

As part of the ACT Government's Climate Adaptation Strategy, trials of new innovations are increasing the ability of our community to adapt to climate change impacts, reduce greenhouse gas emissions and build a more sustainable city.

CLIMATE ADAPTATION INNOVATION

Soil cells and permeable pavers grow bigger, healthier trees

The use of innovative soil cells is resulting in faster growing, healthier trees at the new Casey subdivision and Amaroo Group Centre in Gungahlin. Permeable pavers used at Amaroo allow rainwater infiltration adding to soil moisture and tree health.

DETAILS

The ACT Government is trialling a range of measures at the Amaroo Group Centre and in a Casey subdivision in partnership with the estate developers, to enhance tree growth and reduce flash flooding while maintaining sufficient pavement for vehicles and pedestrians.

Hard plastic cell structures, permeable pavers and rain gardens have been installed at Amaroo to reduce runoff (stormwater) and allow rain to soak into the ground. The trial results are very promising, and trees will continue to be monitored to gauge how they perform compared to tree plantings nearby without these techniques.

INNOVATION

The plastic soil cell system increases the volume of soil available for tree-root growth. The easy-to-assemble cells form an interconnected structure that gives tree roots access to a higher volume of uncompacted soil in paved surfaces.

Permeable pavers allow water to filter through them, rather than creating an impervious surface like standard paving materials such as bitumen and concrete. Trees in both trials have grown successfully, and data from the Casey project show trees have grown faster than trees planted in grass verges.



CLIMATE CHANGE BENEFITS

- > Improved below-ground growing conditions and increased soil volume yield larger, healthier trees.
- > Increased soil volumes increase the range of possible species that can be grown to achieve high canopy cover.
- > Healthier trees create more shade cover, which reduces urban heat.
- > Trees absorb and store carbon from the atmosphere. The bigger the trees, the more carbon is sequestered.
- > The amount of stormwater and risk of flash flooding is reduced as there is less impervious surface area.

CO-BENEFITS

- > Less need for irrigation with rainwater infiltration.
- > Reduced maintenance of unhealthy trees.

Canberra's climate is already changing,
and in future the ACT can expect more
EXTREME WEATHER EVENTS.



Heatwaves

will become hotter,
more frequent and
last longer.



Droughts

will increase
in severity and
frequency.



Storms

will become more
intense, causing flash
flooding.



Bushfire

weather will
become more
dangerous.

A certain amount of warming is already locked in. The ACT Government is committed to ensuring Canberra adapts to the changing climate, so that it can remain a vibrant, resilient and liveable city.

Do you want to prevent soil compaction and prevent water run-off at your home or business?

Visit www.environment.act.gov.au/water