Water as an enabler for Green infrastructure
Case studies from Australia

Harry Virahsawmy
Two case studies from Melbourne that have gone from strategy to construction:

1. **The City of Melton** a large local government area undertaking a large tree planting program with passive irrigation

2. **Stamford Park**: a residential housing development that uses water at all scales to deliver green infrastructure outcomes
The City of Melton

- City of Melton, west of Melbourne ~500 km²
- Low rainfall (~ 300 - 400 mm per year)
- Rapid population growth
- Currently low tree coverage
- Very high risk of urban heat
The City of Melton – Tree planting program

Today

Future: Opportunity for 130,000 new trees
Water as an enabler: “Passive irrigation’ of street trees

CITY OF MELTON
INTEGRATED WATER MANAGEMENT PLAN
2018-2028

OBJECTIVE 1
Reduced reliance on potable water

OBJECTIVE 2
Healthy waterways and wetlands

OBJECTIVE 3
Valued landscapes that are connected and accessible

OUTCOMES
Effective and efficient use of all water sources across Council assets
Increase use of non-potable water sources

OUTCOMES
Ecological and habitat values within the City of Melton’s waterways improve over time
Stormwater drainage and WSUD assets are resilient and effective

OUTCOMES
Maximise connections between the community, waterways and open spaces
Reduced urban heat island effect across the City of Melton
An informed and water-wise community

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<th>TIMING</th>
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<td>2019</td>
<td>Undertake a street tree passive irrigation trial to build internal capacity, understand budget and to guide the land development industry</td>
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To support the targets of the Street Tree Strategy and to improve the irrigation of Council and developer planted street trees.
Tree planting and implementation of passive irrigation
Stamford Park Development

- 6.3 hectares
- 160 residential homes & 30 apartments
- Partnership between local government (landowner) and developer
Stamford Park Development

Main park: Stormwater harvesting and irrigation of open spaces

Trees: Swale to distribute and infiltrate water for trees to access

Pocket parks: Trees and lawn passively irrigated by stormwater
Swale infiltrates treated stormwater and passively irrigate trees
Pocket parks and trees are passively irrigated
## Challenges

- Organisational agreement
- Justifying cost
- Standing firm when approach is challenged / not compromising
- Buy in from maintenance staff
- Integrating with other below ground services

## Lessons

- Construction teams innovate quickly and learn how to reduce costs
- There is an economic benefit in selling cool and beautiful places in Australia
- Maintenance requires ongoing education and financial support
We are passionate about the protection and restoration of waterways, catchments and water resources. We strive to make a positive difference to the world we live in.

harry.virahsawmy@allluvium.com.au