

4. Underground storage

WHAT IS THE PROJECT?

This project would involve building underground storage tanks to temporarily hold stormwater during heavy rainfall. The aim is to capture and store stormwater before slowly releasing it back into the drainage system, which helps to reduce the pressure on pipes and decrease flood risks.

WHERE COULD THIS HAPPEN?

After reviewing several sites, the following locations were found to be feasible and may provide real benefits:

- > Newtown Primary School sports field
- > Gertrude Street
- > Churchill Avenue Playground
- > Geelong West Community Garden.

HOW WOULD THIS HELP?

Underground storage helps to decrease the pressure on the drainage network during heavy storms.

By spreading storage tanks across key sites, the stormwater can be captured and stored before it causes flooding.



Figure 9 shows all the potential locations that were assessed for underground storage.

MITIGATION OPTIONS

Central Geelong Stormwater Management Strategy

WHAT DOES FLOOD RISK LOOK LIKE IF THIS PROJECT IS BUILT?

Newtown Primary School

- > Figures 10–12 show modelling results for the proposed Newtown Primary School storage option.



Figure 10: Newtown Primary School storage option.

Before and after the project (flooding – 2 per cent AEP).

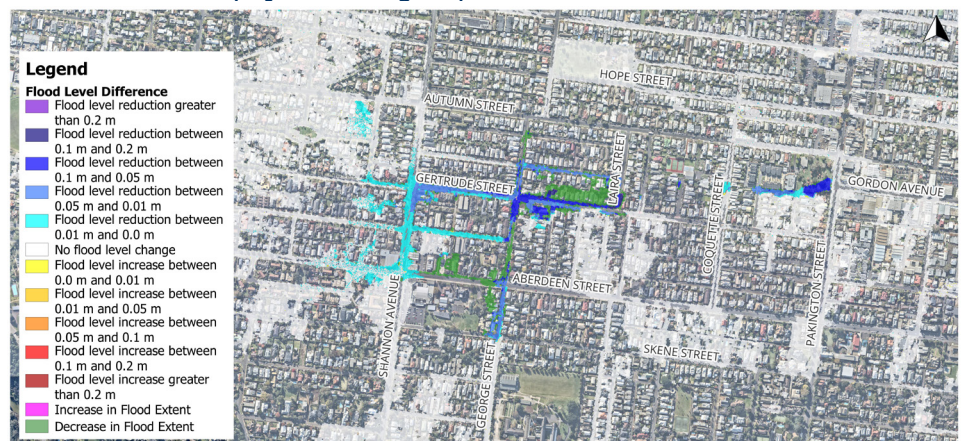


Figure 11: Newtown Primary School storage – 20 per cent AEP modelling result.

Before and after the project (flooding – 1 per cent AEP).

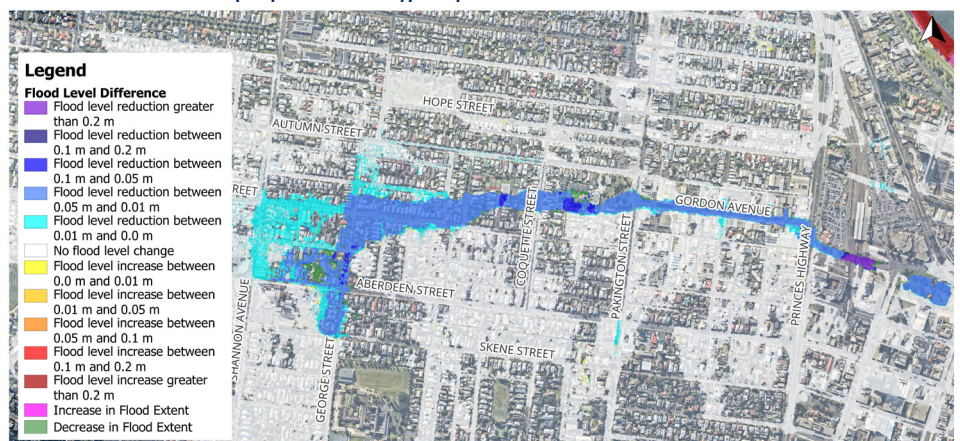


Figure 12: Newtown Primary School storage – 1 per cent AEP modelling result.

MITIGATION OPTIONS

Central Geelong Stormwater Management Strategy

WHAT DOES FLOOD RISK LOOK LIKE IF THIS PROJECT IS BUILT?

Gertrude Street

- > Figures 13–15 show modelling results for the proposed Gertrude Street storage option.

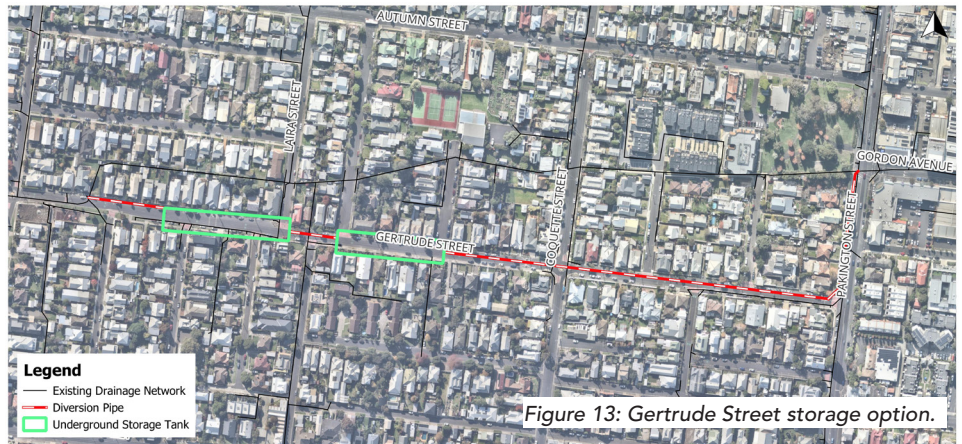


Figure 13: Gertrude Street storage option.

FURTHER INFORMATION:

Installing underground storage is a complex task that depends on factors such as:

- > The size and shape of the site.
- > Quantity of water required to be stored.
- > The site's existing use, like school grounds or parks.
- > Long-term maintenance needs.

Before and after the project (flooding – 20 per cent AEP).

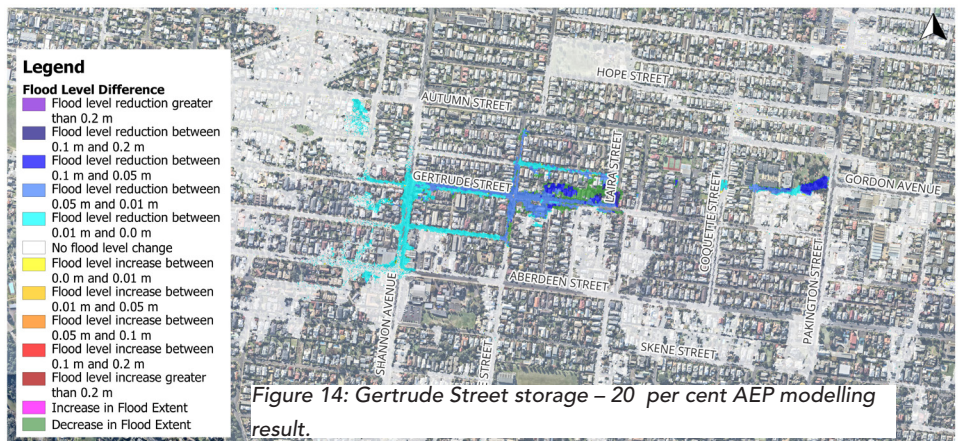


Figure 14: Gertrude Street storage – 20 per cent AEP modelling result.

Before and after the project (flooding – 1 per cent AEP).

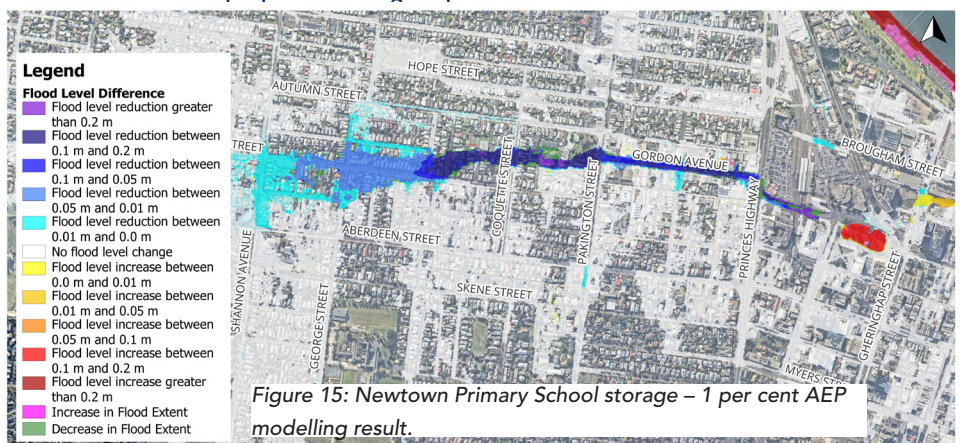


Figure 15: Newtown Primary School storage – 1 per cent AEP modelling result.

Newtown Primary School

INDICATIVE PROJECT COST	IMPLEMENTATION TIME	CAN THIS OPTION BE STAGED
Medium – between \$5 million and \$50 million.	Medium-term – more than five years.	No – the full project would need to be completed at one-time.

Gertrude Street

INDICATIVE PROJECT COST	IMPLEMENTATION TIME	CAN THIS OPTION BE STAGED
High.	Long-term – more than 10 years.	Yes – the project can be applied in stages across different streets or areas.