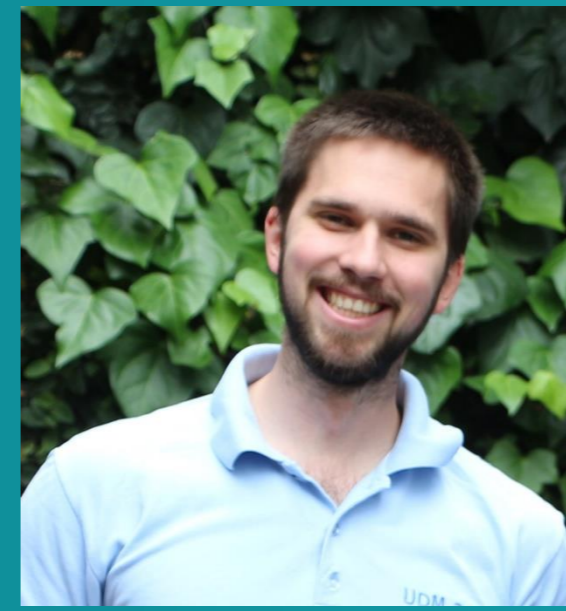


CRC for Water Sensitive Cities



Veljko Prodanovic, Ana Deletic, Belinda Hatt, David McCarthy
Monash University, Australia
CRCWSC Program C4.1
Integrated multi-functional urban water systems

Green walls for greywater reuse

Cities in sync with nature

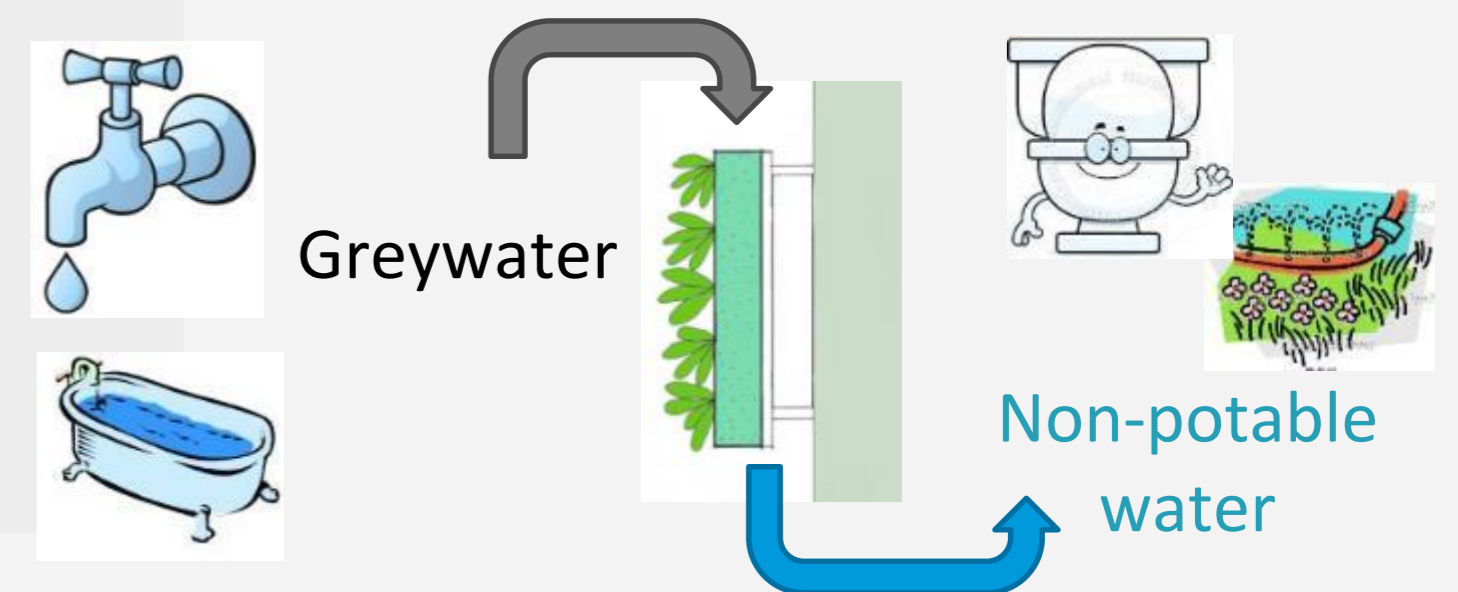
People want to live close to nature, so green elements are an essential part of our liveable future cities. Traditional green infrastructure, such as **trees**, **parks** and **wetlands**, offer multiple benefits but are not easy to place in dense urban environments.

GREEN WALLS can add the benefit of space saving while providing an even greater range of services. However, widespread implementation of these systems is currently hindered by challenges that outweigh the positive sides of these systems.



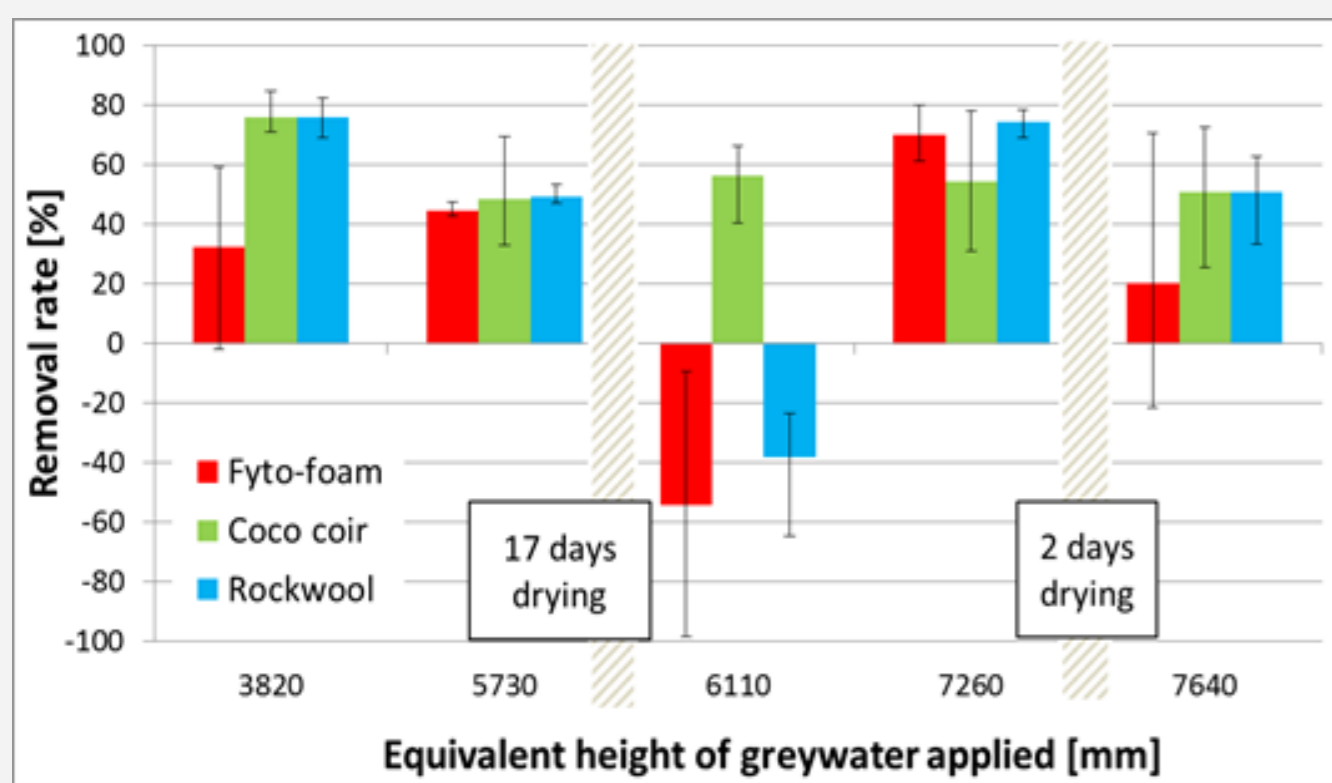
SOLUTION Greywater recycling through green walls!

This research aims to transform the current green wall technology into water producers by developing new designs with specific media and plants for effective greywater purification and much needed cooling and greening to our cities.



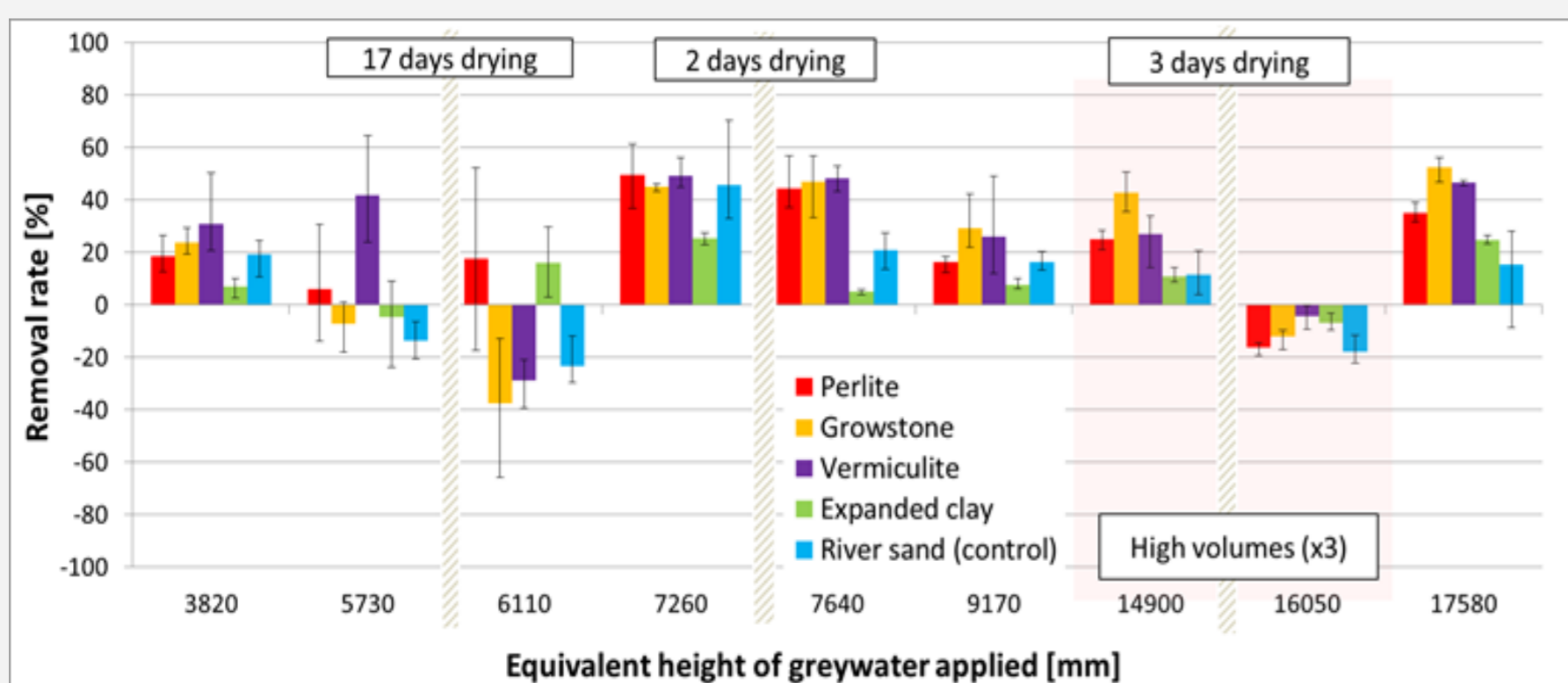
Research steps

Growing media



Eight different lightweight media types have been tested in 2 month long column study.

Comparison of hydraulic and pollutant removal properties, pointed two best performing substrates are, **COCO COIR** and **PERLITE**.

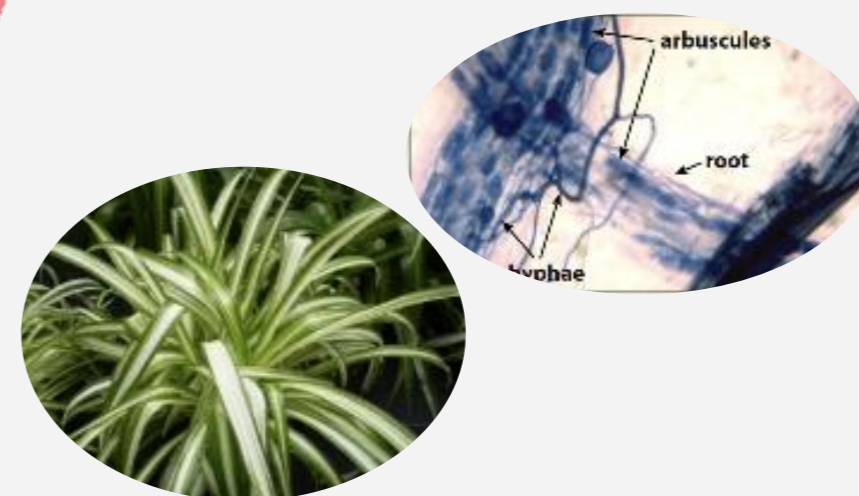


Total nitrogen removal by eight tested media types, over the experiment time

Step 1

COMPLETED

Plants & Fungi



Testing plants nutrient uptake and how to effectively increase it (introduction of mycorrhizal fungi)

Step 2

Complete design

Construction and monitoring of Green Wall prototype



Step 3

From idea into practice

Close working relationship and technology showcasing with industry practitioners will ensure popularisation of these systems and contribute to a sustainable future for our cities.

