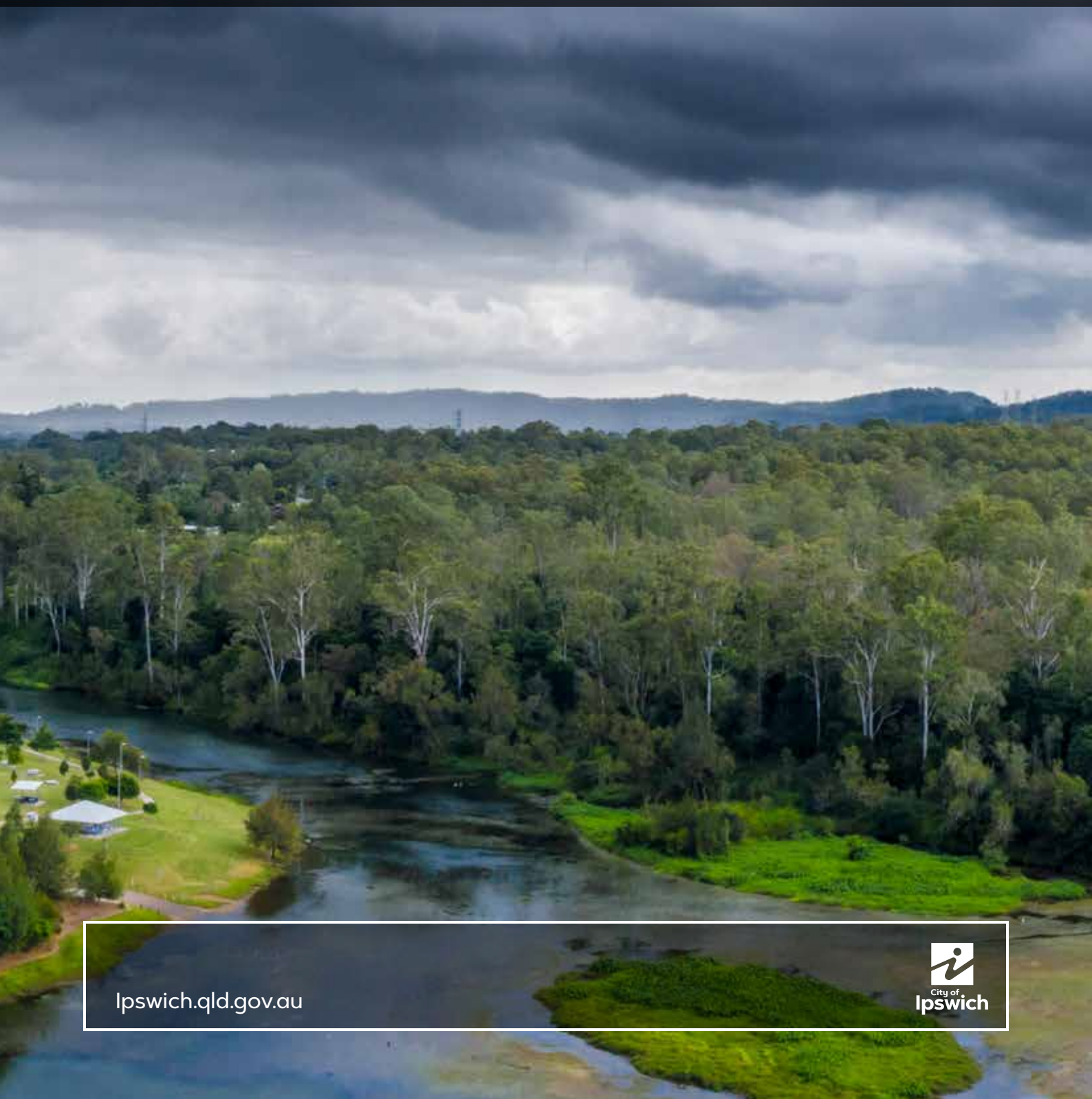




Community awareness and resilience

Discussion paper August 2020

Ipswich Integrated Catchment Plan



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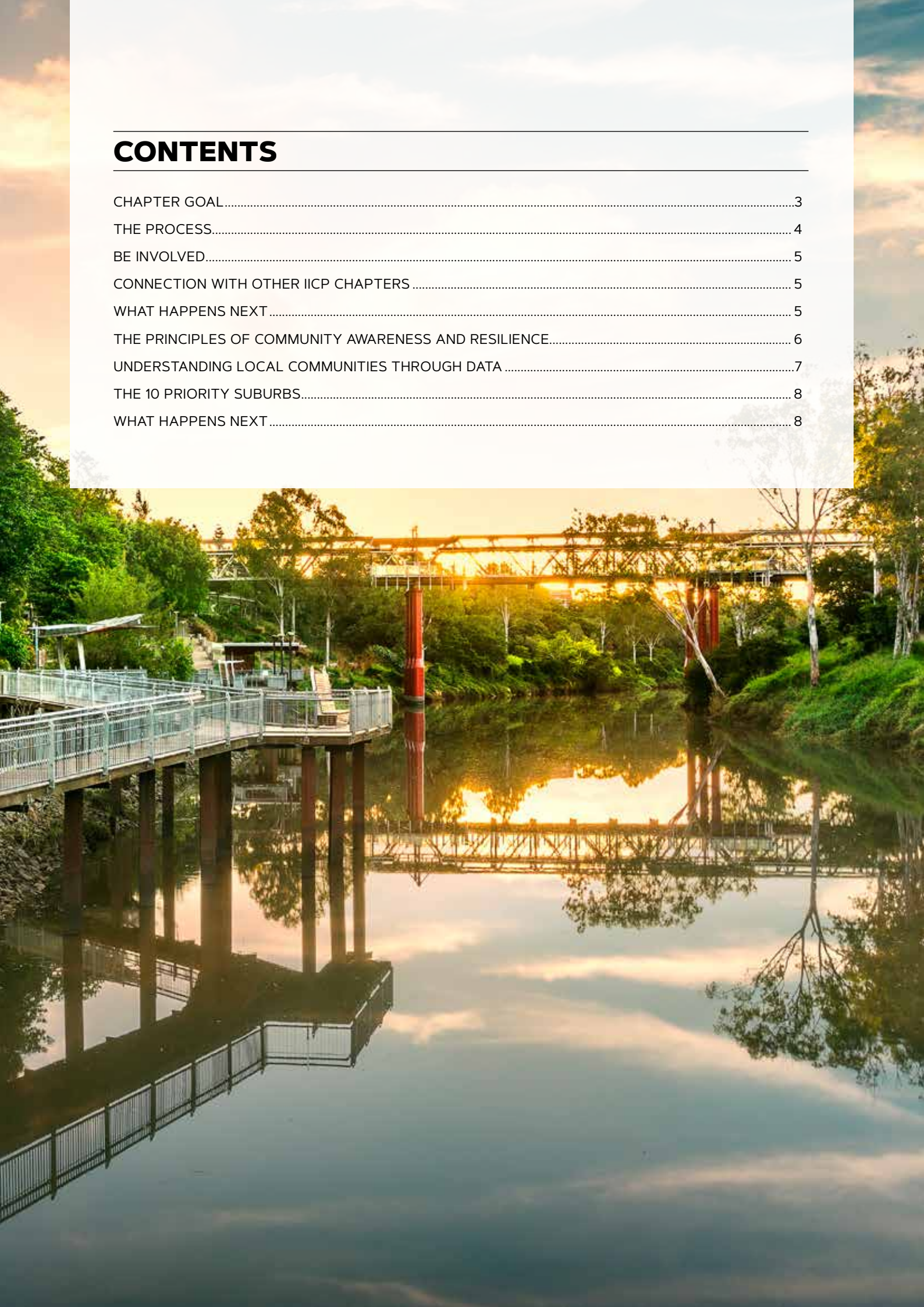
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CHAPTER GOAL

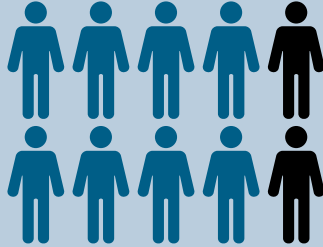
To provide strategies to increase community resilience in priority Ipswich suburbs most at risk of flooding.

MANAGING FUTURE FLOODS SURVEY

The survey had **190 respondents** from **51 Ipswich suburbs** in late 2019.



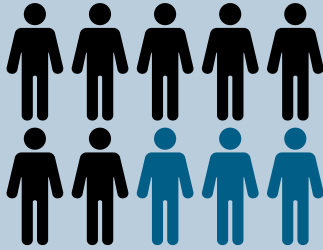
80% had experienced flood before.



Half said they would feel concerned if another major flood was about to happen.



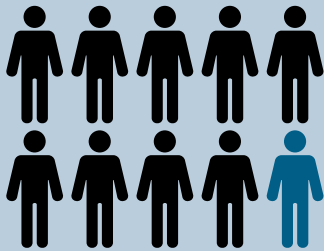
70% thought a flood bigger than **1974** or **2011** was possible.



70% also believed we would have a major flood **within a decade**.



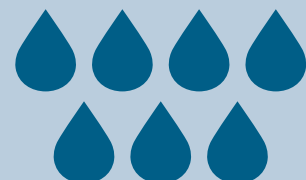
90% said they were responsible for their own safety during a flood.



More than half did not have a household emergency plan.

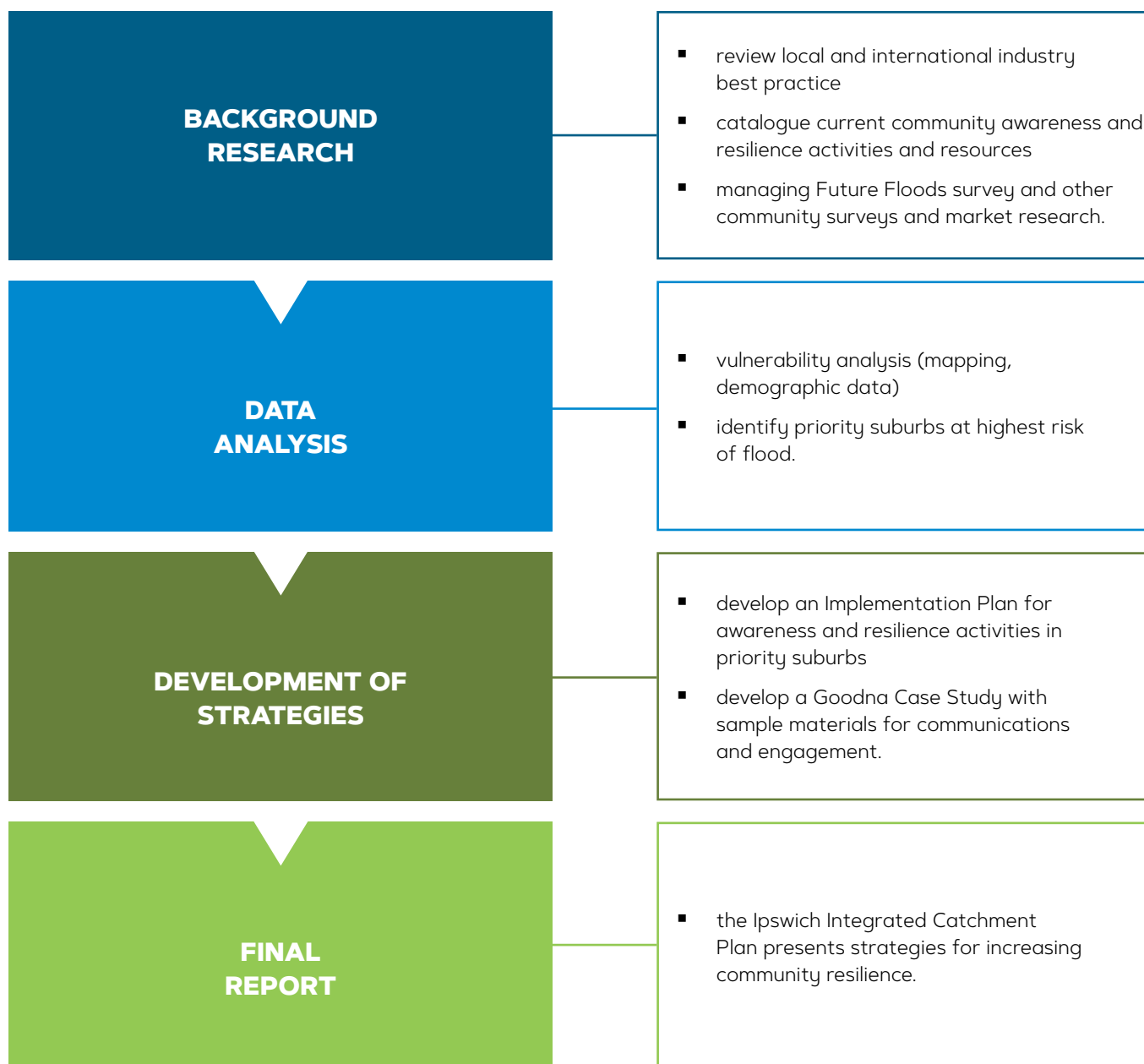


The most trusted sources of information in a flood were **Bureau of Meteorology, Police** and **State Emergency Service**.



THE PROCESS

A thorough understanding of the context of community awareness and resilience – from international frameworks through to results from our Managing Future Floods survey – has been vital for the development of community-based strategies.



WHAT WE FOUND

There is already significant work and research that has been undertaken, from the international stage through to local initiatives, to build community flood awareness and resilience. By drawing on extensive international, national, Queensland and local research and resources we were able to create a comprehensive picture of what we need to increase our own flood resilience and awareness. This has led to four principles: Awareness, Preparedness, Response and Recovery.

Computer modelling and historical records can tell us where fast-moving and dangerous flood water may flow. Census and other demographic data can tell us which parts of our communities are most vulnerable in terms of people's ability to prepare, respond and recover from a flood event.

By combining these flood risk and community factors we were able to determine priority Ipswich suburbs that require particular attention for community awareness and resilience programs.

From that, we will develop an Implementation Plan to build community awareness. This approach, tailored for each suburb, will consist of a suite of communication and engagement tools targeted at the suburb's particular vulnerabilities and flood risk characteristics.

The next step will be to provide a case study that goes into more detail about one priority suburb. We have selected Goodna because of its high flood risk. The purpose of this case study will be to demonstrate how the Implementation Strategy could be applied to a priority suburbs but still ensure consistency with regional flood messaging.

CONNECTION WITH OTHER IICP CHAPTERS

Emergency management – Flood responses such as effective communication of flood warnings and evacuation arrangements are an important component of community awareness and resilience.

Physical mitigation – While physical measures can be used to reduce flood risk, the reality is that Ipswich will always be at risk of flooding. It is vital that the community is prepared and can quickly recover from flooding events, and not over-reliant on physical measures.

Property specific actions – Ipswich suburbs with exposure to frequent and high-hazard flooding are being investigated for actions that can be taken at an individual property level. This supports resilience measures in priority suburbs.

Current and future flood risk – Significant work was undertaken to map flood risk and vulnerability indicators across Ipswich. This data then directly informs what community awareness and resilience responses would be most appropriate for targeted areas.

BE INVOLVED

Submissions on this and other IICP chapters can be made on the 'Managing Future Floods' page of Shape Your Ipswich.

The final Ipswich Integrated Catchment Plan report will be provided to Ipswich City Council in Q4 2020 for consideration.



THE PRINCIPLES OF COMMUNITY AWARENESS AND RESILIENCE

We reviewed industry best practice to develop a shared understanding of what “community awareness and resilience” means.

We are doing our bit towards achieving the ‘shared vision’ for catchment-wide community awareness and resilience, created by local councils and the State Government for the Brisbane River Strategic Floodplain Management Plan (BRSFMP):

Residents, businesses, community groups and governments working together to better manage flood risk and strengthen the resilience of our communities, our economy, our infrastructure and the environment.

The Torrens Resilience Institute provides a definition of resilience that:

Beyond the resilience of individuals or individual organisations, your community will prove resilient in the event of a severe emergency or disaster when members of the population are connected to one another and work together.

This ensures a community can:

- *function and sustain critical systems, even under stress*
- *adapt to changes in the physical, social or economic environment*
- *be self-reliant if external resources are limited or cut off*
- *learn from experience to improve over time.*

From this we have structured Ipswich’s community awareness and response activities based on four principles. We want Ipswich residents and businesses to have:

AWARENESS: Being aware of flood risk, past flood events and a high level of understanding of how water behaves. A community that has access to information needed to prepare and respond to a flood event.

PREPAREDNESS: Being prepared for a flood event with appropriate steps taken to respond to a flood hazard at any time. Plans allow for adaptability and resilience to the variable nature of flood risk.

RESPONSE: Being empowered to efficiently and effectively respond to a flood event, building on flood awareness and previously prepared response plans.

RECOVERY: High levels of tolerability and resilience that enables rapid recovery from a flood event, and the ability to adapt to future flood events as a recovery measure.

It is also important we develop a suite of activities that strengthen community participation and influence. Resilience is enhanced when communities play a key role in their own safety.

The National Strategy for Disaster Resilience Community Engagement Framework provides a range of approaches that can be used depending on the purpose and context of a situation.

These are across five outcomes:

INFORMATION

Sharing information between communities and agencies to come to a mutual understanding

PARTICIPATION

Building connected networks and relationships, ownership and trust through active involvement

CONSULTATION

Sharing information, questions or positions to obtain ideas, feedback, knowledge or understanding

COLLABORATION

Partnering with communities to support action, including developing alternatives and identifying a preferred solution

EMPOWERMENT

Individuals and communities have capacity to understand risk and accept responsibility and implement initiatives

UNDERSTANDING LOCAL COMMUNITIES THROUGH DATA

Each community in Ipswich has its own character and identity. Similarly, flooding affects each community in a different way.

Developing community awareness and resilience strategies is not a one-size-fits-all approach as each suburb has its own factors that need to be addressed.

It was important to gather and combine a range of information that helped determine technical and social factors affecting Ipswich suburbs – especially those most at risk during a flood event.

The data is important because an area that scores high in physical vulnerability drivers may require additional evacuation planning, whereas a suburb that has a large number of properties on flood islands may require a focus on creating emergency kits for sheltering in place.

The data and information included:

- regional market research through the Strategic Floodplain Management Plan. Ipswich was included in a telephone survey on key flood topics
- local feedback through the Managing Future Floods survey. This extended the regional market research and provided important information on Ipswich's understanding of flood
- comments and feedback from early consultation for the next Ipswich City planning scheme
- census data for key vulnerability indicators for Ipswich suburbs
- extensive modelling to map flood risk factors across Ipswich suburbs.

EXPOSURE FACTORS

Hydraulic Risk

Frequency and impact of flood events including the depth of water and velocity

Time to inundation

How many hours it takes water to reach a property from the flood source

Duration of inundation

How many hours properties will be affected by floodwater

Flood islands

Areas that are surrounded by flood water and at risk of isolation



VULNERABILITY FACTORS

Awareness

Language other than English at home; without internet access; new to the area

Physical

Aged under 5 years or over 65; lone person household; requires assistance

Socio-economic

Renting; household income under \$650 per week; unemployed

Mobility

Without vehicle access; one parent family; group households



Identification of priority suburbs – most 'at risk'

Development of strategies for specific suburbs that address individual factors

WHAT FLOOD MODEL DID WE USE?

There are many different flood scenarios that potentially affect Ipswich, from flash-flooding of local creeks through to a 'probable maximum flood' that provides the worst-case scenario for Ipswich.

Each of these has areas of hazardous water, deep and fast-flowing, that is dangerous for people and properties. It can be different areas for different flood events.

We mapped all of these areas of hazardous water and included all of them when determining which parts of Ipswich were exposed to the most significant flood risk.

THE TEN PRIORITY SUBURBS

The flood modelling and vulnerability data analysis highlighted ten suburbs that are a priority for actions to build community awareness and resilience:

- **Goodna**
- **Ipswich**
- **North Booval**
- **Bundamba**
- **One Mile**
- **Leichhardt**
- **North Ipswich**
- **Churchill**
- **Brassall**
- **East Ipswich.**

WHAT HAPPENS NEXT

- The Ipswich Integrated Catchment Plan final report will present an Implementation Plan with strategies to increase community resilience in these priority suburbs. This will be a document to guide council decision-making and council programs and initiatives.
- The Ipswich Integrated Catchment Plan final report will contain a Case Study for the suburb of Goodna, which will provide an example for council staff on how to apply the Implementation Plan and also supply draft resources for council use.







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