



## Property mapping exercise

This is a simple activity that allows residents to better understand how defensible their home is, their ability to defend that home and how they can improve resilience and recovery capacity if they choose the 'leave early' evacuation option.

The exercise requires participants to sketch their property, and then use it as a diagnostic aid to identify risks, vulnerabilities and strengths of their home to any number of extreme weather hazards. This provides a visual form of information with a personal context, which is easily understood for further discussion.

As well as the permanent physical features of the property, the sketch can reference maintenance issues, which can then be used to discuss an individuals' personal capability when it comes to preparing and defending their property against fire or other hazards.

This exercise is equally applicable to businesses and services such as aged care facilities to consider their property features, although more time may be required for larger, more complex premises.

### Hazards addressed

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Bush fire                               | <input checked="" type="checkbox"/> Storms  |
| <input checked="" type="checkbox"/> Drought                                 | <input checked="" type="checkbox"/> Tsunami |
| <input checked="" type="checkbox"/> Extreme heat                            | <input type="checkbox"/> Other _____        |
| <input checked="" type="checkbox"/> Flooding                                |   |
| <input checked="" type="checkbox"/> Sea level rise – erosion and inundation |   |

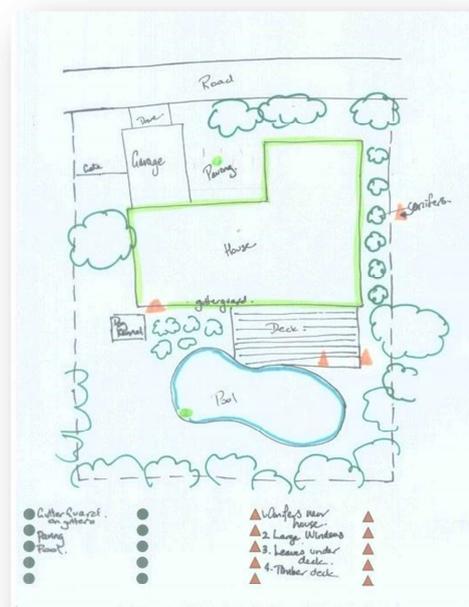
### Resources required

- Paper (min. A4; A3 size is good)
- Pens/pencils
- Examples (optional)

### Process

Provide each participant with a sheet of paper (A4 or larger) and pens or pencils.

Ask people to draw their property including any structures, features and plants within and adjacent to the property boundary. Explain that the object of the exercise is to identify which features of their home make it more susceptible to fires, storms and other hazards, and what they have in place to reduce their risk.



*Sample map identifying property strengths and vulnerabilities*



This activity is undertaken individually, but participants can be encouraged to discuss features with another person to get a second insight into aspects they may have not considered.

Some general questions to consider are:

- How far is your property from bushland or other open space? What is its aspect (direction it faces) and the degree of slope it is built on?
- How do you access your property? If egress is blocked, how would you escape? Could emergency service vehicles access your property easily if required?
- Are all gaps around the house sealed from water, embers or heat transfer? Think about around doors and windows, the condition of your roof, vents and weepholes.
- Think about the flammability of the materials from which your walls and other structures are constructed? Is external cladding fire resistant? What about your external doors and windows? Is there timber decking around the house? Do you have wire mesh screens or all-weather shutters? Do you have sprinklers?
- What about the structures in the immediate vicinity of the house, such as on or below decking, and under or adjacent to the house? Could embers get in these areas? What do you have stored that could be combustible?
- Is your home and garden well-maintained? Do drains and downpipes block regularly? Do you have gutter guards? Where do you store mulch and garden waste?
- What are some of the features of your garden landscape? How are garden beds arranged? What is the flammability level of plants or mulching materials? Do any features pose a risk in the case of storms or flooding?
- What other features do you have that might be either a strength or a vulnerability in particular circumstances? These might include rainwater tanks, swimming pools, sheds, trampolines and play equipment, shade structures, BBQ areas and gas bottles, external taps and fittings.

Ideally this activity is facilitated by emergency services representatives, who can use questions to prompt further thinking about design or materials or maintenance issues, and can provide appropriate advice on how specific features can be improved.

Participants should also consider their physical and psychological capacity to prepare for or respond to an emergency event. This includes any health, age, mobility, financial and time constraints to effectively manage these issues. Whether or not their home and contents are insured at an adequate level should also be discussed.

### **Additional materials**

Both the State Emergency Services and Rural Fire Service have excellent resources that can be used to discuss how to prepare for natural disasters. See:



- **Storms** [stormsafe.com.au/prepare-for-a-storm-now](https://stormsafe.com.au/prepare-for-a-storm-now)
- **Floods** [floodsafe.com.au/simple-things-you-can-do/before-a-flood](https://floodsafe.com.au/simple-things-you-can-do/before-a-flood)
- **Bush fire** [rfs.nsw.gov.au/plan-and-prepare/prepare-your-property](https://rfs.nsw.gov.au/plan-and-prepare/prepare-your-property)

### Research background and observations in practice

Participatory tools and methods in risk assessment and action planning help to enhance community participation in disaster mitigation. For example, the Asian Urban Disaster Mitigation Program (AUDMP) uses hazard and risk maps to encourage participatory identification of problems and action planning in communities. This includes vulnerability mapping, where elements at risk are identified on a map (Victoria, 2002). In this exercise, participants identify strengths as well as vulnerabilities, and the map boundaries are restricted to the participant's property and immediate surrounds. Risks can be ranked and scored to help the participant understand priorities for action.



*Local emergency services facilitate residents' understanding of their property strengths and vulnerabilities*

The advantage of drawing simple maps is that the activity is accessible to all and requires few resources. Such visual methods can be used with low literacy groups, including children or those from culturally and linguistically diverse (CALD) backgrounds. Akama (2014) describes her intention to design and use engagement tools that are 'light-weight' and non-technological, which are hence economical and easy to replicate. Although the maps drawn are simple, they can be useful for identifying problems and raising awareness of how to prevent disaster.

### References

Akama, Y. (2014) 'Passing on, handing over, letting go – the passage of embodied design methods for disaster preparedness', in D. Sangiorgi, D. Hands, E. Murphy (ed.) *Proceedings of the Fourth Service Design and Service Innovation Conference*, Sweden, 9-11 April 2014, pp. 173-183.

Victoria, L.P. (2002) 'Community based approaches to disaster mitigation', in Asian Disaster Preparedness Centre *Regional Workshop on Best Practices in Disaster Mitigation: lessons learned from the Asian Urban Disaster Mitigation Program and other initiatives*, Bali, Indonesia, 24-26 September 2002, pp. 269-290.