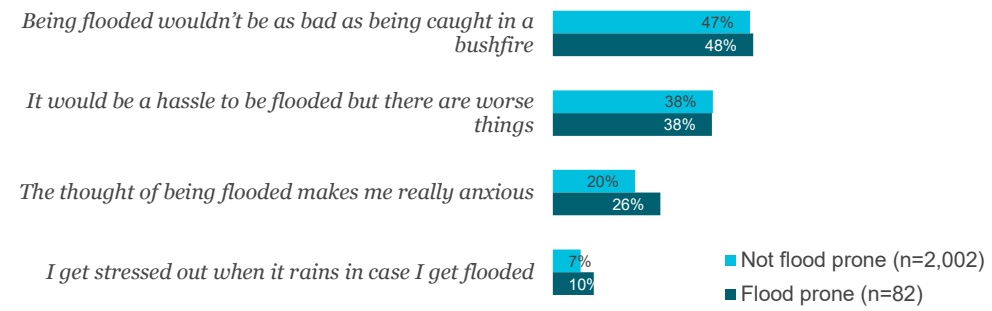
Figure 19. Attitudes towards impact of a flood



Base: Those who provided a valid address, n=2,084. "On a scale from 0 to 10 where 0 is 'strongly disagree' and 10 is 'strongly agree' how strongly do you agree with each of the following statements about a flood 2-3 cm above your ground floor level." Top box (% rating 8-10) shown.

Further evidence of the lack of saliency of a flood 2-3 centimetres above ground floor level, as shown in Figure 20 Perceived emotional impact of a flood below, is that nearly half (48% of those who are flood prone and 47% of those who are not) agree (rate 8-10) that 'being flooded wouldn't be as bad as being caught in a bushfire'. This is consistent with the qualitative results where a bushfire is felt to be a much larger and more 'real' threat to life and property. Similarly, 38% agree that 'it would be a hassle to be flooded but there are worse things', while relatively few (26% of those who are flood prone and 20% of those who are not) agree that 'the thought of being flooded makes me really anxious'. In general, for many, a flood is not currently felt to be that dangerous or concerning particularly in the context of other potential threats.

Figure 20. Perceived emotional impact of a flood

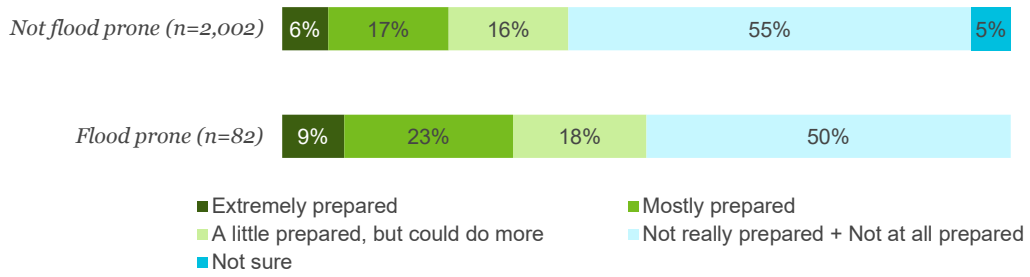


Base: Those who provided a valid address, n=2,084. "On a scale from 0 to 10 where 0 is 'strongly disagree' and 10 is 'strongly agree' how strongly do you agree with each of the following statements about a flood 2-3 cm above your ground floor level." Top box (% rating 8-10) shown.

5.5 Preparedness for a Flood

As shown in Figure 21 Preparedness below, about one in three (32%) of those who are flood prone feel that they are prepared for a flood (extremely or mostly prepared). Not surprisingly, the proportion that feels they are extremely or mostly prepared drops significantly to 23% amongst those who are not flood prone. There is clearly room to improve flood preparedness amongst the community at large, and particularly amongst those who are flood prone: half of those at a flood prone address feel that they are not really or not at all prepared for a flood.

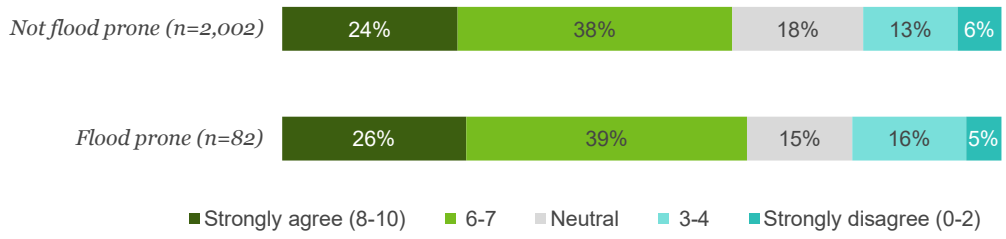
Figure 21. Preparedness



Base: Those who provided a valid address, n=2,084. "How prepared do you feel you and your household are for a flood at the home or property where you currently live?"

Respondents were also asked how strongly they agreed or disagreed with the statement 'I could cope with a flood if I was prepared' to further explore the perceived value of flood preparedness. As shown in Figure 22 Perceived Ability to Cope with a Flood if Prepared below, regardless of their current flood risk, about two in three (65% of those who are flood prone and 62% of those who are not) agree (rate 6-10) that if they were prepared they would be able to cope with a flood.

Figure 22. Perceived Ability to Cope with a Flood if Prepared

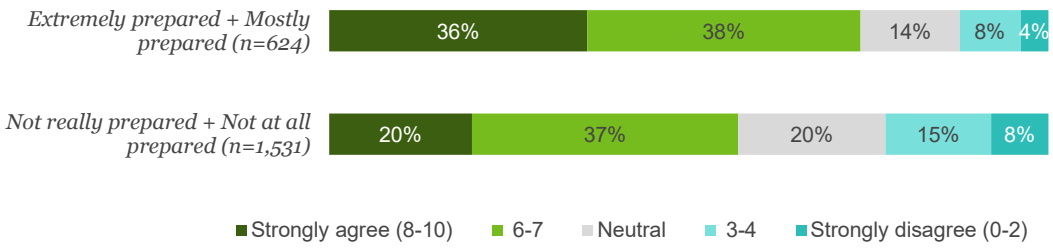


Base: Those who provided a valid address, n=2,084. "On a scale from 0 to 10 where 0 is 'strongly disagree' and 10 is 'strongly agree' how strongly do you agree with each of the following statements about a flood 2-3 cm above your ground floor level: I could cope with a flood if I were prepared." Top box (% rating 8-10) shown.

Importantly, as shown in Figure 23 Perceived Ability to Cope with a Flood by Perceived Preparedness below, for those who feel that they are prepared for a flood, the feeling of being able to cope with a flood is significantly greater (36% rate 8-10 versus 20% of those who are not prepared). However, amongst those who do not feel they are prepared for a flood, one in four (23%) feel that preparedness would not help them cope (disagree with the statement).

This perception of 'helplessness' would likely have an impact on their willingness to prepare as there is not necessarily a clear benefit in doing so. This suggests that the link between preparedness and the ability to cope should be addressed in communications in order to encourage residents to take more action towards flood readiness.

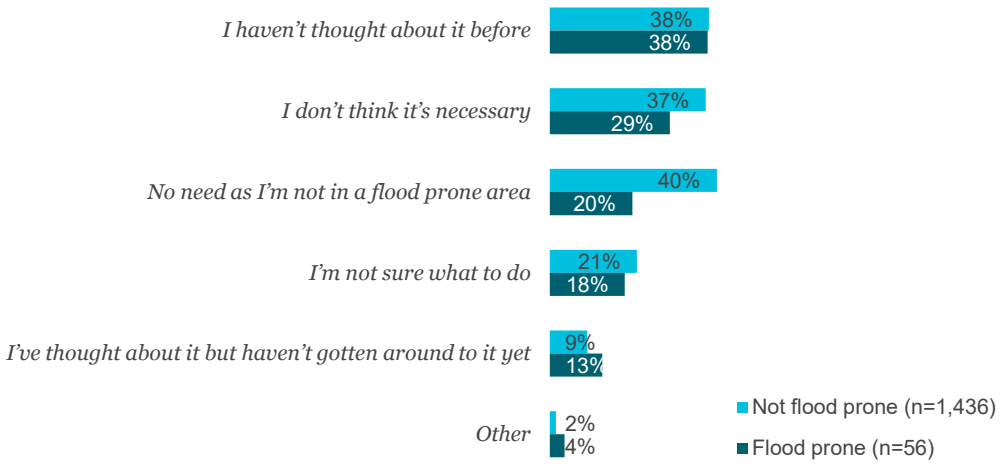
Figure 23. Perceived Ability to Cope with a Flood by Perceived Preparedness



Base: Those who are prepared and not prepared for a flood. "How prepared do you feel you and your household are for a flood at the home or property where you currently live?" "On a scale from 0 to 10 where 0 is 'strongly disagree' and 10 is 'strongly agree' how strongly do you agree with each of the following statements about a flood 2-3 cm above your ground floor level: I could cope with a flood if I were prepared." Top box (% rating 8-10) shown.

As shown in Figure 24 Reasons for Lack of Preparedness below, for those who are flood prone who do not feel prepared for a flood, the most common reason they feel this way is simply because they have not thought about it before (38%). However, beyond simply raising awareness of preparing for a flood, the results indicate that the need to be prepared also needs to be communicated: 29% who are flood prone are unprepared simply because they do not think it is necessary to be prepared. Further, for 40% of those who are not flood prone, they feel there is no need because they are not in a flood prone area.

Figure 24. Reasons for Lack of Preparedness



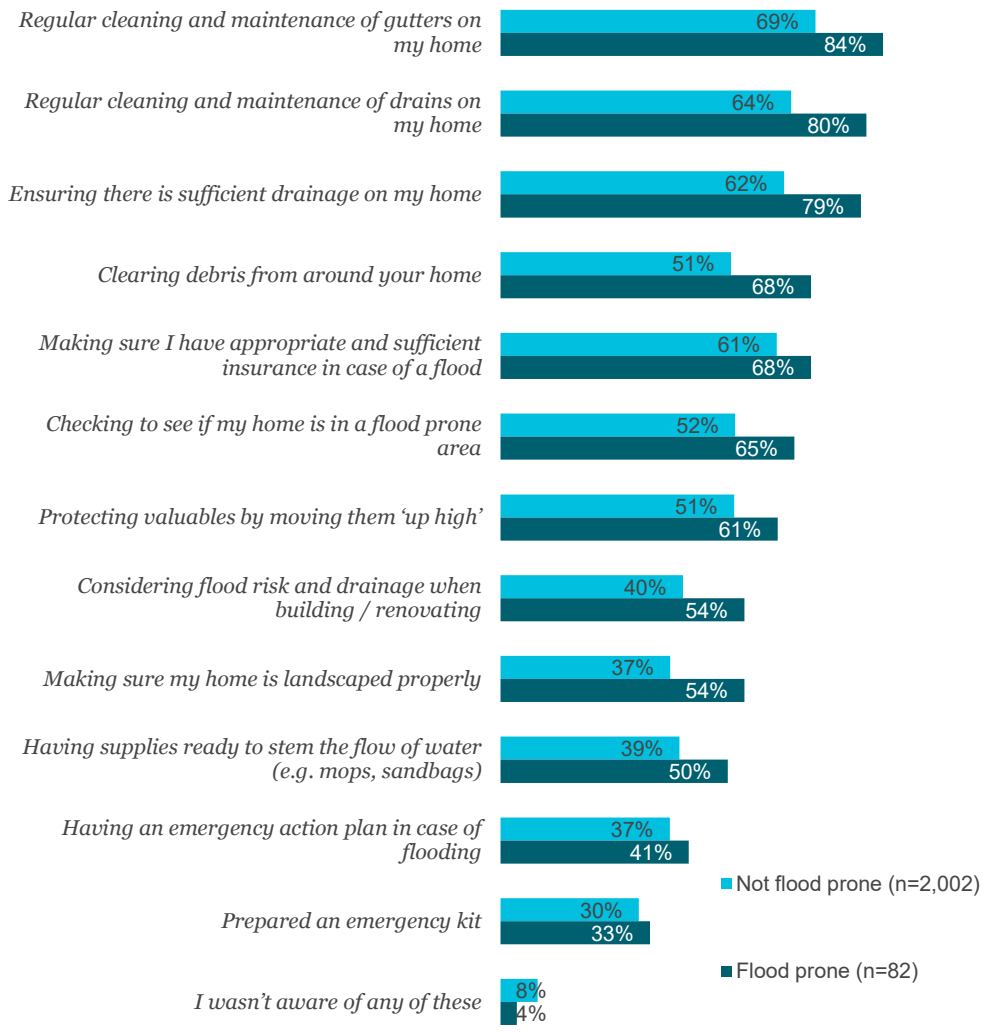
Base: Those unprepared for a flood who provided a valid address, n=1,492. "What are the reasons you do not feel prepared for a flood?"

Respondents were also asked to indicate which, of a list of flood minimisation strategies shown to them, they were aware of prior to the survey. As shown in Figure 25 Awareness of Flood Risk Minimisation Strategies below, the most well known flood risk minimisation strategies are cleaning and maintenance of gutters and drains. For those who are flood prone, awareness is significantly higher across nearly all of the strategies shown.

That said, there is still a great deal of room to improve awareness amongst both the flood prone and those not flood prone. In particular, fewer than half (41%) of those at a flood prone address reported they were aware that having an emergency action plan and preparing an emergency kit (33%) are risk minimisation strategies.

These results indicate that communications need to drive awareness of flood risk, communicate the benefits of being prepared and then educate residents as to how to be prepared, i.e. educate the community as to the specific flood risk minimisation strategies that can be undertaken.

Figure 25. Awareness of Flood Risk Minimisation Strategies

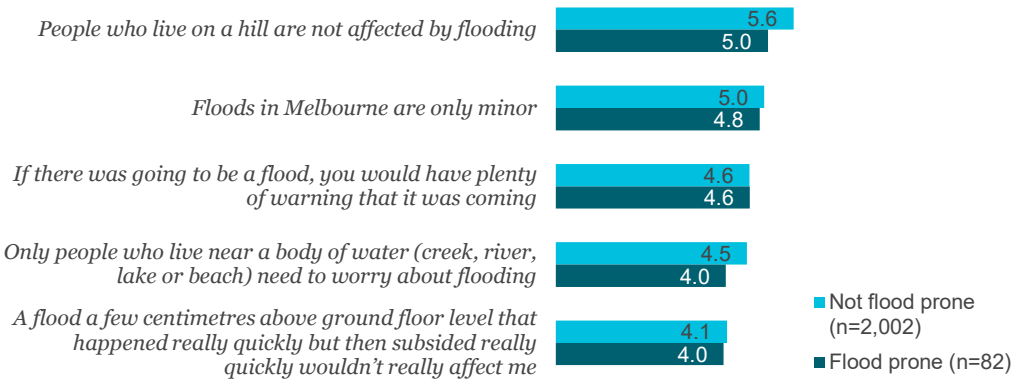


Base: Those who provided a valid address, n=2,084. "There are a number of ways to minimise the risk of flood damage to your home. Before today, which of the following were you aware of as ways to minimise the risk of flooding and the potential damage from flooding?"

5.6 Attitudes Towards Flooding

As shown in Figure 26 Attitudes Towards Flood Risk (Mean Score) below, overall the perception of flood risk is largely neutral, with most statements achieving a mean score close to the midpoint of the scale (5 out of 10). Of particular concern is that, on average, there is not strong disagreement with the statement 'a flood a few centimetres above ground floor level that happened really quickly but then subsided really quickly wouldn't really affect me'. Further, perceptions of flood risk are consistent for those who are flood prone and those who are not. This again suggests that the risk of flooding lacks saliency for the community at large.

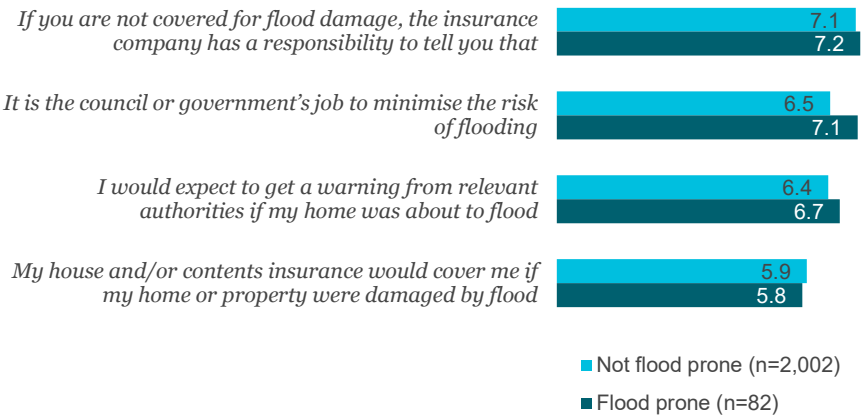
Figure 26. Attitudes Towards Flood Risk (Mean Score)



Base: Those who provided a valid address, n=2,084. "The following are some statements that people have said about flooding in Melbourne. For each one, please indicate how strongly you agree or disagree with the statement, on a scale from 0 to 10 where 0 is 'strongly disagree' and 10 is 'strongly agree'."

As shown in Figure 27 Attitudes Towards Flood Risk - Responsibility (Mean Score) below, of particular concern is that, on average, both those who are flood prone and those who are not believe that the responsibility for minimising risk lies elsewhere (rating above 6.4 on the scale from 0 to 10 for all statements except 'my house and contents insurance would cover me'). This perception that others are responsible for protection and prevention would contribute to a lack of action on an individual's part to undertake strategies themselves to minimise the impact of a flood.

Figure 27. Attitudes Towards Flood Risk - Responsibility (Mean Score)



Base: Those who provided a valid address, n=2,084. "The following are some statements that people have said about flooding in Melbourne. For each one, please indicate how strongly you agree or disagree with the statement, on a scale from 0 to 10 where 0 is 'strongly disagree' and 10 is 'strongly agree'."

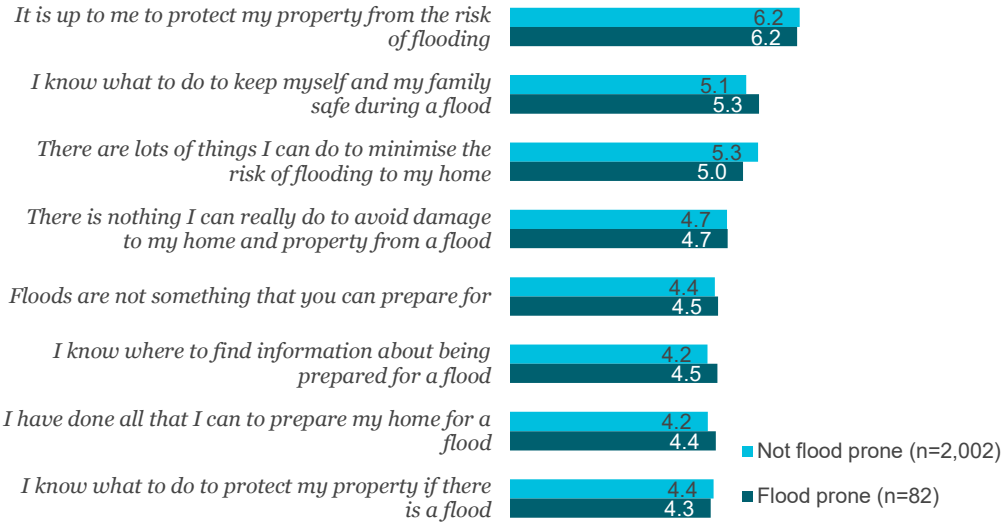
Encouragingly, as shown in Figure 28 Attitudes Towards Flood Risk - Perceived Control (Mean Score) below, despite some belief that others have responsibility to reduce the risk of flooding, on average there is some agreement that individuals are also responsible for protecting their property from the risk of flooding (6.2 out of 10 on average for both the flood prone and not flood prone). But while believing that there is some individual responsibility, there is a sense of some helplessness amongst some residents:

- Overall there is a lack of strong agreement that 'there are lots of things I can do to minimise the risk of flooding to my home' (5.3 out of 10 for those who are not flood prone and 5.0 out of 10 for those who are flood prone); and
- There is a lack of strong disagreement with the statement 'floods are not something that you can prepare for' (4.4 out of 10 for those who are not flood prone and 4.5 out of 10 for those who are flood prone); and
- There is a lack of strong disagreement with the statement 'there is nothing I can really do to avoid damage to my home and property from a flood' (4.7 out of 10 for those who are not flood prone and for those who are flood prone).

There is also a suggestion that this sense of helplessness is driven by lack of knowledge with relatively few agreeing that they 'know where to find information about being prepared for a flood' (4.2 out of 10 for those who are not flood prone and 4.5 out of 10 for those who are flood prone) and 'I know what to do to protect my property if there is a flood (4.4 out of 10 for those who are not flood prone and 4.3 out of 10 for those who are flood prone).

These results indicate that communications need to educate residents as to what they can actually do to minimise their risk that will, in turn, likely give them a stronger sense of control.

Figure 28. Attitudes Towards Flood Risk - Perceived Control (Mean Score)

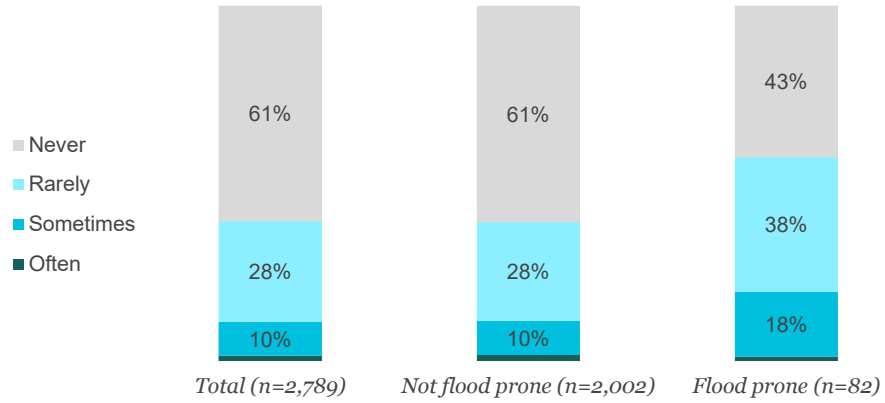


Base: Those who provided a valid address, n=2,084. "The following are some statements that people have said about flooding in Melbourne. For each one, please indicate how strongly you agree or disagree with the statement, on a scale from 0 to 10 where 0 is 'strongly disagree' and 10 is 'strongly agree'."

5.7 Communication Channels

As shown in Figure 29 Frequency discussing flood risk with others below, both the flood prone and not flood prone discuss risk of flooding with others rarely or never (89% of those who are not flood prone, 81% of those who are flood prone). That said, while still in the minority, there are significantly more amongst those who are flood prone who discuss the risk with others 'sometimes' (18% versus 10% of those who are not flood prone). This again confirms that the risk of flooding lacks saliency for most residents.

Figure 29. Frequency discussing flood risk with others

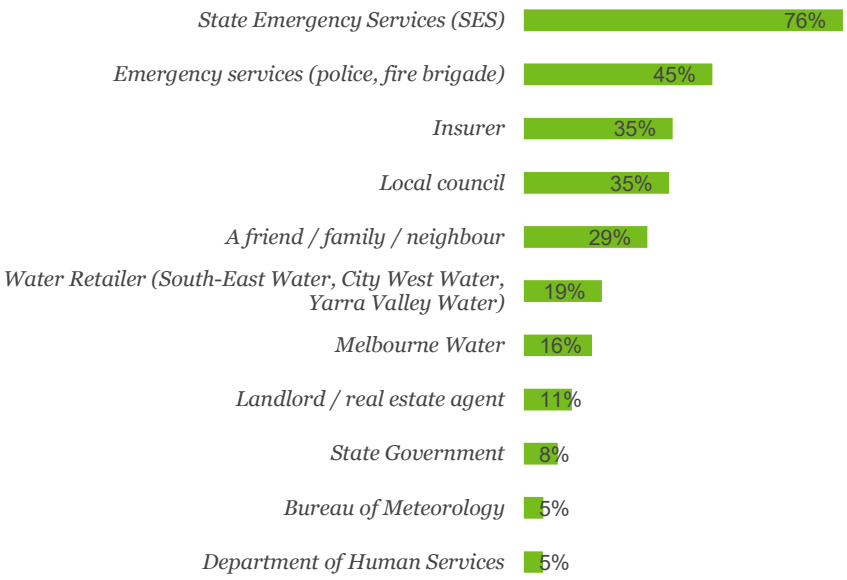


Base: Total, n=2,789. "How often do you discuss the potential for flooding in your area with family, friends or neighbours?"

As shown in Figure 30 Contacts for help during flood below, in case of flood the SES is clearly the first point of call for help (76%) followed at quite a distance by emergency services (45%). Overall this indicates that the community has confidence about whom they would contact for help during a flood.

There are no significant differences between those who are flood prone and those who are not.

Figure 30. Contacts for help during flood

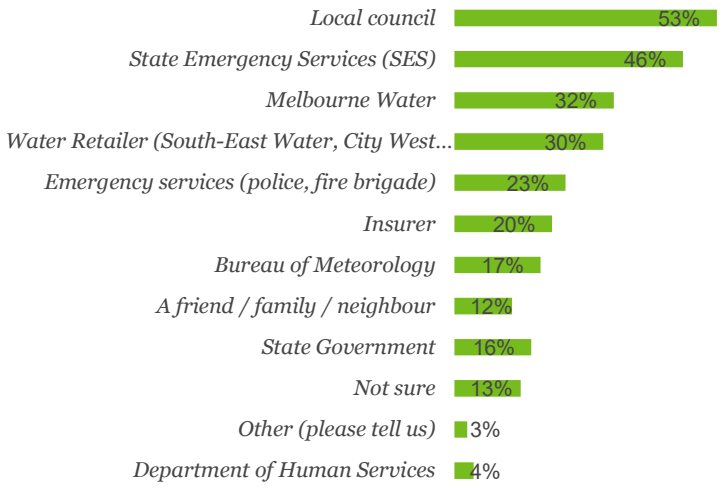


Base: Total, n=2,789. "Who would you contact for help during a flood?" (Prompted, Multiple response)

Unlike knowledge of who to contact during a flood, as shown in Figure 31 Contact Points for More Information about Flood Preparation below, there is a wide range of information sources mentioned when thinking about who to contact to find out more information about preparing for a flood. Local council is most often mentioned (53%) followed closely by SES (46%) and then Melbourne Water (32%). Overall this suggests that there is some uncertainty as to who to contact for information about preparing for a flood, which would be an additional barrier to becoming more informed and consequently being more prepared.

There are no significant differences between those who are flood prone and those who are not.

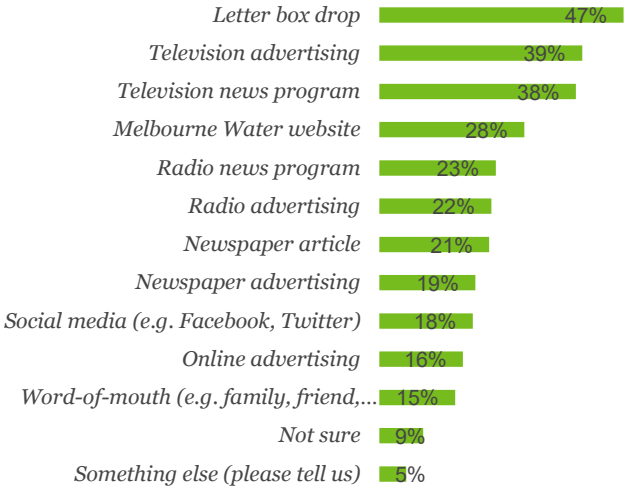
Figure 31. Contact Points for More Information about Flood Preparation



Base: Total, n=2,789. "Who would you contact to find out more information about preparing for a flood?" (Prompted, Multiple response)

Regarding how they would prefer to receive information about preparing for a flood, as shown in Figure 32 Communication channel below, a letter box drop is the preferred communication channel for nearly half of the community (47%); chosen significantly more often than all other channels including television. There are no significant differences between those who are flood prone and those who are not.

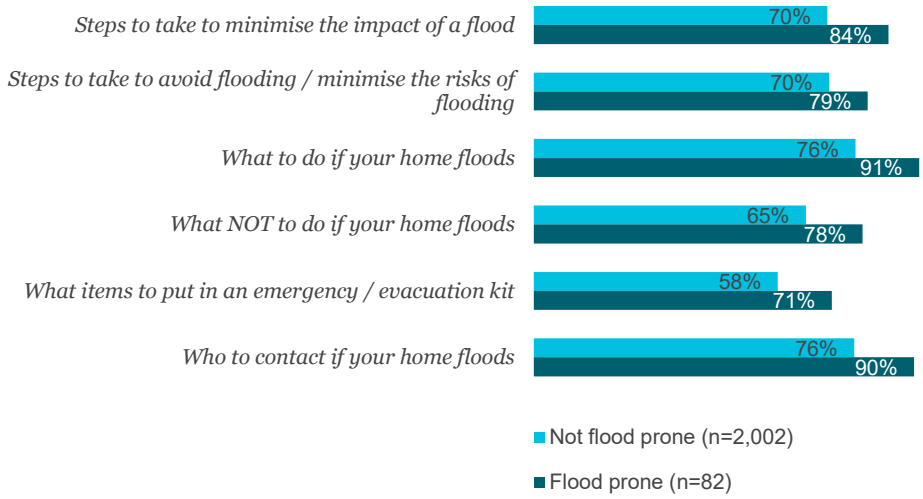
Figure 32. Communication channel



Base: Total, n=2,789. "And assuming you wanted to receive information, how would you want to receive information about preparing for a flood?" (Prompted, Multiple response)

Consistent with earlier results indicating a lack of knowledge about how to prepare for a flood, as shown in Figure 33 Information that Would Help Prepare for a Flood below, a wide range of information is felt to be desirable in communications. Not surprisingly, those who are flood prone are significantly more likely to feel that all of the information suggested would be helpful in preparing for a flood compared to those who are not flood prone. The least helpful piece of information is felt to be 'what items to put in an emergency / evacuation kit'. This suggests that the value of having an emergency / evacuation kit prepared needs to be raised.

Figure 33. Information that Would Help Prepare for a Flood



Base: Those who provided a valid address, n=2,084. "And what information do you feel would help you to prepare for a flood?" (Prompted, Multiple response)

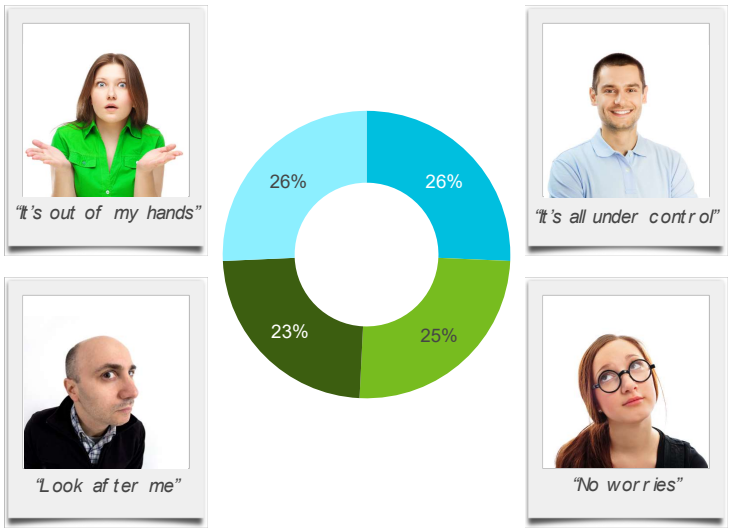
5.8 Guiding Communications for the Wider Melbourne Audience

In order to further explore the different types of attitudes that exist in the broader community and provide guidance to Melbourne Water in developing effective communications, multivariate segmentation analysis was undertaken. Using Principle Components Analysis, four distinct attitudinal segments emerged. As shown in Figure 34 Attitudinal Segment Sizes below, each segment identified represents about one quarter of the wider Melbourne community.

- "It's out of my hands" (26%);
- "It's all under control" (26%);
- "Look after me" (23%); and
- "No worries" (25%).

Comparing the distribution of segments between those who are flood prone and those who are not, there are significantly fewer in the "No worries" segment amongst those who are flood prone (13% vs. 25% for those who are not flood prone). That said, while relatively smaller, because the "No worries" segment is still represented amongst those who are flood prone, communications should not ignore this segment.

Figure 34. Attitudinal Segment Sizes

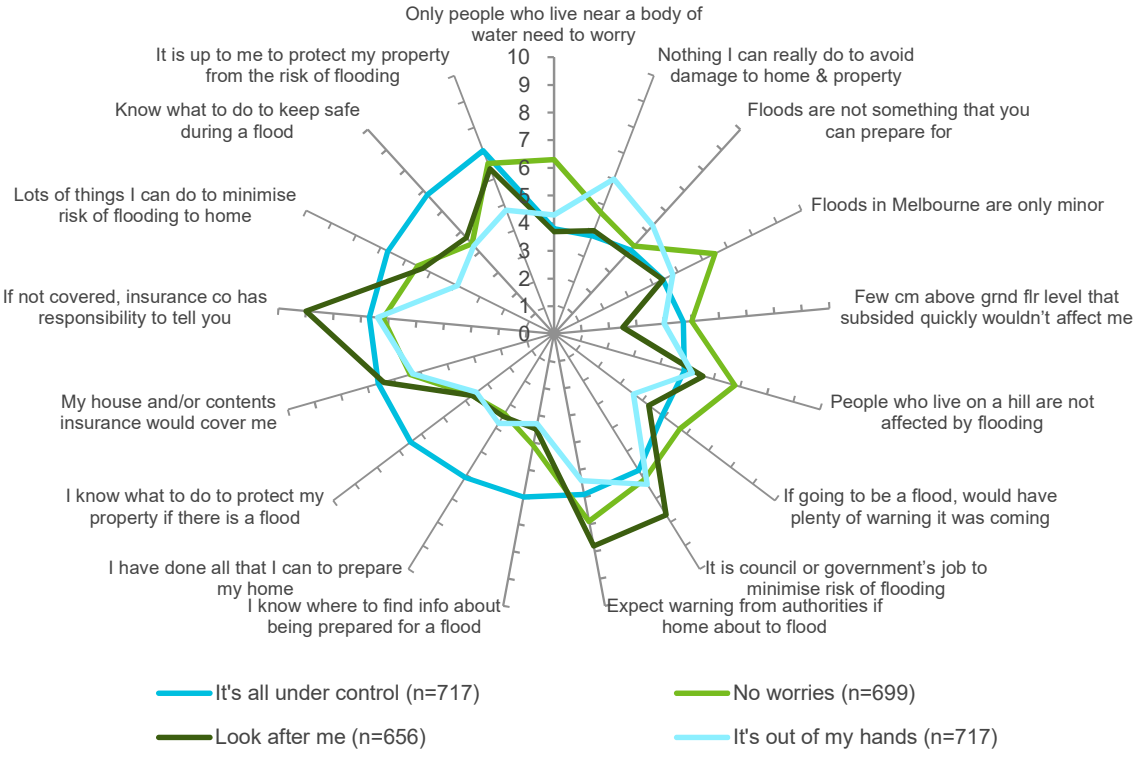


Base: Total, n=2,789.

5.9 Segments compared

As shown in Figure 35 Attitudes Towards Flooding by Segment and Table 4 Attitudes Towards Flooding by Segment below, these segments differ primarily based on their attitudes towards flooding and flood risk. It is these differences that form the basis of each segment.

Figure 35. Attitudes Towards Flooding by Segment



Base: Total (n=2,789). "The following are some statements that people have said about flooding in Melbourne. For each, please indicate how strongly you agree or disagree with the statement, on a scale from 0 to 10 where 0 is 'strongly disagree' and 10 is 'strongly agree'."

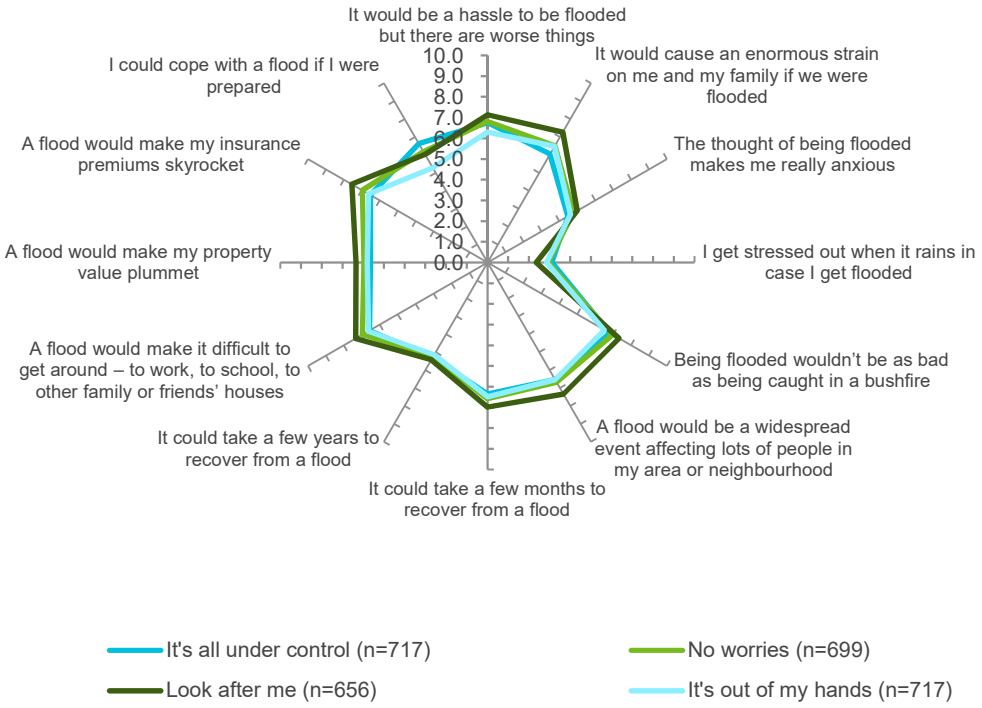
Table 4. Attitudes Towards Flooding by Segment

Mean score	Total (n=2,789)	It's all under control (n=717)	No worries (n=699)	Look after me (n=656)	It's out of my hands (n=717)
There is nothing I can really do to avoid damage to my home and property from a flood	4.6	3.8	4.7	4.0	6.0
Floods in Melbourne are only minor	5.0	4.4	6.5	4.4	4.8
People who live on a hill are not affected by flooding	5.6	4.9	6.8	5.6	5.2
Only people who live near a body of water (creek, river, lake or beach) need to worry about flooding	4.5	3.8	6.3	3.7	4.3
It is the council or government's job to minimise the risk of flooding	6.5	5.8	6.2	7.7	6.4
If there was going to be a flood, you would have plenty of warning that it was coming	4.6	4.9	5.7	4.3	3.6
If you are not covered for flood damage, the insurance company has a responsibility to tell you that	7.1	6.7	6.2	9.0	6.4
It is up to me to protect my property from the risk of flooding	6.2	7.1	6.6	6.4	4.8
There are lots of things I can do to minimise the risk of flooding to my home	5.3	6.7	5.5	5.3	3.9
I have done all that I can to prepare my home for a flood	4.2	6.1	3.4	3.5	3.8
I know what to do to protect my property if there is a flood	4.4	6.5	3.7	3.7	3.5
I know what to do to keep myself and my family safe during a flood	5.1	6.8	4.4	4.7	4.3
Floods are not something that you can prepare for	4.4	4.1	4.3	3.9	5.3
My house and/or contents insurance would cover me if my home or property were damaged by flood	5.9	6.6	5.4	6.4	5.3
I know where to find information about being prepared for a flood	4.3	6.0	4.1	3.5	3.3
I would expect to get a warning from relevant authorities if my home was about to flood	6.5	5.9	6.9	7.8	5.4
A flood a few centimetres above ground floor level that happened really quickly but then subsided really quickly wouldn't really affect me	4.1	4.7	5.0	2.5	4.0

Base: Total (n=2,789). "The following are some statements that people have said about flooding in Melbourne. For each, please indicate how strongly you agree or disagree with the statement, on a scale from 0 to 10 where 0 is 'strongly disagree' and 10 is 'strongly agree'." Scores significantly higher than the total are shaded green; scores significantly lower are shaded grey.

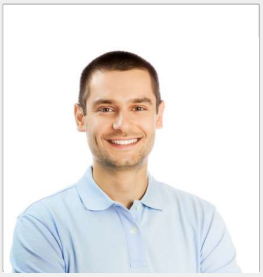
As shown in Figure 36 Attitudes Towards a Flood 2-3 Centimetres Above Ground Floor Level by Segment below, while there are fewer differences between segments when looking at attitudes towards a flood of 2-3 centimetres above ground floor level (as opposed to attitudes to floods generally) there are still variations among segments that should be considered to further guide communications. These differences are particularly relevant when considering differences in how well segments feel they would cope with a flood if they were prepared.

Figure 36. Attitudes Towards a Flood 2-3 Centimetres Above Ground Floor Level by Segment



Each segment is outlined in more detail in the following sections with meaningful differences noted.

5.10 Segment 1: "It's all under control"



"It's all under control"

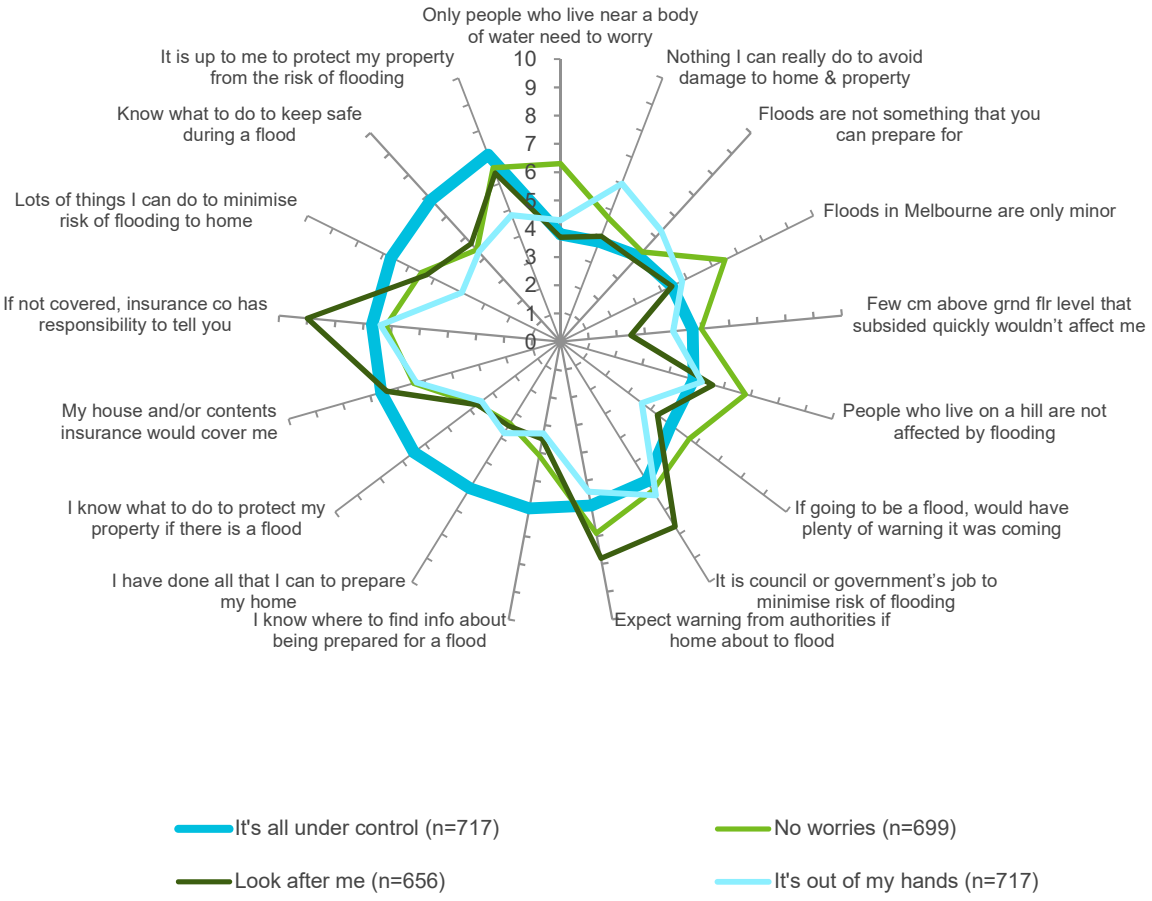
Those in the **"It's all under control"** segment feel in control when it comes to flooding and flood risk, have taken steps to minimise the risk and protect themselves, know where to find information, and know that it is up to them to protect their property.

While this segment feels responsible for taking action, they also have some sense of false security about the impact of a flood 2-3 cm above the ground floor level. So while they are responsible and believe they are taking steps to minimise risk, they do not appear to appreciate the impact of a flood as much as they should.

As shown in Figure 37 Attitudes Towards Flooding – "It's all under control" and Table 5 Attitudes Towards Flooding – "It's all under control" below, "It's all under control" are significantly more likely than the total to agree with a number of statements regarding flooding in general:

- If there was going to be a flood, you would have plenty of warning that it was coming;
- It is up to me to protect my property from the risk of flooding;
- There are lots of things I can do to minimise the risk of flooding to my home;
- I have done all that I can to prepare my home for a flood;
- I know what to do to protect my property if there is a flood;
- I know what to do to keep myself and my family safe during a flood;
- My house and/or contents insurance would cover me if my home or property were damaged by flood;
- I know where to find information about being prepared for a flood; and
- A flood a few centimetres above ground floor level that happened really quickly but then subsided really quickly wouldn't really affect me.

Figure 37. Attitudes Towards Flooding – "It's all under control"



Base: Total (n=2,789). "The following are some statements that people have said about flooding in Melbourne. For each, please indicate how strongly you agree or disagree with the statement, on a scale from 0 to 10 where 0 is 'strongly disagree' and 10 is 'strongly agree'."

Table 5. Attitudes Towards Flooding – "It's all under control"

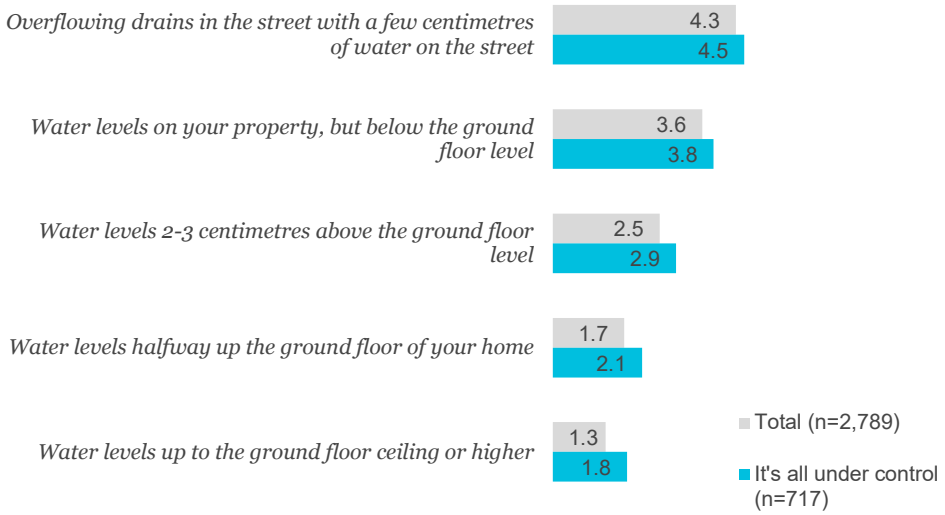
Mean Score	It's all under control (n=717)	Total (n=2,789)
There is nothing I can really do to avoid damage to my home and property from a flood	3.8	4.6
Floods in Melbourne are only minor	4.4	5.0
People who live on a hill are not affected by flooding	4.9	5.6
Only people who live near a body of water (creek, river, lake or beach) need to worry about flooding	3.8	4.5
It is the council or government's job to minimise the risk of flooding	5.8	6.5
If there was going to be a flood, you would have plenty of warning that it was coming	4.9	4.6
If you are not covered for flood damage, the insurance company has a responsibility to tell you that	6.7	7.1
It is up to me to protect my property from the risk of flooding	7.1	6.2
There are lots of things I can do to minimise the risk of flooding to my home	6.7	5.3
I have done all that I can to prepare my home for a flood	6.1	4.2
I know what to do to protect my property if there is a flood	6.5	4.4
I know what to do to keep myself and my family safe during a flood	6.8	5.1
Floods are not something that you can prepare for	4.1	4.4
My house and/or contents insurance would cover me if my home or property were damaged by flood	6.6	5.9
I know where to find information about being prepared for a flood	6.0	4.3
I would expect to get a warning from relevant authorities if my home was about to flood	5.9	6.5
A flood a few centimetres above ground floor level that happened really quickly but then subsided really quickly wouldn't really affect me	4.7	4.1

Base: Total (n=2,789). "The following are some statements that people have said about flooding in Melbourne. For each, please indicate how strongly you agree or disagree with the statement, on a scale from 0 to 10 where 0 is 'strongly disagree' and 10 is 'strongly agree'." Scores significantly higher than the total are shaded green; scores significantly lower are shaded grey.

Driving these attitudes to an extent, those in the "It's all under control" segment have more experience with flooding. Significantly fewer (47%) have not experienced a flood at their current home (compared to the total of 55%). That said, the majority of flooding experienced has been below ground floor level (63%).

Consistent with having experienced more flooding, as shown in Figure 38 Perceived Flood Risk "It's all under control" below, the "It's all under control" perception of flood risk is higher than others regardless of the flood level. All measures are significantly higher than the total except for 'overflowing drains in the street'.

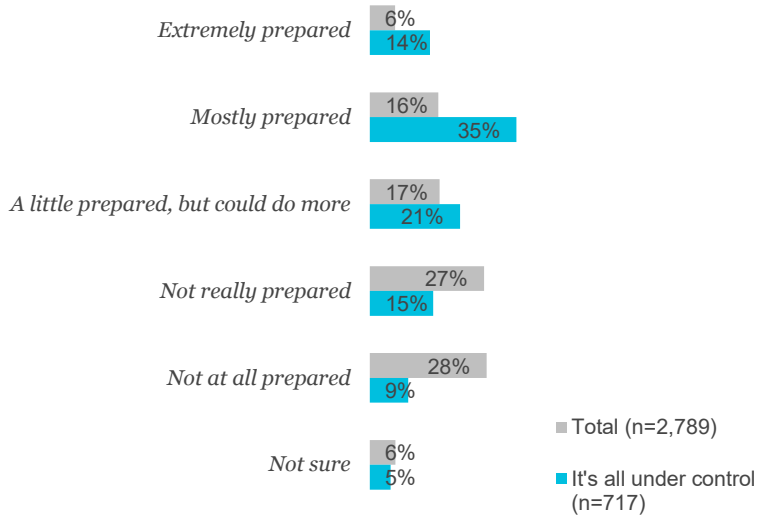
Figure 38. Perceived Flood Risk "It's all under control"



Base: Total. "We are interested if the impact on you would be different with different levels of flooding. Think about the impact on you, your family, your day-to-day life and your house and contents. Use the scale below where 0 is 'no impact at all' to 10 being 'catastrophic impact' to rate the amount of impact for each level listed."

Further, as shown in Figure 39 Flood Preparedness "It's all under control" below, "It's all under control" feel significantly more prepared than the average, with nearly half (49%) reporting that they are extremely or mostly prepared; significantly higher than the total of 24%. This suggests that for this segment the higher perceived risk of flooding has motivated them to prepare for a flood.

Figure 39. Flood Preparedness "It's all under control"



Base: Total. "How prepared do you feel you and your household are for a flood at the home or property where you currently live?"

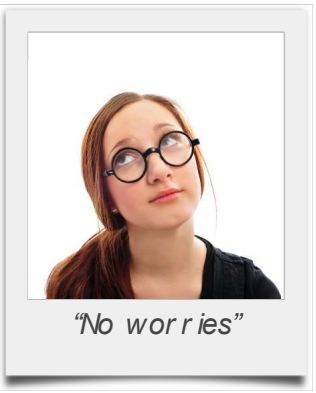
This segment is also significantly more likely to:

- be aware of all of the risk minimisation strategies (between 4% and 16% higher than the total);
- have undertaken risk minimisation strategies (only 10% have not done anything versus the total of 22%);
- know who to contact for more information about preparing for a flood (only 7% say 'not sure' versus the total of 13%); and
- know whom to contact during a flood (only 4% say 'not sure' versus the total of 7%).

Importantly, despite perceiving a greater risk of flooding and being more prepared, this segment still considers the likely impact of a flood 2-3 centimetres above ground floor level to be 6.0 out of 10: equal lowest of all the segments. Those in "It's all under control" are also significantly more likely to agree "I could cope with a flood if I was prepared" (6.6 versus the total of 6.0). Overall, results for "It's all under control" suggests that whilst this segment feels prepared and under control, they still potentially underestimate the impact of flooding 2-3 centimetres above ground floor level.

Demographically there are some slight skews: this segment has significantly more males (46% versus the total of 39%) and significantly more in the 45-54 year old age group (24% versus the total of 21%).

5.11 Segment 2: "No worries"



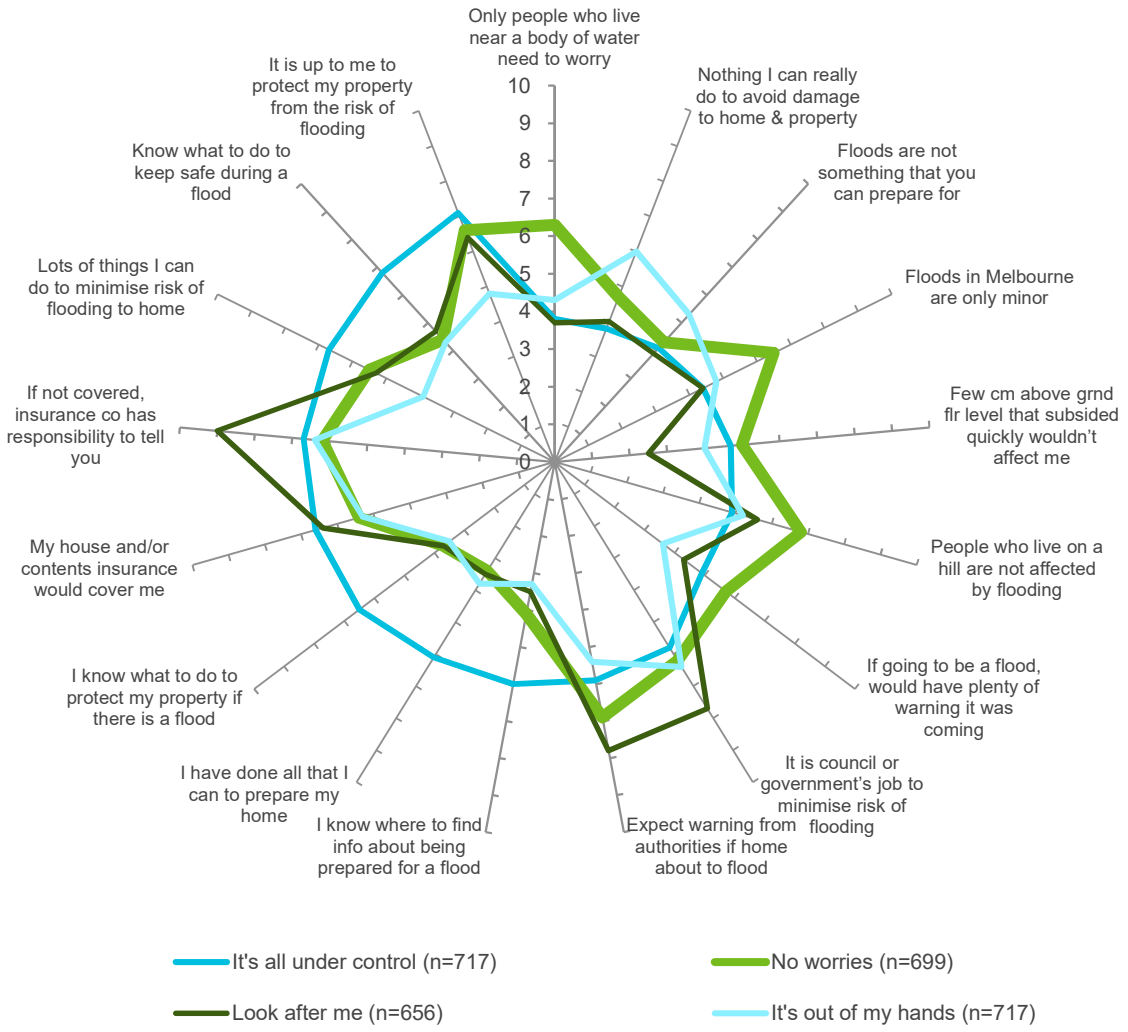
Those in the **"No worries"** segment are less in control, less informed and less prepared simply because they do not feel that they need to be. They believe that flooding and flood risk is largely to do with environmental features (e.g. proximity of bodies of water, residing in a low lying area).

This segment also expects to get warnings that a flood is coming and lacks understanding of the potential impact of a flood 2-3 cm above flood level.

As shown in Figure 40 Attitudes Towards Flooding – "No worries" and Table 6 Attitudes Towards Flooding – "No worries" below, "No worries" are significantly more likely than the total to agree with a number of statements regarding flooding in general:

- Floods in Melbourne are only minor;
- People who live on a hill are not affected by flooding;
- Only people who live near a body of water (creek, river, lake or beach) need to worry about flooding;
- If there was going to be a flood, you would have plenty of warning that it was coming;
- It is up to me to protect my property from the risk of flooding;
- There are lots of things I can do to minimise the risk of flooding to my home;
- I would expect to get a warning from relevant authorities if my home was about to flood; and
- A flood a few centimetres above ground floor level that happened really quickly but then subsided really quickly wouldn't really affect me.

Figure 40. Attitudes Towards Flooding – "No worries"



Base: Total (n=2,789). "The following are some statements that people have said about flooding in Melbourne. For each, please indicate how strongly you agree or disagree with the statement, on a scale from 0 to 10 where 0 is 'strongly disagree' and 10 is 'strongly agree'."

Table 6. Attitudes Towards Flooding – "No worries"

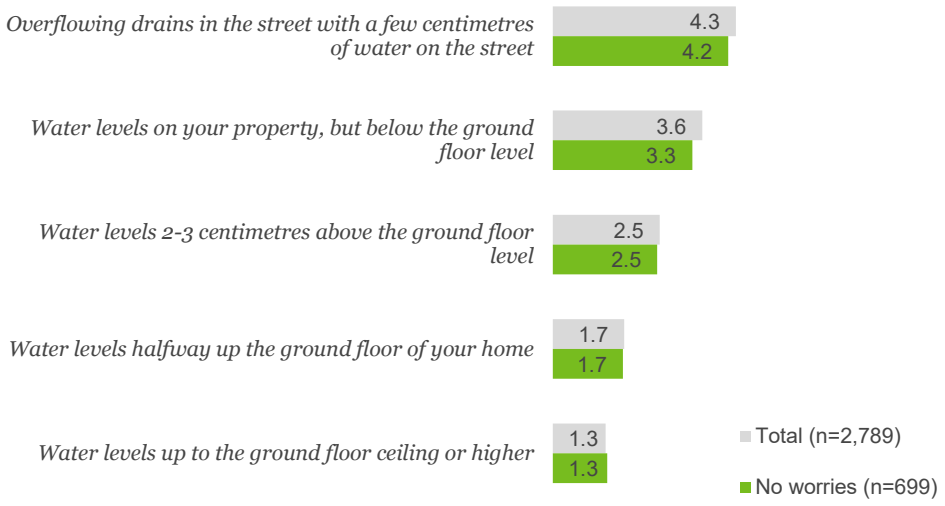
Mean Score	No worries (n=699)	Total (n=2,789)
There is nothing I can really do to avoid damage to my home and property from a flood	4.7	4.6
Floods in Melbourne are only minor	6.5	5.0
People who live on a hill are not affected by flooding	6.8	5.6
Only people who live near a body of water (creek, river, lake or beach) need to worry about flooding	6.3	4.5
It is the council or government's job to minimise the risk of flooding	6.2	6.5
If there was going to be a flood, you would have plenty of warning that it was coming	5.7	4.6
If you are not covered for flood damage, the insurance company has a responsibility to tell you that	6.2	7.1
It is up to me to protect my property from the risk of flooding	6.6	6.2
There are lots of things I can do to minimise the risk of flooding to my home	5.5	5.3
I have done all that I can to prepare my home for a flood	3.4	4.2
I know what to do to protect my property if there is a flood	3.7	4.4
I know what to do to keep myself and my family safe during a flood	4.4	5.1
Floods are not something that you can prepare for	4.3	4.4
My house and/or contents insurance would cover me if my home or property were damaged by flood	5.4	5.9
I know where to find information about being prepared for a flood	4.1	4.3
I would expect to get a warning from relevant authorities if my home was about to flood	6.9	6.5
A flood a few centimetres above ground floor level that happened really quickly but then subsided really quickly wouldn't really affect me	5.0	4.1

Base: Total (n=2,789). "The following are some statements that people have said about flooding in Melbourne. For each, please indicate how strongly you agree or disagree with the statement, on a scale from 0 to 10 where 0 is 'strongly disagree' and 10 is 'strongly agree'." Scores significantly higher than the total are shaded green; scores significantly lower are shaded grey.

Driving these attitudes to an extent, "No worries" has less experience with flooding than the average. Significantly more (60%) have not experienced a flood at their current home (compared to the total of 55%).

Consistent with having experienced less flooding, as shown in Figure 41 Perceived Flood Risk "No worries" below, for those in the "No worries" segment, perception of flood risk is on a par with the average.

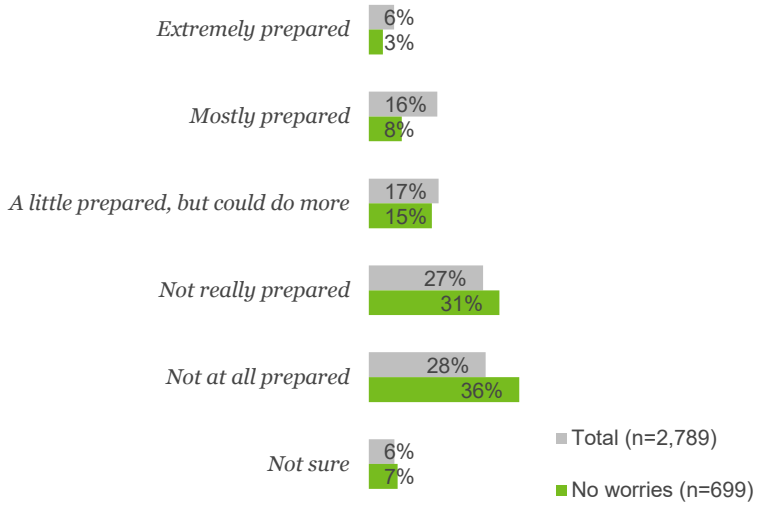
Figure 41. Perceived Flood Risk "No worries"



Base: Total. "We are interested if the impact on you would be different with different levels of flooding. Think about the impact on you, your family, your day-to-day life and your house and contents. Use the scale below where 0 is 'no impact at all' to 10 being 'catastrophic impact' to rate the amount of impact for each level listed."

Despite having average perceptions of flood risk, as shown in Figure 42 Flood Preparedness "No worries" below, those in the "No worries" segment feel significantly less prepared than the average, with two thirds (67%) reporting that they are not really or not all prepared; significantly lower than the total of 55%.

Figure 42. Flood Preparedness "No worries"



Base: Total. "How prepared do you feel you and your household are for a flood at the home or property where you currently live?"

This segment is much more likely to report that they are unprepared because they have not thought about it before (45% versus the total of 38%) or because they do not think it is necessary (41% versus the total of 36%).

As a result, this segment is also:

- significantly less likely to be aware of risk minimisation strategies (12% aware of none of those presented versus the total of 8%); and
- even where aware of risk minimisation strategies, they are significantly less likely to have actually undertaken any (34% have not done anything versus the total of 22%).

Together with perceiving a lower risk of flooding, those in the "No worries" segment also consider the likely impact of a flood 2-3 centimetres above ground floor level to be only 6.0 out of 10 on average: equal lowest of all the segments. While having lower awareness of how to prepare, this segment is significantly more likely to agree "I could cope with a flood if I was prepared" (6.2 versus the total of 6.0). Overall, results for "No worries" suggests a lack of understanding and saliency of flood risk. So while they feel they could cope if prepared, they do not know what to do to be prepared or why preparation is important.

Demographically there are some skews: this segment has significantly more females (65% versus the total of 61%) and significantly more are aged under 45 years (59% versus the total of 43%). Those in the "No worries" segment are also significantly more likely to be renting (32% versus the total of 26%).

5.12 Segment 3: "Look after me"

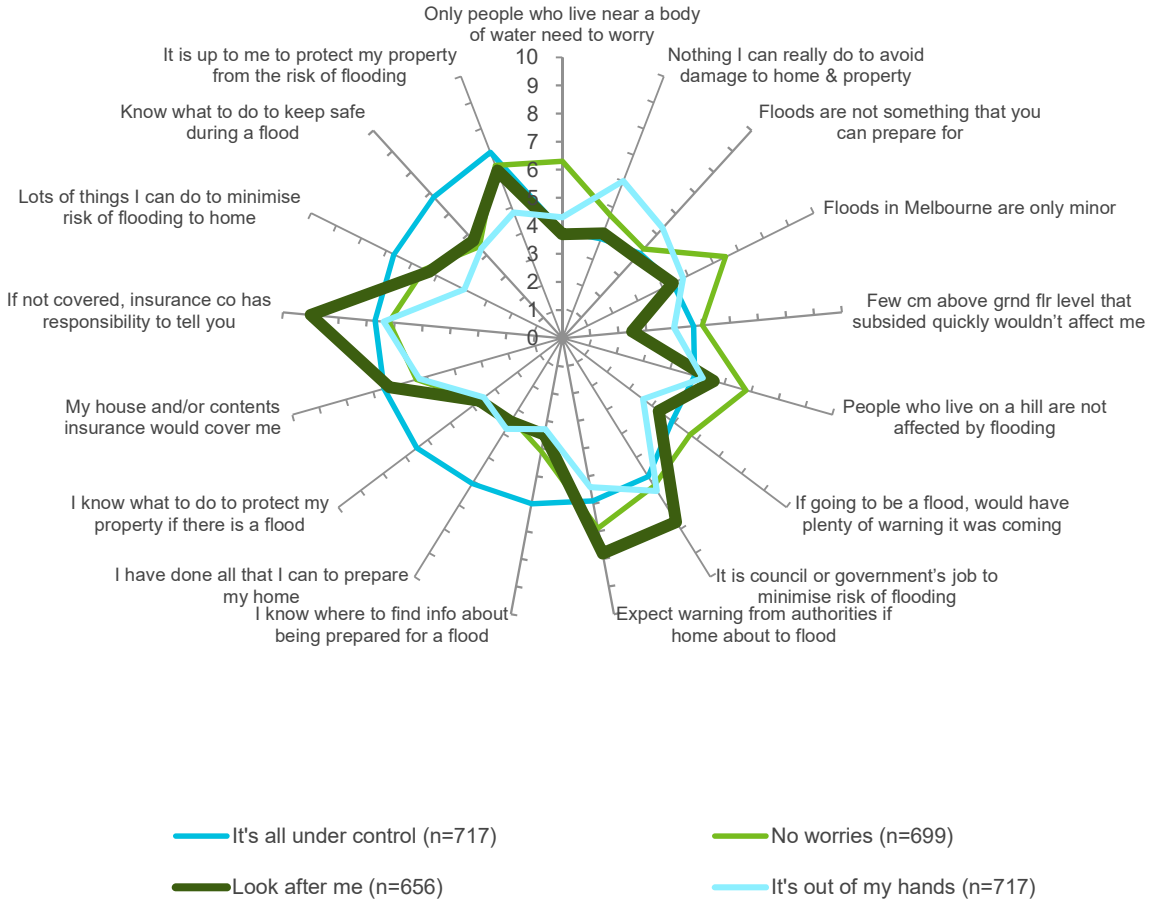
Those in the **"Look after me"** segment believe that responsibility for minimising risk and preparation belongs to others – to warn them of an impending flood, to warn them if you are not covered by insurance, and to provide the necessary infrastructure to minimise their risk.

So while they are more aware of the potential impact of a flood 2-3 cm above floor level, they do not believe that they themselves are primarily responsible for taking steps to protect themselves and minimise their risk.

As shown in Figure 43 Attitudes Towards Flooding – "Look after me" and Table 7 Attitudes Towards Flooding – "Look after me" below, those in the "Look after me" segment are significantly more likely than the total to agree with the following statements:

- It is the council or government's job to minimise the risk of flooding;
- If you are not covered for flood damage, the insurance company has a responsibility to tell you that;
- My house and/or contents insurance would cover me if my home or property were damaged by flood; and
- I would expect to get a warning from relevant authorities if my home was about to flood.

Figure 43. Attitudes Towards Flooding – "Look after me"



Base: Total (n=2,789). "The following are some statements that people have said about flooding in Melbourne. For each, please indicate how strongly you agree or disagree with the statement, on a scale from 0 to 10 where 0 is 'strongly disagree' and 10 is 'strongly agree'."

Table 7. Attitudes Towards Flooding – "Look after me"

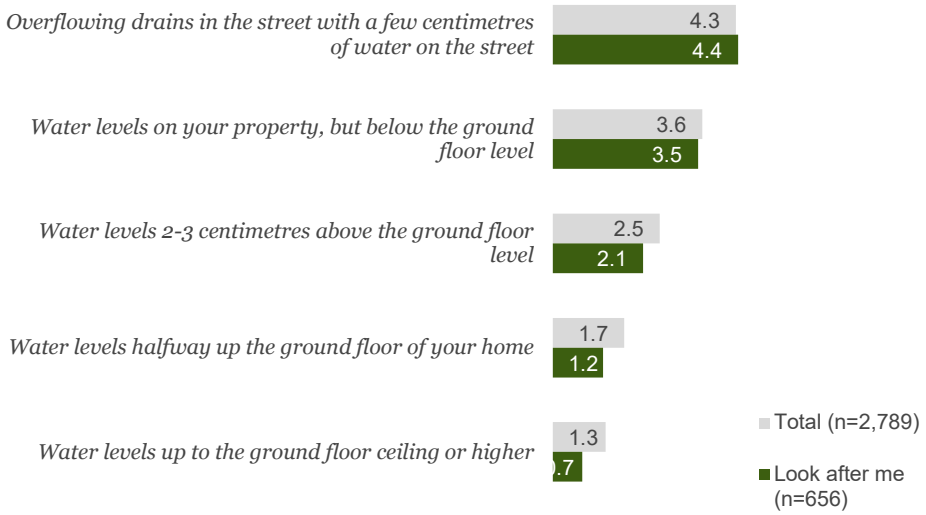
Mean Score	Look after me	Total
There is nothing I can really do to avoid damage to my home and property from a flood	4.0	4.6
Floods in Melbourne are only minor	4.4	5.0
People who live on a hill are not affected by flooding	5.6	5.6
Only people who live near a body of water (creek, river, lake or beach) need to worry about flooding	3.7	4.5
It is the council or government's job to minimise the risk of flooding	7.7	6.5
If there was going to be a flood, you would have plenty of warning that it was coming	4.3	4.6
If you are not covered for flood damage, the insurance company has a responsibility to tell you that	9.0	7.1
It is up to me to protect my property from the risk of flooding	6.4	6.2
There are lots of things I can do to minimise the risk of flooding to my home	5.3	5.3
I have done all that I can to prepare my home for a flood	3.5	4.2
I know what to do to protect my property if there is a flood	3.7	4.4
I know what to do to keep myself and my family safe during a flood	4.7	5.1
Floods are not something that you can prepare for	3.9	4.4
My house and/or contents insurance would cover me if my home or property were damaged by flood	6.4	5.9
I know where to find information about being prepared for a flood	3.5	4.3
I would expect to get a warning from relevant authorities if my home was about to flood	7.8	6.5
A flood a few centimetres above ground floor level that happened really quickly but then subsided really quickly wouldn't really affect me	2.5	4.1

Base: Total (n=2,789). "The following are some statements that people have said about flooding in Melbourne. For each, please indicate how strongly you agree or disagree with the statement, on a scale from 0 to 10 where 0 is 'strongly disagree' and 10 is 'strongly agree'." Scores significantly higher than the total are shaded green; scores significantly lower are shaded grey.

Underpinning these attitudes to an extent, those in the "Look after me" segment have flooding experience that is on a par with the average: 54% not having experienced a flood at their current home (versus the total of 55%).

Further, as shown in Figure 44 Perceived Flood Risk "Look after me" below, those in the "Look after me" segment's perception of flood risk is significantly lower than others when considering flood levels above ground floor level (2.1 versus 2.5 for the total, 1.2 versus 1.7 for the total and 0.7 versus 1.3 for the total).

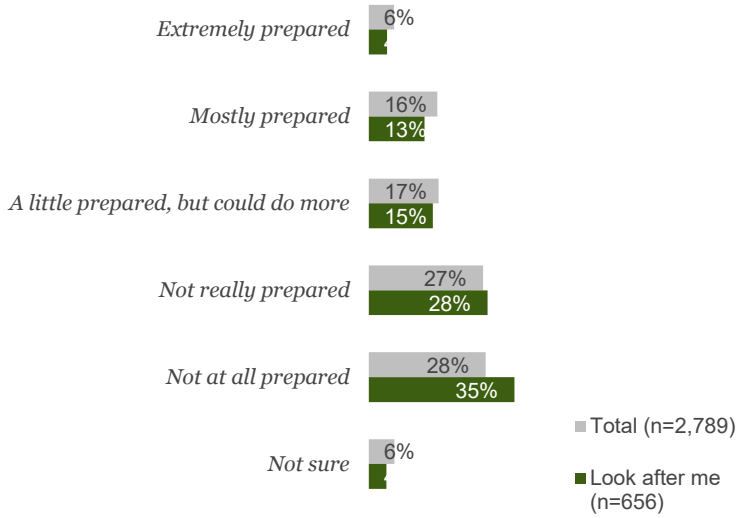
Figure 44. Perceived Flood Risk "Look after me"



Base: Total. "We are interested if the impact on you would be different with different levels of flooding. Think about the impact on you, your family, your day-to-day life and your house and contents. Use the scale below where 0 is 'no impact at all' to 10 being 'catastrophic impact' to rate the amount of impact for each level listed."

As shown in Figure 45 Flood Preparedness "Look after me" below, more than one in three (35%) of those in the "Look after me" segment feel 'not at all prepared' for a flood; significantly greater than the total (28%).

Figure 45. Flood Preparedness "Look after me"



Base: Total. "How prepared do you feel you and your household are for a flood at the home or property where you currently live?"

This lack of preparedness is consistent with more in "Look after me" believing that the responsibility for preparation lies with others. This is despite this segment also being significantly more likely to be aware

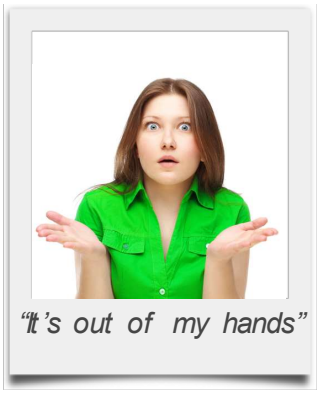
of a range of flood minimisation strategies. So while aware of the strategies, implementation is on a par with the total.

This segment also knows who to contact for more information and who to contact during a flood.

Interestingly, while believing it is the responsibility of others to look after them, those in the “Look after me” segment perceive the highest level of impact from a flood 2-3 centimetres above ground floor level (6.9 out of 10); significantly higher than the total of 6.2. So while this segment recognises the likely impact, they are doing less to prepare, as they do not believe it is up to them to do so.

Demographically there are some skews: this segment has significantly more are aged 55 years and over (46% versus the total of 36%). Those in the “Look after me” segment are also significantly more likely to own their home outright (40% versus the total of 34%).

5.13 Segment 4: "It's out of my hands"



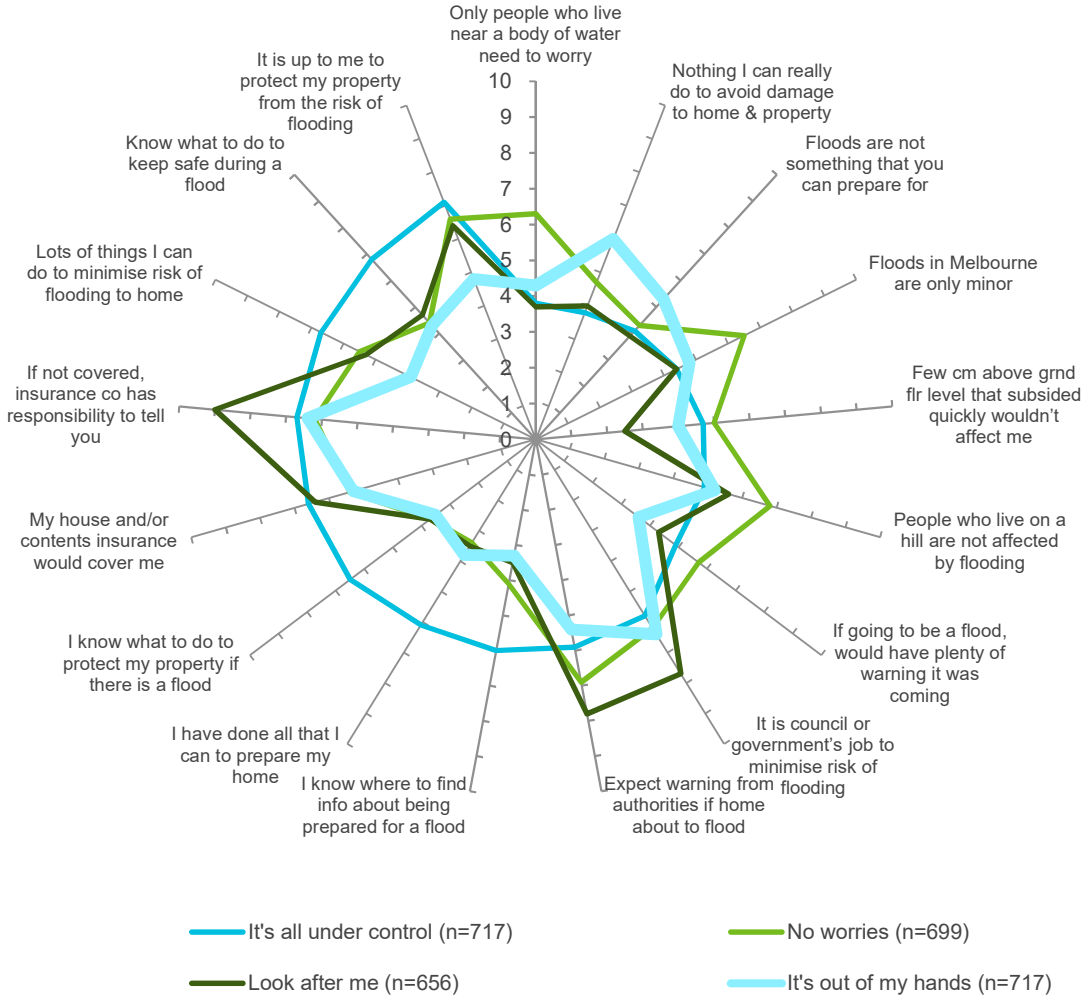
Those in the **"It's out of my hands"** segment are highly disengaged; giving little thought to flood risk. They also have little sense of control over flood risk, feel that there is nothing they can really do to prepare or minimise their risk, and do not know where to find information.

While this segment does not necessarily feel that they are protected by not living near a body of water or in a low lying area, this is because they have given little thought to flood risk. Similarly, they also do not feel that others should be responsible for minimising the risk, because they do not feel that there is anything that can be done or that anything should be done.

As shown in Figure 46 Attitudes Towards Flooding – "It's out of my hands" and Table 8 Attitudes Towards Flooding – "It's out of my hands" below, "It's out of my hands" are:

- significantly more likely than the total to agree that "There is nothing I can really do to avoid damage to my home and property from a flood" and "Floods are not something that you can prepare for"; and
- significantly less likely to agree with all other statements, except "A flood a few centimetres above ground floor level that happened really quickly but then subsided really quickly wouldn't really affect me".

Figure 46. Attitudes Towards Flooding – "It's out of my hands"



Base: Total (n=2,789). "The following are some statements that people have said about flooding in Melbourne. For each, please indicate how strongly you agree or disagree with the statement, on a scale from 0 to 10 where 0 is 'strongly disagree' and 10 is 'strongly agree'."

Table 8. Attitudes Towards Flooding – "It's out of my hands"

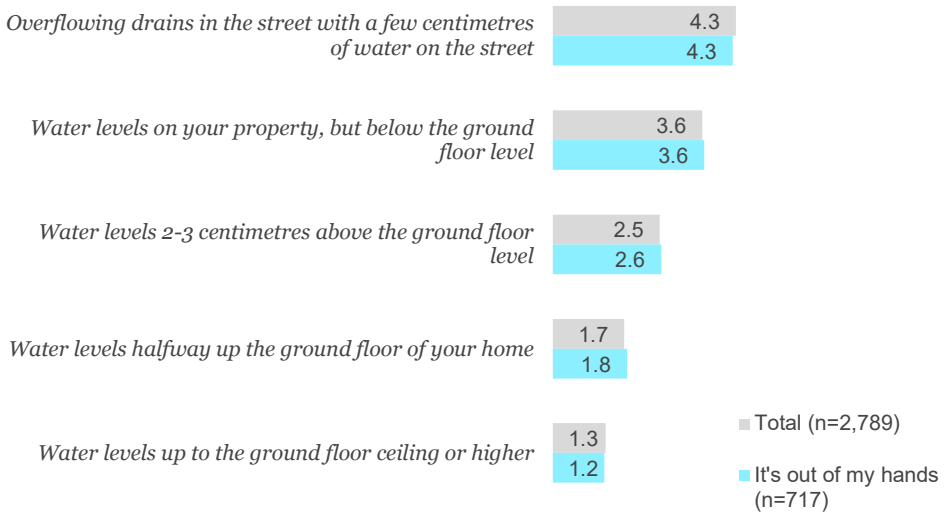
Flood Attitudes (Average Agreement)	It's out of my hands (n=717)	Total (n=2,789)
There is nothing I can really do to avoid damage to my home and property from a flood	6.0	4.6
Floods in Melbourne are only minor	4.8	5.0
People who live on a hill are not affected by flooding	5.2	5.6
Only people who live near a body of water (creek, river, lake or beach) need to worry about flooding	4.3	4.5
It is the council or government's job to minimise the risk of flooding	6.4	6.5
If there was going to be a flood, you would have plenty of warning that it was coming	3.6	4.6
If you are not covered for flood damage, the insurance company has a responsibility to tell you that	6.4	7.1
It is up to me to protect my property from the risk of flooding	4.8	6.2
There are lots of things I can do to minimise the risk of flooding to my home	3.9	5.3
I have done all that I can to prepare my home for a flood	3.8	4.2
I know what to do to protect my property if there is a flood	3.5	4.4
I know what to do to keep myself and my family safe during a flood	4.3	5.1
Floods are not something that you can prepare for	5.3	4.4
My house and/or contents insurance would cover me if my home or property were damaged by flood	5.3	5.9
I know where to find information about being prepared for a flood	3.3	4.3
I would expect to get a warning from relevant authorities if my home was about to flood	5.4	6.5
A flood a few centimetres above ground floor level that happened really quickly but then subsided really quickly wouldn't really affect me	4.0	4.1

Base: Total (n=2,789). "The following are some statements that people have said about flooding in Melbourne. For each, please indicate how strongly you agree or disagree with the statement, on a scale from 0 to 10 where 0 is 'strongly disagree' and 10 is 'strongly agree'." Scores significantly higher than the total are shaded green; scores significantly lower are shaded grey.

Underpinning these attitudes to an extent, those in the "It's out of my hands" segment have less experience with flooding. Significantly more (59%) have not experienced a flood at their current home (compared to the total of 55%).

Along with having experienced less flooding, as shown in Figure 47 Perceived Flood Risk "It's out of my hands" below, those in the "It's out of my hands" segment have average perceptions of their flood risk.

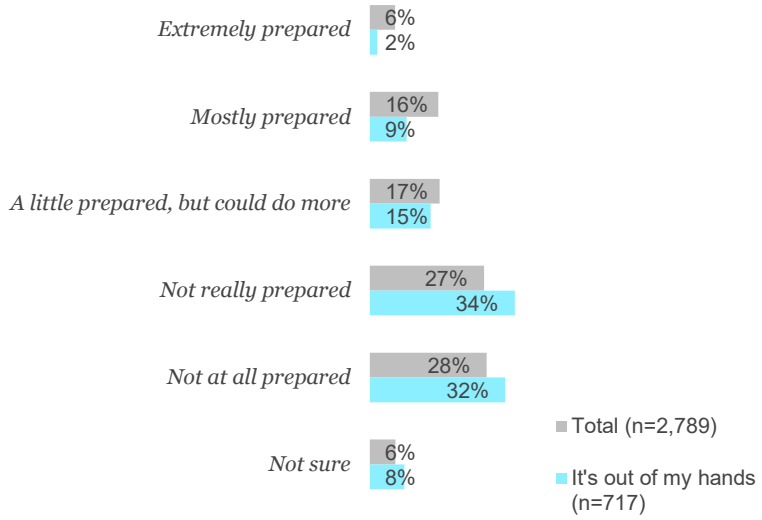
Figure 47. Perceived Flood Risk "It's out of my hands"



Base: Total. "We are interested if the impact on you would be different with different levels of flooding. Think about the impact on you, your family, your day-to-day life and your house and contents. Use the scale below where 0 is 'no impact at all' to 10 being 'catastrophic impact' to rate the amount of impact for each level listed."

Further, as shown in Figure 48 Flood Preparedness "It's out of my hands" below, two in three (66%) do not feel prepared for a flood (not really or not at all prepared): significantly greater than the total (55%).

Figure 48. Flood Preparedness "It's out of my hands"



Base: Total. "How prepared do you feel you and your household are for a flood at the home or property where you currently live?"

This lack of preparedness is consistent with more in the "It's out of my hands" segment feeling that there is not anything that they can do to prepare or any way to avoid damage to their home or property from a flood.

This segment is also significantly more likely to:

- be unaware of any of the risk minimisation strategies presented (13% aware of 'none of these' versus the total of 8%);
- not know whom to contact for more information about preparing for a flood (22% versus the total of 13%); and
- not know whom to contact during a flood (11% versus the total of 7%).

Finally, this those in the "It's out of my hands" segment are also significantly less likely to agree "I could cope with a flood if I was prepared" (5.3 versus the total of 6.0). This suggests that for this segment, lack of preparedness is due to both a lack of knowledge about what to do, but also a lack of motivation, as they do not necessarily see a benefit from being prepared.

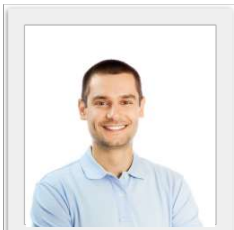
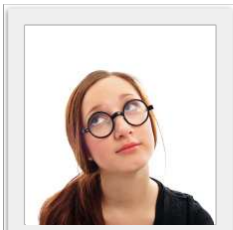
Demographically there are some skews: this segment has significantly more who are renting (29% versus the total of 26%), and significantly more who are singles / couples with no children (42% versus the total of 38%). In terms of age and gender they are consistent with the total.

5.14 Implications for communications

Understanding that there are different types of residents with different sets of attitudes towards flood risk will help Melbourne Water design communications that speak to all of these segments. Note that this may require multiple pieces of communication, each focused on a different segment.

The table below, Table 9 Implications for communications by segment, summarises the implications for communications for each of the segments identified.

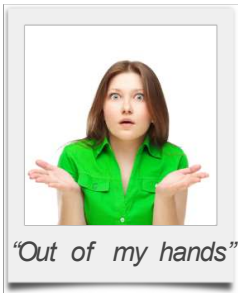
Table 9. Implications for communications by segment

 *"All under control"*	Because this segment takes responsibility and takes action, they are likely to be receptive to communication and content if it is thorough and goes beyond what they have already done / are aware of. For example, while residents in this segment have done well more than others, relatively few have an emergency action plan or an evacuation kit. More 'basic' or 'beginner' communications might be disregarded as something they already know or have already done. It will be also important to educate this segment about the potential impact of a flood 2-3 centimetres above ground floor level to motivate more risk minimisation actions.
 *"No worries"*	This segment feels they have less control, are less informed and are less prepared because they do not feel that they need to be. So the focus of communications should be on raising their awareness of flood risk and that there are actions that they can take. Initially focusing on the simplest, lowest effort risk minimisation strategies would likely have the most success for this segment. Communications also need to address the potential false sense of security that they are not at risk because they are on a hill, do not live near a body of water, etc.

"Look after me"

While those in this segment have taken some action, they could do far more. Communications to this segment need to emphasise that leaving it to others is not enough and that personal action and responsibility is also important.

So while aware of many risk minimisation strategies, and appear aware of the impact of flooding, they need to be encouraged to actually take steps to protect themselves.



"Out of my hands"

Residents in this segment have done very little to minimise their risk of flooding. Communications need to focus on raising awareness of flood risk generally and then focus on empowerment: making them aware that they do have some control over their flood risk / control over protecting their home and property from damage.

While they also need to be educated about risk minimisation strategies generally, it will be critical to convince this segment that those strategies are something that they can do and something that will actually benefit them.

6. APPENDICES

6.1 Qualitative Exploration Discussion Guide

PROJECT READY
Discussion Guide
FINAL 29-05-15

Overriding objective: To develop insights that can be used as direct input into the development of an initiative aimed at building awareness, education and action into flood readiness; includes evaluating MW's definition of 'flood readiness' and understanding how aware and prepared the community needs to be and how to get there.

Section	Discussion	Stimulus/ Exercise	Timing
1. Introduction & warm up Obj: To set the scene about how the group will work	• Introduce self, Latitude Insights and purpose of project • No right or wrong answers, recording for review • Anonymity and confidentiality • Confirm group length (1½ - 2 hours) • Confirm topic: natural disasters and extreme events • Introductions: Each person to introduce themselves and share something about themselves (job, suburb)		**5 mins**
2. Natural disasters Obj: To understand the perceptions of flooding in the context of other natural disasters	• Awareness of natural disasters. *When I say "natural disasters" or "extreme events", what sort of things come to mind?* [MODERATOR TO WRITE DOWN A LIST ON THE WHITEBOARD] • Relevance to them. *And which of these are relevant to you and your life? Which ones should you personally be concerned about?* • Reasons for relevance. Explore why certain events are more relevant than others. eg *What makes bushfires in Victoria more relevant to you personally? What about earthquakes? In what way are they or are they not relevant to you? What about cyclones? What about flooding?* • Relevance of flooding. *What about flooding? How relevant is that to you personally? Has anyone here experienced it? Are you at risk of flooding in your home? How does flooding compare to other natural disasters and extreme events?*		**5 mins**
3. Emotional response to a flooding event Obj: To elicit the emotional response from the community when faced with a flooding event	• Introduce imagery & footage of a flooding event. *I'm going to show you some photos of floods that have recently happened in Sydney and Brisbane.* [SHOW PHOTO BOARDS] • Elicit emotional response. *What are the thoughts going through your mind as you are seeing these images? Tell me a bit about how you are feeling. How do you think the people that are experiencing it are feeling right now?* • Outcome & impact. *What do you think would be the impact of something like this? What sort of damage is done? How long would it take to recover form this?* • Relevance. *How relevant is something like this to you personally? Could this happen to you? Why/ why not?*	Photo boards.	**15 mins**

152-037 Discussion guide FINAL 150529

Latitude

Section	Discussion	Stimulus/ Exercise	Timing
4. 'Readiness' ideation Obj: To brainstorm the practicalities of being 'flood ready'	• Introduce word association exercise. *I'd like you to help me brainstorm what 'being flood ready' means. Let's complete this by writing our thoughts and ideas on to post-it notes. Put one single thought or idea on each Post-It note and stick them on the table in front of you. Then we'll talk about them as a group.* *On each Post-It note, I'd like you to write a thought or idea that relates to what being 'flood ready' means in a practical sense? What sort of things would you be doing to prepare for that type of event, even if you think you are never going to be flooded? Anything that comes to mind.* [ALLOW APPROX 5 MINS FOR INDIVIDUALS TO COMPLETE THIS TASK] • Word sort exercise. *I now want to take these and group them somehow. Let's start with one thought or idea that someone had and stick it up over here. Anything similar?* Continue until all Post-It notes have been grouped into like topics. Then re-group the topics into broader themes (eg physical actions, financial actions, emotional actions).	Projective technique: Word association Activity: word sort exercise	**15 mins**
5. Evaluate 'flood readiness' definition Obj: To evaluate the definition of 'flood readiness' that MW have prepared and identify improvements	• Introduce definition. *I'd like to spend a bit of time on the idea of being 'flood ready' and what that actually means. Here is a definition of what being 'flood ready' could mean. I'd like to run it past you and get your thoughts on it.* [READ OUT DEFINITION] • First reactions. *What are your first thoughts when I read that out to you?* • Comprehension. *What does this all mean? Does it make sense to you? What do you think they want you to do?* • Resonating elements. *What are the key points in this that really stood out for? What makes you want to know more or do more?* • Confusions. *Is there anything in here that is confusing or that you would just dismiss? What are they?*	Board with definition	**10 mins**

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Latitude

Section	Discussion	Stimulus/ Exercise	Timing
6. Evaluate SES flood ready plan Obj: To explore perceptions of the current flood ready plan by SES and its appropriateness/ relevance	• Introduce SES plan. *Here's a copy of the SES FloodSafe Guide which advises you on what to do to be 'flood ready'. Have a quick read and let me know your thoughts on this.* • Open discussion. *First thoughts, positive, negatives.* • Capability. *How capable to you feel to be able to action some of these points? Do you understand what they are asking you to do? Why, why not?* • Opportunity. *Can you physically achieve these things? Do you have the means to actually make some of these things happen? Could you afford to do these?* • Motivation. *Are these things you feel you want to do or should do? Is it relevant to you or not?* • Incorporating their ideation. *Looking back at the post-it note exercise we did, were there any other things that we thought would be good action points to be 'flood ready' that haven't been included in the SES outline? What are they? Do you feel capable, motivated and have the opportunity to achieve that? Why or why not?*	SES FloodSafe Guide	**15 mins**
7. Explore key messaging ideas Obj: To identify the key messaging elements that could be used in comms to motivate 'flood readiness'	• Introduce 'Flood Fact Sheet' stimulus. *I'm going to show you a series of boards with some facts and figures on them and I'd like to get your thoughts and feedback about.* [SHOW FLOOD FACT SHEET BOARD] • Spontaneous reactions. *First thoughts to these 'facts and figures'. Did you know this? Does this come as a surprise?* • Emotional resonance. *How does this make you feel, hearing about this? Does it make you think differently about flooding in Melbourne?* • Show Andrew Serratore video - https://www.youtube.com/watch?v=giLbi2XUPYc#t=103. *I'm going to show you a video of someone who's been through a flooding situation and I wanted you to hear his story.* [SHOW VIDEO – ALLOW 5 MINS] • Open discussion as per above – *spontaneous reactions, emotional resonance.*	Flood fact sheet	**20 mins**
8. Highlighting those 'at risk' Obj: To confirm the messaging among those 'at risk'	AMONG THE 'AT RISK' GROUPS ONLY, IF NOT ALREADY RAISED • Awareness. *How would you feel if I told you that you were in a high or extreme flood risk area. Does that surprise you? How does it make you feel?* • Change in attitude. *Does it make you feel differently about wanting to be more 'flood ready' than you are now. Why/ why not?*		**5 mins**
9. Close Obj: To close the discussion	• Final questions/ comments from participants • Final questions/ comments from client • Thank & provide incentives		**5 mins**

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6.2 Quantitative Benchmarking Questionnaire

Latitude INSIGHTS	152-037 Melbourne Water
	Flood Ready Questionnaire
	Benchmark V1
	26-June-2015

COMMENTS SHADED IN GREY ARE NOTES TO THE READER FOR CONTEXT PURPOSES. THEY WILL NOT BE DISPLAYED TO THE RESPONDENT.

OBJECTIVES

To develop and quantify a set of relevant and repeatable measures that can be used as a benchmark against which to evaluate the success of the proposed communications campaign, particularly with respect to changes in levels of awareness, attitudes and behaviours of flood readiness.

Note that many of these questions will be cross-tabbed against currently classified 'flood prone' and 'not flood prone' properties for analysis purposes.

INTRODUCTION

Thank you for agreeing to participate in this survey, which will take no more than 15 minutes of your time. Please rest assured that we are not trying to sell you anything, and that your responses to these questions will be used along with hundreds of others. All responses are kept confidential and are collected in accordance with the principles and guidelines as set out by the Australian Social and Market Research Society (AMSRS).

SCREENER

Q1 **Before we get started, do you or your immediate family work in any of the following industries?**

Please select all that apply. [MR, RANDOMISE]

Advertising, PR, or public relations	1
Automotive	2
Banking	3
Fashion manufacturing or retailing	4
Market research	5
Telecommunications	6
Utilities (water)	7
Utilities (energy – gas or electricity)	8
Utilities (telecommunications)	9
[ANCHOR] None of these	98

CLOSE IF CODES 1, 5 OR 7 IN Q1.

Q2 **Who is responsible for managing your household? By that I mean paying bills, making decisions on services for your property, purchasing insurance, etc. Are you...? [SR]**

Solely responsible for managing the household	1
Jointly responsible for managing the household	2
Not at all responsible for managing the household	3

CLOSE IF CODE 3 IN Q2.

Q3 **Which of the following best describes your residency in the greater Melbourne area. [SR]**

I am a citizen or resident who lives permanently in the Melbourne area	1
I am a temporary visitor to the Melbourne area	2
Neither of these	3

CLOSE IF CODES 2 OR 3 IN Q3.

Q4 **What is your postcode? [TYPE IN]**

ENSURE POSTCODE MATCH WITH DATABASE LIST AGAINST ELIGIBLE POSTCODES.
CLOSE IF NO MATCH.

DEFINITION

Thanks for answering those few questions. We'd like to talk more about flooding. When we refer to flooding, we mean water coming into your home or property from outside such as from heavy rain or a storm. We don't mean flooding as a result of faulty plumbing or household accidents within the home.

In addition, by 'flooding' we mean water rising up from ground level. For example, if your roof collapsed due to heavy rain, this is not 'flooding' for the purposes of this survey.

Q5 **Thinking about the home or property at which you live, at what point do you believe the amount of water would be classified as a 'flood'?**

Click on and drag the slider below to raise and lower the water level. [SR]

AWARENESS AND RISK

Q6 **To the best of your knowledge, is the home or property where you currently live at risk of flooding or may be affected by flooding? That is, are you in a 'flood prone' area?**

Remember that when we talk about 'flood' we mean water coming into your home or property from outside such as from heavy rain or a storm, and water rising from ground level, not flooding as a result of faulty plumbing or household accidents. [SR]

Yes	1
No	2
Not sure	3

ASK Q7 OF THOSE WHO SELECTED CODE 2 OR 3 IN Q6. OTHERS GO TO Q8.

Q7 **What makes you feel you are not at risk of flooding?**

Select all that apply. [RANDOMISE RESPONSES. MR]

I live on a hill	1
I do not live near a body of water (creek, river, lake, beach)	2
We have effective drainage in the street I live in	3
I do not live in a low lying area	4
I have investigated with an authority about my property's flood risk	5
I have never been told that I live in in a flood prone area	6
I have never had a problem with flooding in the property I live in before	7
It does not flood in my area	8
[ANCHOR] Something else (please tell us_____)	98
[ANCHOR] Not sure	99

ASK ALL

Q8 **On a scale from 0 to 10, where 0 is 'extremely unlikely and 10 is 'extremely likely', how likely is it that the home or property where you live will experience one of the following flood levels in the next 10 years? [SR PER LEVEL]**

Extremely Unlikely										Extremely likely
0	1	2	3	4	5	6	7	8	9	10
										0-10 SCORE
Overflowing drains in the street with a few centimetres of water on the street										
Water levels on your property, but below the ground floor level										
Water levels 2-3 centimetres above the ground floor level										
Water levels halfway up the ground floor of your home										
Water levels up to the ground floor ceiling or higher										

Q9 **Which of the following have you ever experienced at your current home or property where you live?**

Select all that apply. [MR]

Overflowing drains in the street with a few centimetres of water on the street	1
Water levels on your property, but below the ground floor level	2
Water levels 2-3 centimetres above the ground floor level	3
Water levels halfway up the ground floor of your home	4
Water levels up to the ground floor ceiling or higher	5
[EXCLUSIVE] I haven't experienced any of these	6

PREPAREDNESS

Q10 **How prepared do you feel you and your household are for a flood at the home or property where you currently live?**

Remember that when we talk about 'flood' we mean water coming into your home or property from outside such as from heavy rain or a storm, and water rising from ground level, not flooding as a result of faulty plumbing or household accidents. [SR]

Extremely prepared	1
Mostly prepared	2
A little prepared, but could do more	3
Not really prepared	4
Not at all prepared	5
Not sure	99

ASK Q11 IF CODES 3, 4 OR 5 SELECTED IN Q10. OTHERS GO TO Q12.

Q11 **What are the reasons you do not feel prepared for a flood?**

Select all that apply. [RANDOMISE RESPONSES. MR]

No need as I'm not in a flood prone area	1
I haven't thought about it before	2
I'm not sure what to do	3
I've thought about but haven't gotten around to it yet	4
I don't think it's necessary	5
[ANCHOR] Something else (please tell us_____)	98

ASK ALL.

Q12 **The following are some statements that people have said about flooding in Melbourne. For each one, please indicate how strongly you agree or disagree with the statement, on a scale from 0 to 10 where 0 is 'strongly disagree' and 10 is 'strongly agree'.**

[RANDOMISE STATEMENTS. SR PER STATEMENT. DISPLAY 4 – 5 STATEMENTS PER PAGE]

Strongly disagree										Strongly agree
0	1	2	3	4	5	6	7	8	9	10
										0-10 SCORE
a.	There is nothing I can really do to avoid damage to my home and property from a flood									
b.	Floods in Melbourne are only minor									
c.	People who live on a hill are not affected by flooding									
d.	Only people who live near a body of water (creek, river, lake or beach) need to worry about flooding									
e.	It is the council or government's job to minimise the risk of flooding									
f.	If there was going to be a flood, you would have plenty of warning that it was coming									
g.	If you are not covered for flood damage, the insurance company has a responsibility to tell you that									
h.	It is up to me to protect my property from the risk of flooding									
i.	There are lots of things I can do to minimise the risk of flooding to my home									
j.	I have done all that I can to prepare my home for a flood									
k.	I know what to do to protect my property if there is a flood									
l.	I know what to do to keep myself and my family safe during a flood									
m.	Floods are not something that you can prepare for									
n.	My house and/or contents insurance would cover me if my home or property were damaged by flood									
O	I know where to find information about being prepared for a flood									
P	I would expect to get a warning from relevant authorities if my home was about to flood									
Q	A flood a few centimetres above ground floor level that happened really quickly but then subsided really quickly wouldn't really affect me									

Q13 **There are a number of ways to minimise the risk of flood damage to your home. Before today, which of the following were you aware of as ways to minimise the risk of flooding and the potential damage from flooding?**

Select all that apply. [RANDOMISE RESPONSES. MR]

Regular cleaning and maintenance of drains on my home	1
Regular cleaning and maintenance of gutters on my home	2
Ensuring there is sufficient drainage on my home	3
Clearing debris from around your home	4
Having an emergency action plan in case of flooding	5
Having supplies ready to stem the flow of water (mops, sandbags)	6
Considering flood risk and drainage when building / renovating	7
Checking to see if my home is in a flood prone area	8
Protecting valuables by moving them 'up high'	9
Making sure I have appropriate and sufficient insurance in case of flood	10
Prepared an emergency kit	11
Making sure my home is landscaped properly	12
[ANCHOR] I wasn't aware of any of these	99

Q14 **And which of the following have you done to minimise the risk of flooding and the potential damage from flooding?**

Select all that apply. [PIPE RESPONSES FROM Q13. RANDOMISE RESPONSES. MR]

Regular cleaning and maintenance of drains on my home	1
Regular cleaning and maintenance of gutters on my home	2
Ensuring there is sufficient drainage on my home	3
Clearing debris from around your home	4
Having an emergency action plan in case of flooding	5
Having supplies ready to stem the flow of water (mops, sandbags)	6
Considering flood risk and drainage when building / renovating	7
Checking to see if my home is in a flood prone area	8
Protecting valuables by moving them 'up high'	9
Making sure I have appropriate and sufficient insurance in case of flood	10
Prepared an emergency kit	11
Making sure my home is landscaped properly	12
[ANCHOR] I have not done any of any of these	99

Q15 **How often do you discuss the potential for flooding in your area with family, friends or neighbours? [SR]**

Often	1
Sometimes	2
Rarely	3
Never	4

Q16 **Who would you contact to find out more information about preparing for a flood?**

Select all that apply. [RANDOMISE RESPONSES. MR]

Bureau of Meteorology	1
Emergency services (police, fire brigade)	2
State Emergency Services (SES)	3
Local council	4
State Government	5
Water Retailer (South-East Water, City West Water, Yarra Valley Water)	6
Melbourne Water	7
Insurer	8
Department of Human Services	9
A friend / family / neighbour	10
[ANCHOR] Other (please tell us_____)	98
[ANCHOR] Not sure	99

PERCEIVED IMPACT OF FLOODING

Q17 **Imagine for a moment, your home experienced a flood of 2-3 centimetres above ground floor level. What do you think the impact of that would be on you and your family?**

Remember that when we talk about 'flood' we mean water coming into your home or property from outside such as from heavy rain or a storm, and water rising from ground level, not flooding as a result of faulty plumbing or household accidents. [OPEN]

Q18 **We are interested if the impact on you would be different with different levels of flooding.**

Think about the impact on you, your family, your day-to-day life and your house and contents.

Use the scale below where 0 is 'no impact at all' to 10 being 'catastrophic impact' to rate the amount of impact for each level listed. [SR PER LEVEL]

No impact at all									Catastrophic impact	
0	1	2	3	4	5	6	7	8	9	10
									0-10 SCORE	
Overflowing drains in the street with a few centimetres of water on the street										
Water levels on your property, but below the ground floor level										
Water levels 2-3 centimetres above the ground floor level										
Water levels halfway up the ground floor of your home										
Water levels up to the ground floor ceiling or higher										

Q19 **Imagine your home experiences a flood where your ground floor is covered with 2-3 cm of water.**

On a scale from 0 to 10 where 0 is 'strongly disagree' and 10 is 'strongly agree' how strongly do you agree with each of the following statements about a flood 2-3 cm above your ground floor level.

[RANDOMISE STATEMENTS. SR PER STATEMENT. DISPLAY 4 – 5 STATEMENTS PER PAGE]

	Strongly disagree									Strongly agree	
	0	1	2	3	4	5	6	7	8	9	10
										0-10 SCORE	
a.	It would be a hassle to be flooded but there are worse things										
b.	It would cause an enormous strain on me and my family if we were flooded										
c.	The thought of being flooded makes me really anxious										
d.	I get stressed out when it rains in case I get flooded										
e.	Being flooded wouldn't be as bad as being caught in a bushfire										
f.	A flood would be a widespread event affecting lots of people in my area or neighbourhood										
g.	It could take a few months to recover from a flood										
h.	It could take a few years to recover from a flood										
i.	A flood would make it difficult to get around – to work, to school, to other family or friends' houses										
k.	A flood would make my property value plummet										
l.	A flood would make my insurance premiums skyrocket										
M	I could cope with a flood if I were prepared										

Q20 **Who would you contact for help during a flood?**

Select all that apply. [RANDOMISE RESPONSES. MR]

Bureau of Meteorology	1
Emergency services (police, fire brigade)	2
State Emergency Services (SES)	3
Local council	4
State Government	5
Water Retailer (South-East Water, City West Water, Yarra Valley Water)	6
Melbourne Water	7
Insurer	8
Department of Human Services	9
A friend / family / neighbour	10
Landlord / real estate agent	11
[ANCHOR] Other (please tell us_____)	98
[ANCHOR] Not sure	99

Q21 **If you did experience damage / loss to your home or other property from a flood, would your house and / or contents insurance cover you for that? [SR]**

Yes – I am absolutely sure	1
Yes – I think so	2
No	3
Not sure	99

COMMUNICATIONS

Q22 **Do you recall any advertising or information about the risk of floods in the last few months? [SR]**

Yes	1
No	2
Not sure	99

IF SELECTED CODE 1 IN Q22, ASK Q23. OTHERS GO TO Q24.

Q23 Where did you see this advertising or information?

Select all that apply. [RANDOMISE CHANNELS. MR]

Television	1
Radio	2
Newspaper	3
Website	4
Social media (Facebook, Twitter)	5
Word-of-mouth (family, friend, neighbour, colleague)	6
Letter box drop	7
[ANCHOR] Something else (please tell us_____)	98
[ANCHOR] Not sure	99

Q24 And assuming you wanted to receive information, how would you want to receive information about preparing for a flood?

Select all that apply. [RANDOMISE RESPONSES. MR]

Television advertising	1
Television news program	2
Radio advertising	3
Radio news program	4
Newspaper advertising	5
Newspaper article	6
Online advertising	7
Melbourne Water website	8
Social media (Facebook, Twitter)	9
Word-of-mouth (family, friend, neighbour, colleague)	10
Letter box drop	11
[ANCHOR] Something else (please tell us_____)	98
[ANCHOR] Not sure	99

Q25 And what information do you feel would help you to prepare for a flood?

Select all that apply. [RANDOMISE RESPONSES. MR]

Steps to take to minimise the impact of a flood	1
Steps to take to avoid flooding / minimise the risks of flooding	2
What to do if your home floods	3
What NOT to do if your home floods	4
What items to put in an emergency / evacuation kit	5

Who to contact if your home floods	6
[ANCHOR] Something else (please tell us_____)	98
[ANCHOR] Not sure	99

DEMOGRAPHICS

Thanks for all your answers so far! We have just a few final questions to better understand who you are and the area you live in.

Q26 Are you...

Male	1
Female	2

Q27 Which of the following best describes your age group? [SR]

Under 18 years	1
18 – 24 years	2
25 – 34 years	3
35 – 44 years	4
45 – 54 years	5
55 – 64 years	6
65 – 74 years	7
75 years or older	8

Q28 Which of the following best describes your home?

Single story house / townhouse	1
Multi story house / townhouse	2
Ground floor apartment	3
1st or 2nd floor apartment	5
Apartment on 3rd floor or higher	6
Other (please tell us_____)	98

Q29 And thinking about the home you live in ...

I own my home outright	1
I am paying a mortgage	2
I am renting	3
I live with others and do not pay rent	4
Other (please tell us_____)	98

Q30 **And is your home subject to any of the following? [SINGLE RESPONSE PER ROW]**

	Yes	No	Don't know
SBO (Special Building Overlay)	1	1	1
Inundation Overlay	2	2	2
Floodway Overlay	3	3	3

Q31 **Which of the following best represents your household structure? [SR]**

Younger family (most children under the age of 8 yrs)	1
Older family (most children between 8 – 21 yrs)	2
Mature family (most children over the age of 21 yrs)	3
Adult shared house	4
Single/Couples – No kids	5

Q32 **What is main language spoken at home? [SR]**

English	1
Other	2

Q33 **What is the highest level of education you have completed? [SR]**

Less than high school / still in high school	1
High school / Year 12	2
Certificate I / II	3
Certificate III / IV	4
Advanced diploma/Diploma	5
Graduate diploma/Graduate certificate	6
Bachelor degree	7
Postgraduate degree	8
Prefer not to answer	9

Q34 **What is your current employment status? [SR]**

Working full time	1
Working part time / casual	2
Looking for full time work	3
Looking for part time work	4

Don't work	5
Home duties	6
Retired	7
Student (not in employment)	8
Prefer not to answer	9

Q35 **This survey is being conducted on behalf of Melbourne Water. To better help Melbourne Water with their flood preparation strategy, can you please tell us your home address?**

It is a critical part of this study and your help here is really appreciated!

Remember your privacy is protected and your individual answers will not be provided to Melbourne Water in association with your address under any circumstances.

Your address will NOT be used for any other purpose except to determine whether or not you are in a flood prone area – which can vary from house to house!

We have your postcode as ..... [PIPE IN RESPONSE FROM Q4]

Please type in your suburb, street and house number.

Suburb

Street

House no

CLOSING

Thank you so much for completing this survey today.

This study has been conducted by Latitude Insights on behalf of Melbourne Water. If you have any other comments you would like to make about this survey or about the topic, please type them in the box below.

Please press >> to submit your responses.

Latitude Research Pty Ltd trading as
Latitude Insights | ABN 56 126 996 763
312 Waverley Road, Malvern East VIC 3145
Suite 8, 43 – 45 Burns Bay Rd, Lane Cove NSW 2066
p: +61 3 9571 1199 | p: +61 2 9420 2337
www.latitudeinsights.com.au