Leading by example on WSUD policy implementation

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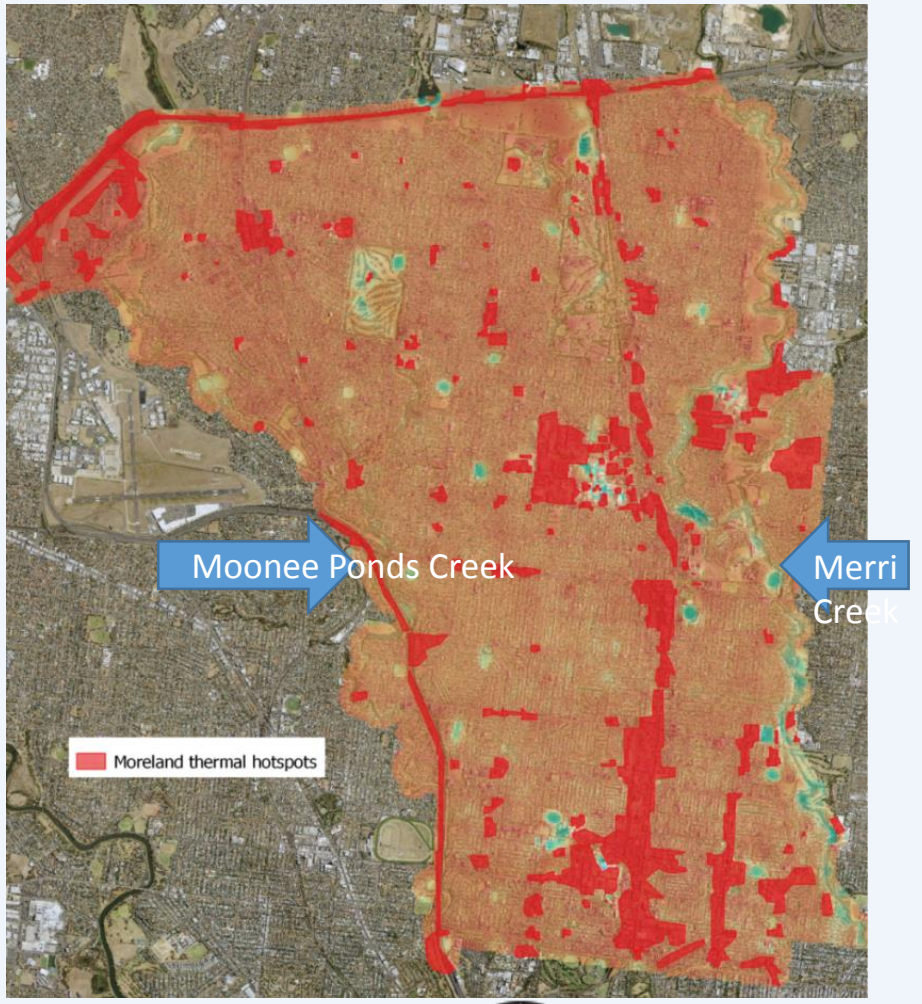
Who is Moreland City Council?

- Covers an area of 51 sqm kilometres
- Bordered by Merri Creek and Moonee Ponds Creek
- Population of 160,000 and growing
- Undergoing a ‘development boom’ - higher density apartments being built in Brunswick and Coburg, whilst townhouses/additional dwellings being built in the northern suburbs.



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What are we doing WSUD wise on Council land?

- Stormwater harvesting + irrigation
- Raingardens
- Tree pits
- Public realm improvements
- Wetlands
- Revegetation works
- WSUD in road reconstructions

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Dunnes Lane, Coburg

Wilson Avenue, Brunswick

Raingardens

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So what about the private realm?

- Private land accounts for 60% of Moreland's municipal area (20% Council open space/assets and 20% roads)
- 1,784 new dwellings approved from July 2016 – March 2017
- 3,605 dwellings approved in 2015 - 2016 financial year

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Environmentally Sustainable Design policy and WSUD

- Moreland planning policy as of November 2015
- Requires minimum ESD response, ranging from energy efficiency, waste management to stormwater
- Applies to 2+ dwellings and commercial 100sqm+
- Refers to the Melbourne Water *STORM* tool, the eWater *MUSIC* tool and the *2006 CSIRO Urban Stormwater Best Practice Guidelines*
- Advocacy at state level for greater WSUD policy (i.e. Water for Victoria actions, revised SEPP targets, state-wide ESD policy)

Water resources:

- *To improve water efficiency*
- *To reduce total operating potable water use*
- *To encourage the collection and reuse of stormwater*
- *To encourage the appropriate use of alternative water sources (e.g. greywater).*

Stormwater management:

- *To reduce the impact of stormwater run-off.*
- *To improve the water quality of stormwater run-off.*
- *To achieve best practice stormwater quality outcomes.*
- *To incorporate the use of water sensitive urban design, including stormwater re-use.*

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Info for developers - what was the issue?

- Planning permit applicants often lack knowledge of what is best practice *water resources* and *stormwater management* objectives and how to demonstrate this + no single source of specific information for Moreland applicants

- Moreland therefore wanted to address this via compiling a set of guidelines for our development community to streamline the assessment of WSUD assessments, have greater assistance and guidance for our Urban Planners, provide clarity for all and ultimately achieve improved outcomes

- We specifically wanted to:
  - Define WSUD in a non-technical way for developers
  - Describe various WSUD treatments, their benefits and maintenance considerations
  - Create a hierarchy of preferred WSUD treatments
  - Provide practical examples for Moreland-type developments
  - Make this info publicly available online
  - Use this to educate our internal colleagues, external development community and Moreland residents

What have we done?

- We engaged the consultancy, *DesignFlow,* to help us do this
- Held a workshop with the Melbourne University *Waterway Ecosystem Research Group (*WERG), representatives from Melbourne Water's Living Rivers team and the Clearwater team and consultants
- Updated Moreland website
- Provided practical examples relevant to Moreland's development typologies
- Established a WSUD hierarchy
- Provided info about different WSUD treatments
- Provided improved training and education for our Urban Planners

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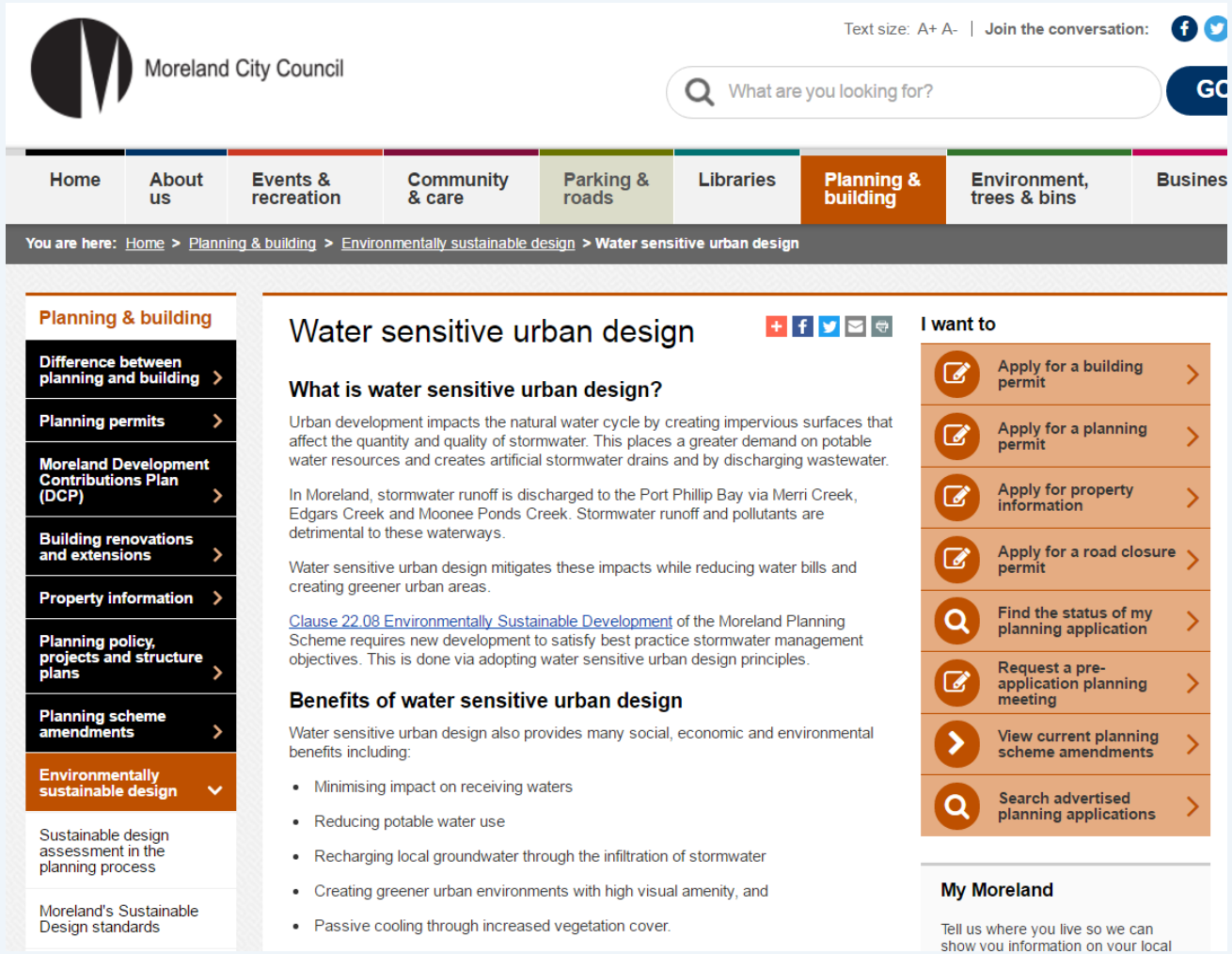
Updated Moreland website



- Defines WSUD in a non-tech way
- Explain why we do it
- Co-benefits of WSUD
- How to response to the planning requirements
- A checklist of info required for lodgement
- Examples of applications

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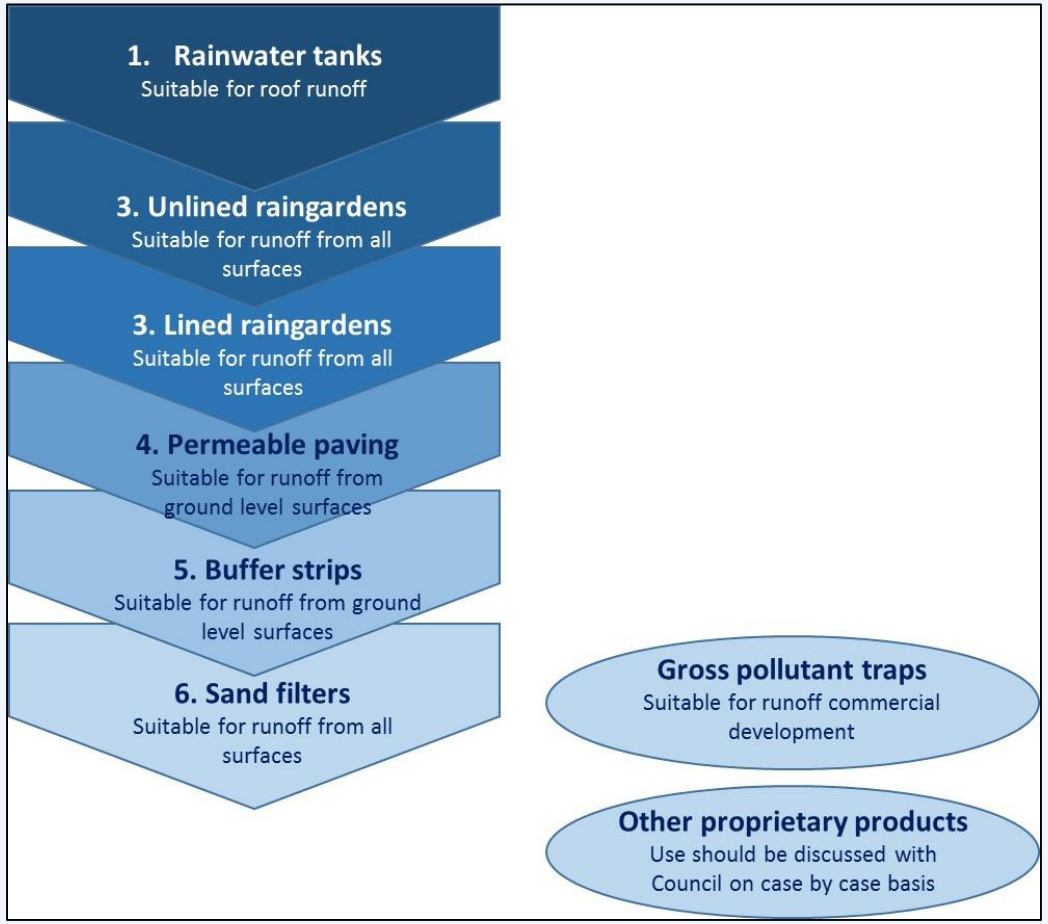
Creation of a WSUD intervention hierarchy for Moreland



Infrastructure type	Stormwater quality	Stormwater flow regime	Reduction in mains water use	Increased evapotranspiration
Rainwater tanks	√√	√√	√√	
Unlined raingardens	√√	√√		√√
Lined raingardens	√√	√		√
Permeable paving	√	√√		√√
Buffer strips	√	√		√
Sand filters	√			
Gross pollutant traps	√			
Other proprietary products	Depends on product			

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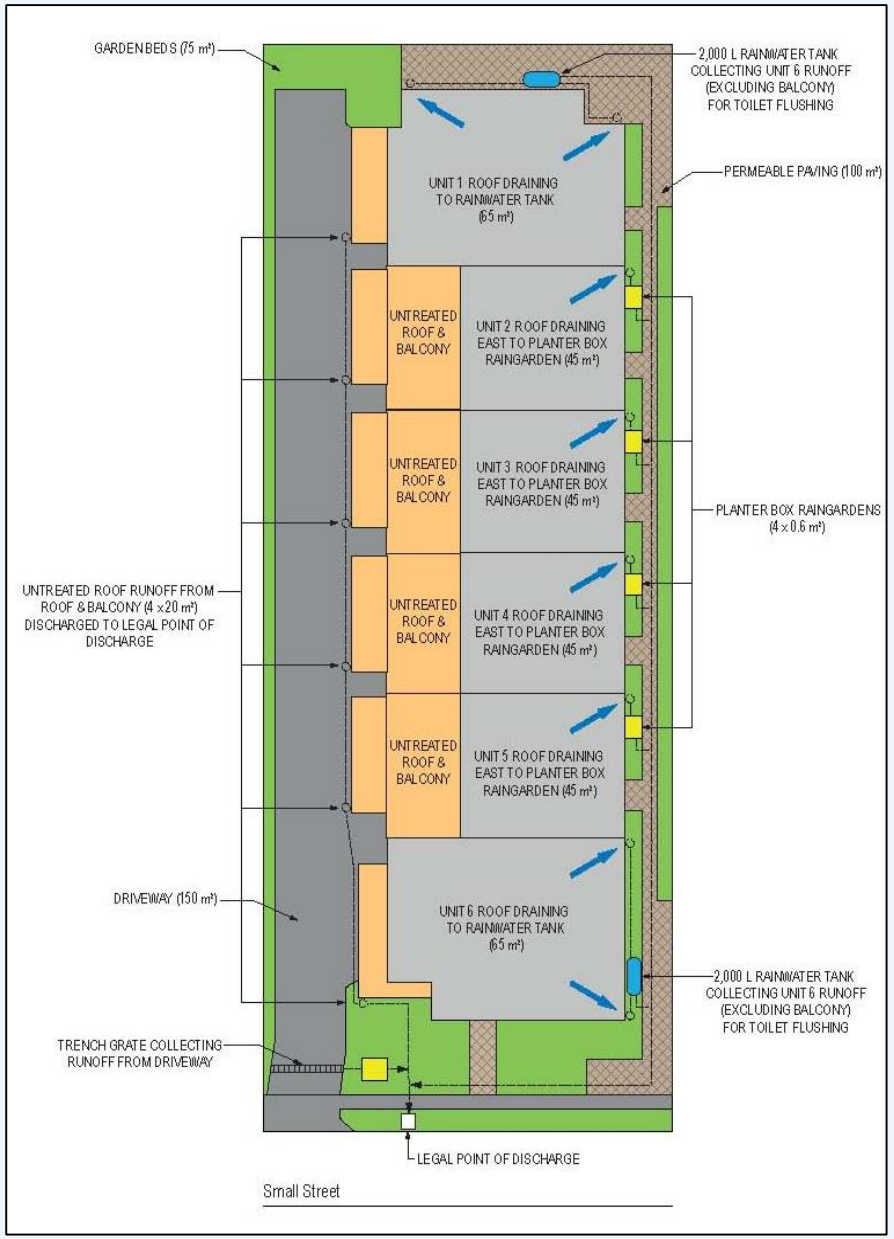
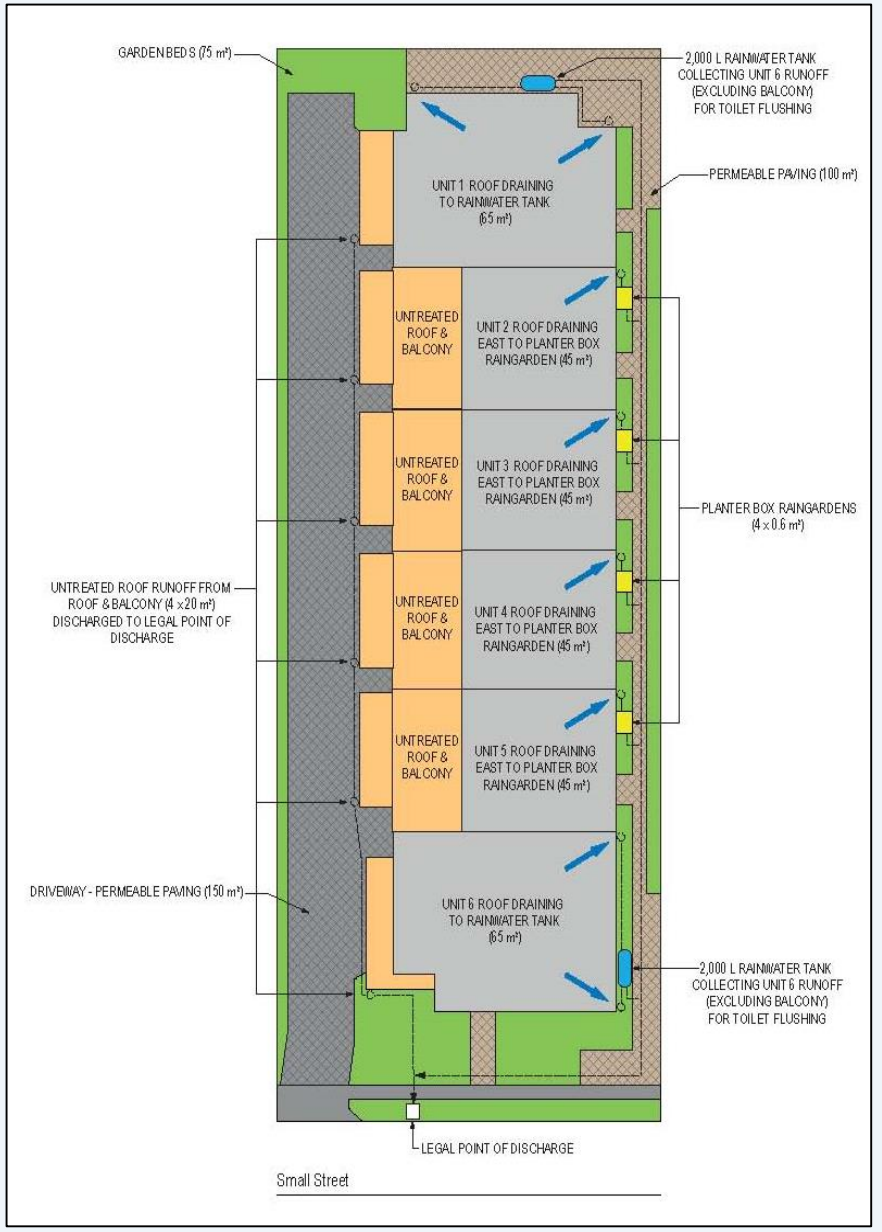
Examples

- Prioritise the WSUD treatments as per the hierarchy, so:
  - Rainwater tanks
  - Raingardens
  - Permeable paving
- Take into account the maintenance implications





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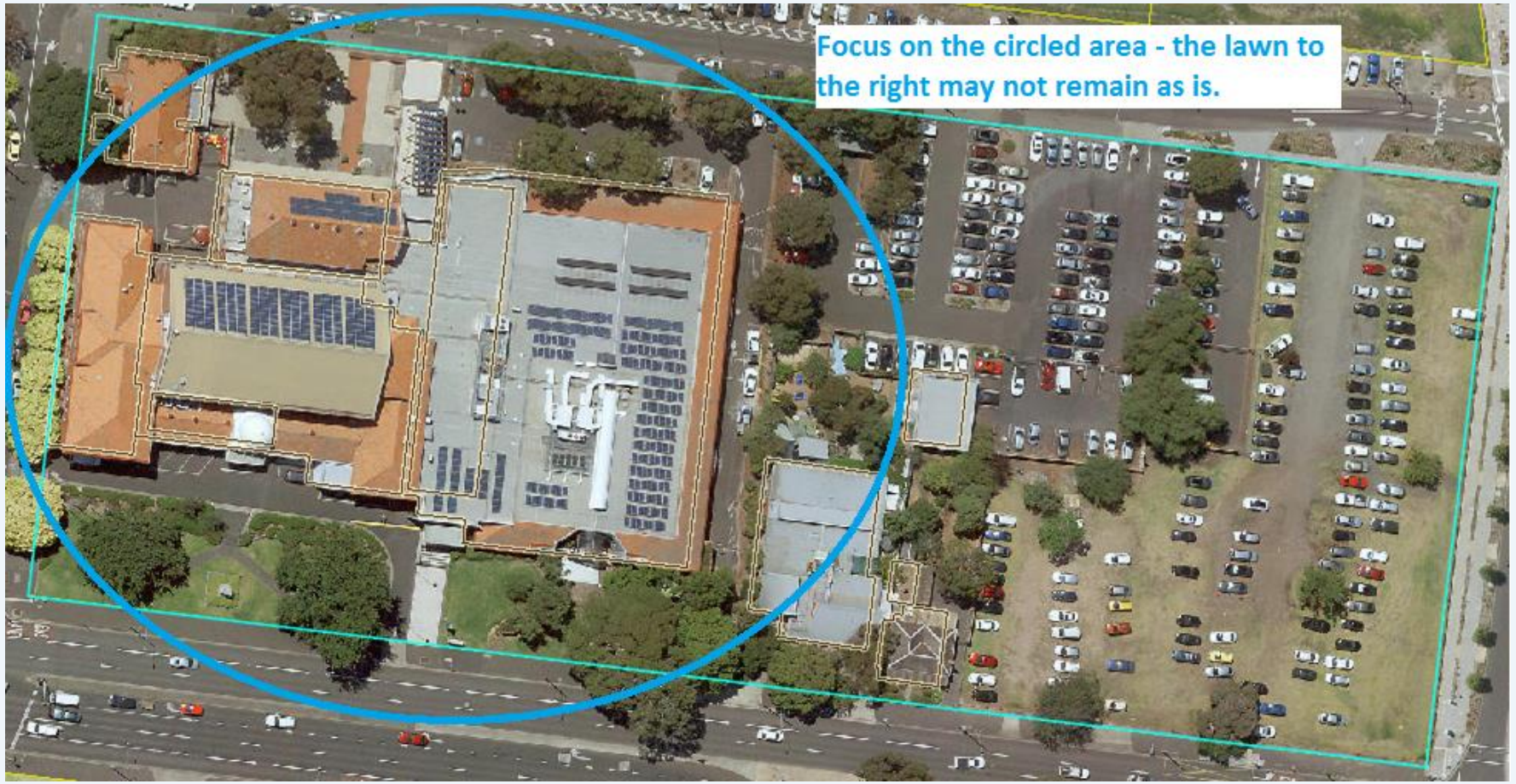
Upgrades to our Coburg Civic Centre

- We wanted to *lead by example* and *preach what we practice*
- Facilitated via Melbourne Water's Living Rivers funding stream, we have started upgrading our civic centre



Our WSUD wish list was to achieve a STORM 100% score utilising a range of different WSUD interventions to show developers how raingardens work; benefits of rooftop gardens; how rainwater tanks can be designed to blend into landscapes, etc.

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How we did this

Explored WSUD options including a demonstration green roof. ESD and Urban Design staff visited rooftop gardens around Melbourne. Unfortunately unfeasible due to the building not able to support the weight of the garden without significant structural works.

Moreland staff at the Westbury Street (St Kilda) rooftop garden

Moreland staff at the Melbourne Uni Burnley roof top garden

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Demonstration raingardens

- To show our developers when we meet at Council
- To show our Urban Planners, Capital Works Team, drainage team, etc.
- Shows how to locate a raingarden with existing levels, different planting options, overflow mechanisms, etc.

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Rainwater tanks

- 35,000L total tank capacity connected to staff toilets

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Educating internal staff

- Educating our Urban Planners about WSUD (what is it; why do it; co-benefits; real-life examples)
- Different WSUD options and benefits of each
- Ultimately having better response to planning permit applications

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Thank you…and questions?

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