



OUR WATER FUTURE

Upper Merri Creek
Communities

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Upper Merri Creek Symposium

17 October 2019



Welcome to Country - Uncle Bill Nicholson

Wurundjeri Woi Wurrung Elder

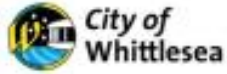


Uncle Bill Nicholson (Jnr), Wurundjeri Elder, has been working in cultural education for over 20 years. He currently works as the Cultural Education Manager at the Wurundjeri Council. Bill offers many different kinds of workshops. His workshops are not simply workshops, but cultural experiences. He adapts his workshops to suit all ages, from preschool to tertiary, to community groups to large corporations.



Introducing the team...

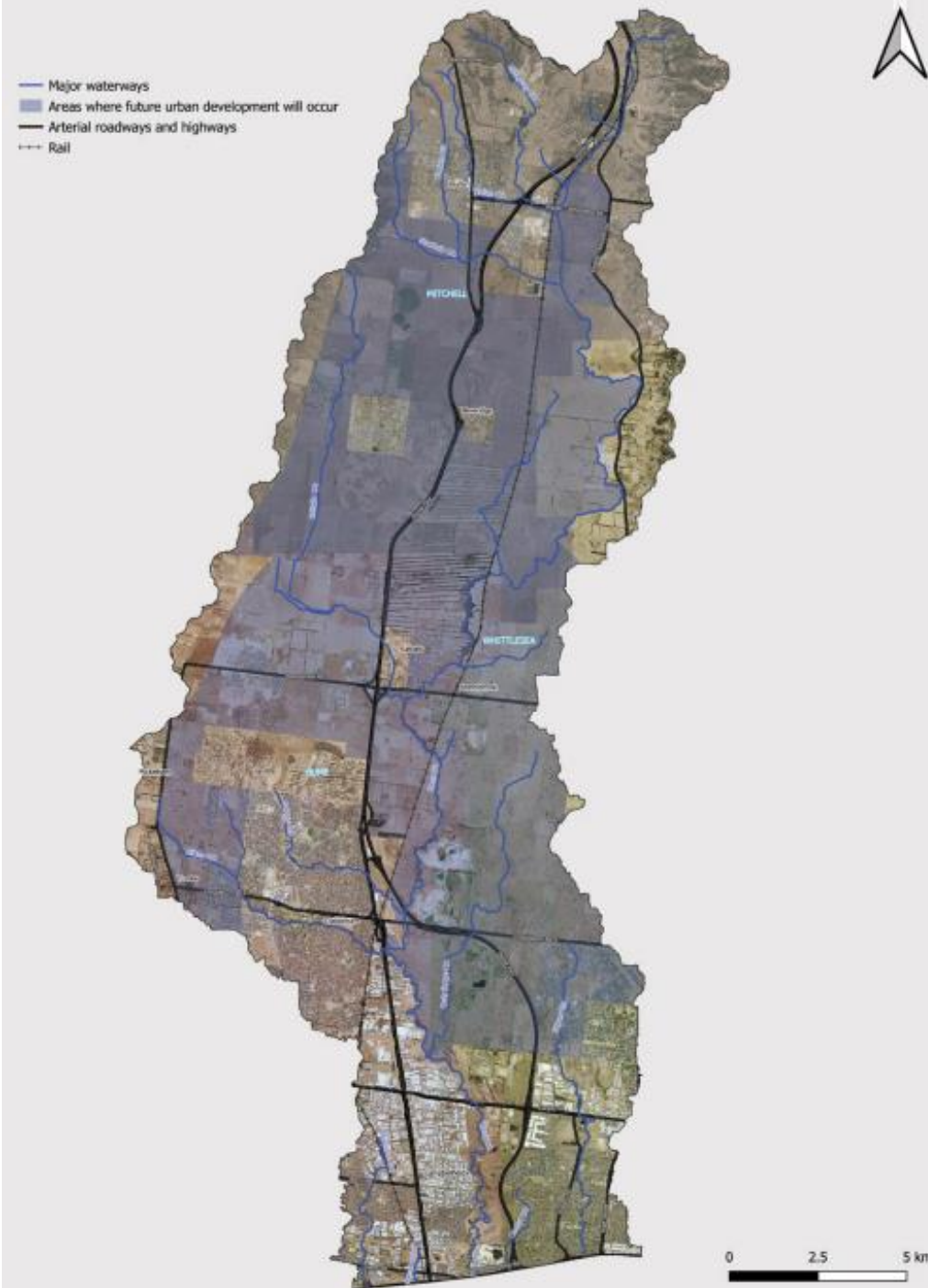
Project Collaborators



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Upper Merri Creek
Communities



Setting the Scene: SDS Projects 9 & 11 Update:

Upper Merri Creek IWM Sub-catchment Plan Pilot

- Understanding the key issues and opportunities in this sub-catchment from a broad range of perspectives
- Balancing a range of statutory and community expectations
- Harnessing new technologies / creating new products (e.g. housing & commercial buildings)
- Understanding our roles / exploring new approaches for services delivery
- Evidence based decisions driving optimized community and customer outcomes

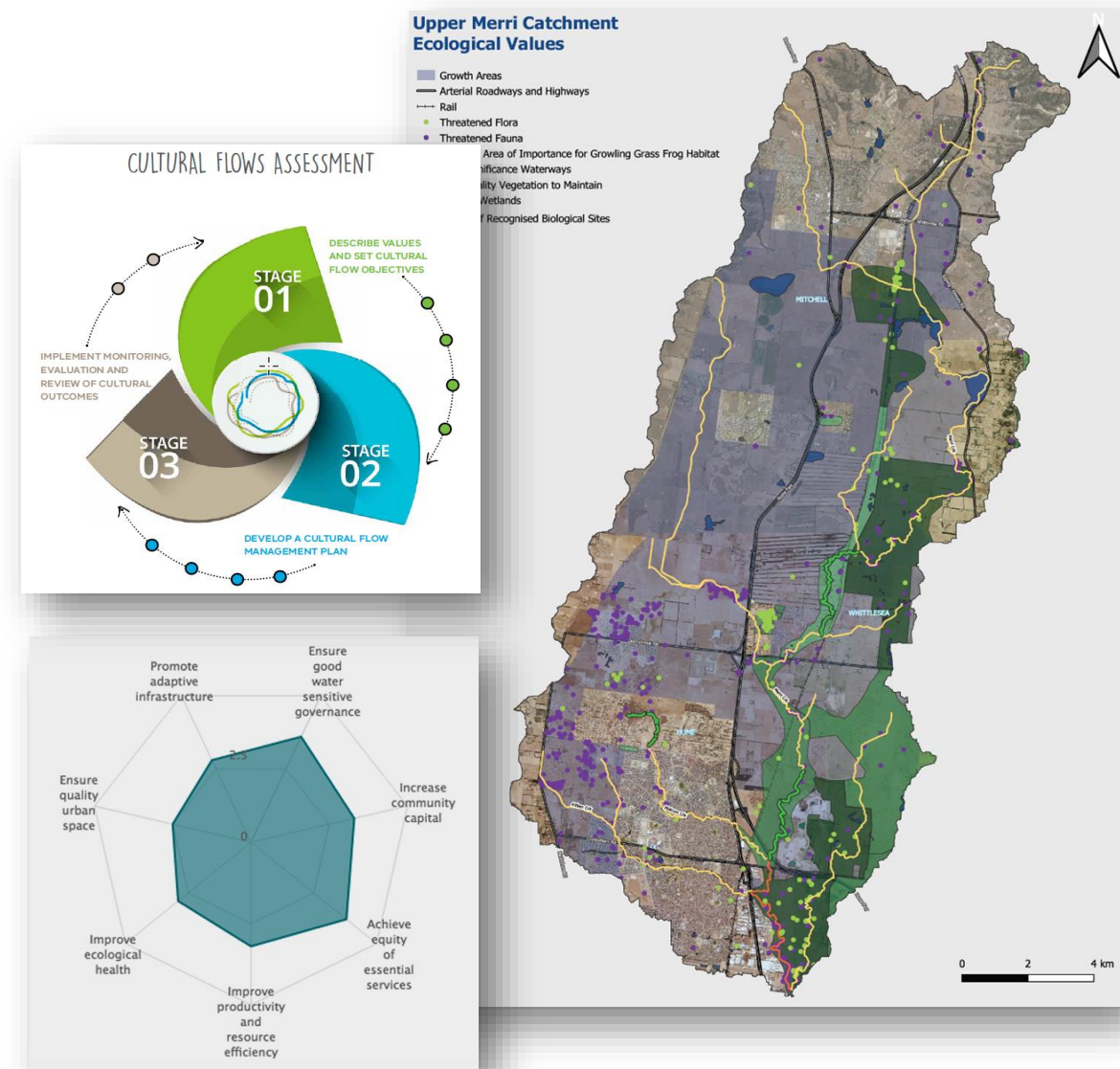


What's different?

- **Embedding Traditional Custodians in Planning processes**
- **Community collaboration** as a fundamental part of the process

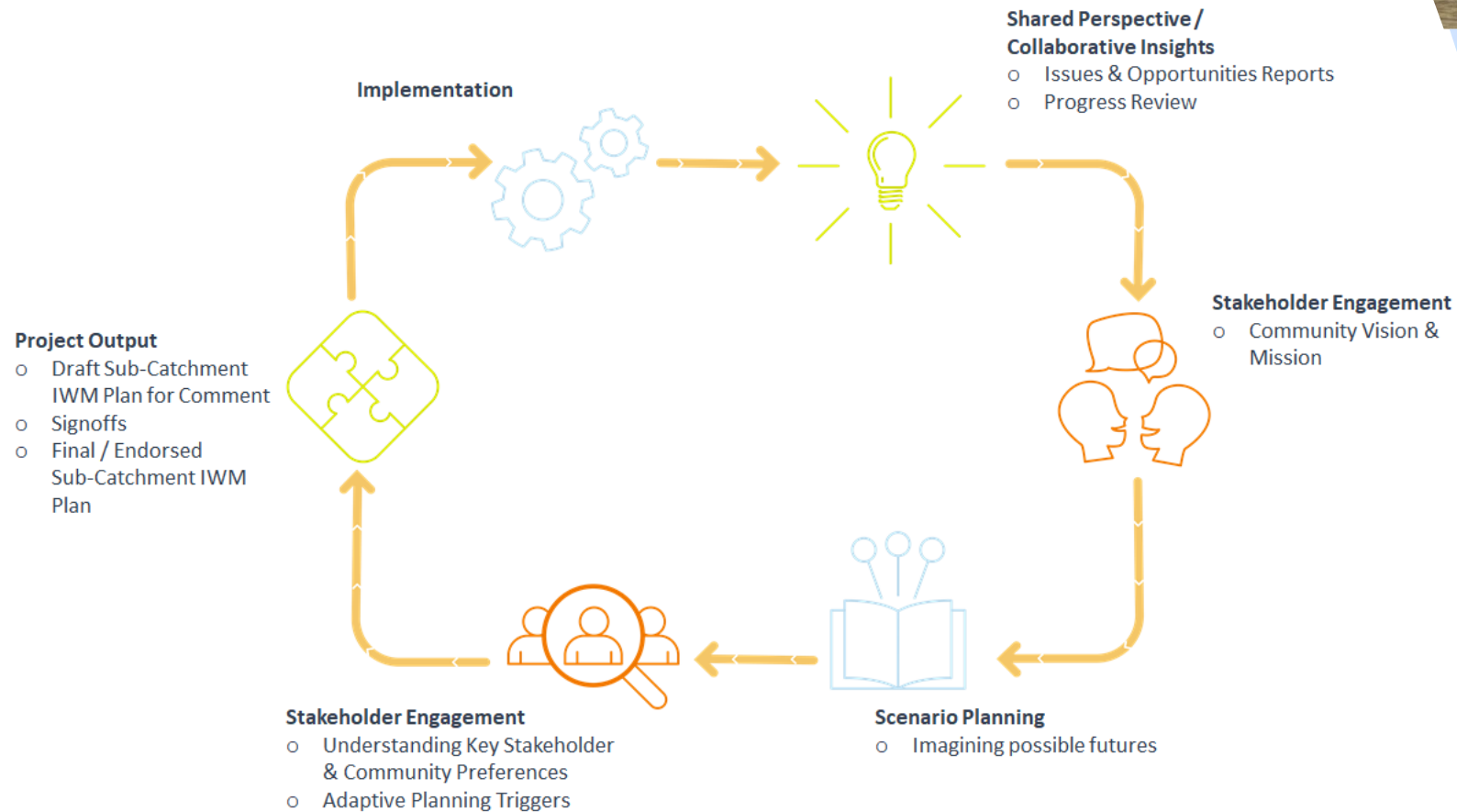


- **Optimised Outcomes**
 - Transparent planning & development requirements including infrastructure sequencing information
 - Streamlined development servicing
 - Integration and extension of existing management and funding frameworks
 - Flexible and adaptive framework to support long term and evolving community objectives and the adoption emerging knowledge and technologies



Place-based options & outcomes

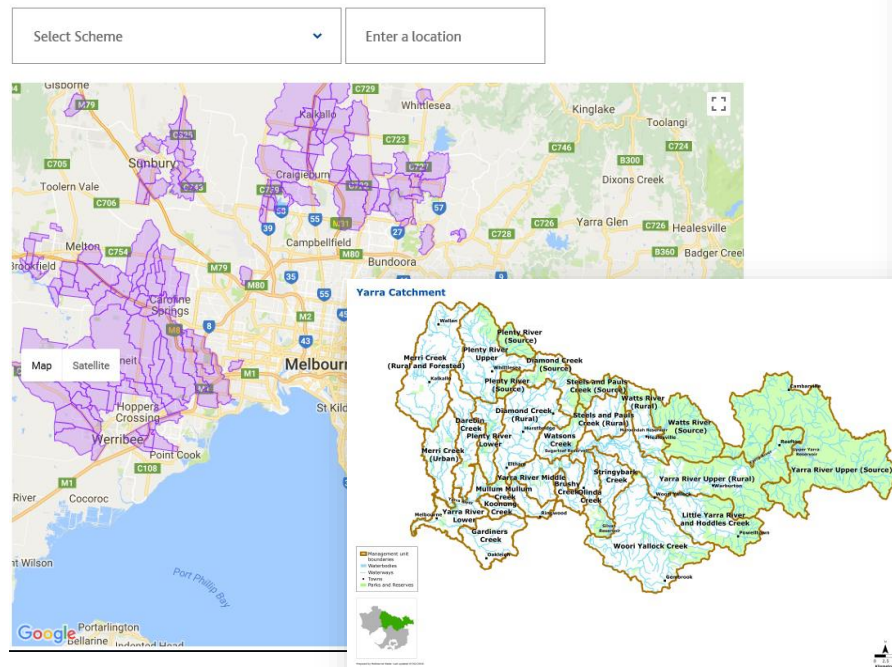
- **How** we do this is as important as **what** the outcomes are.
- IWM sub-catchment planning:



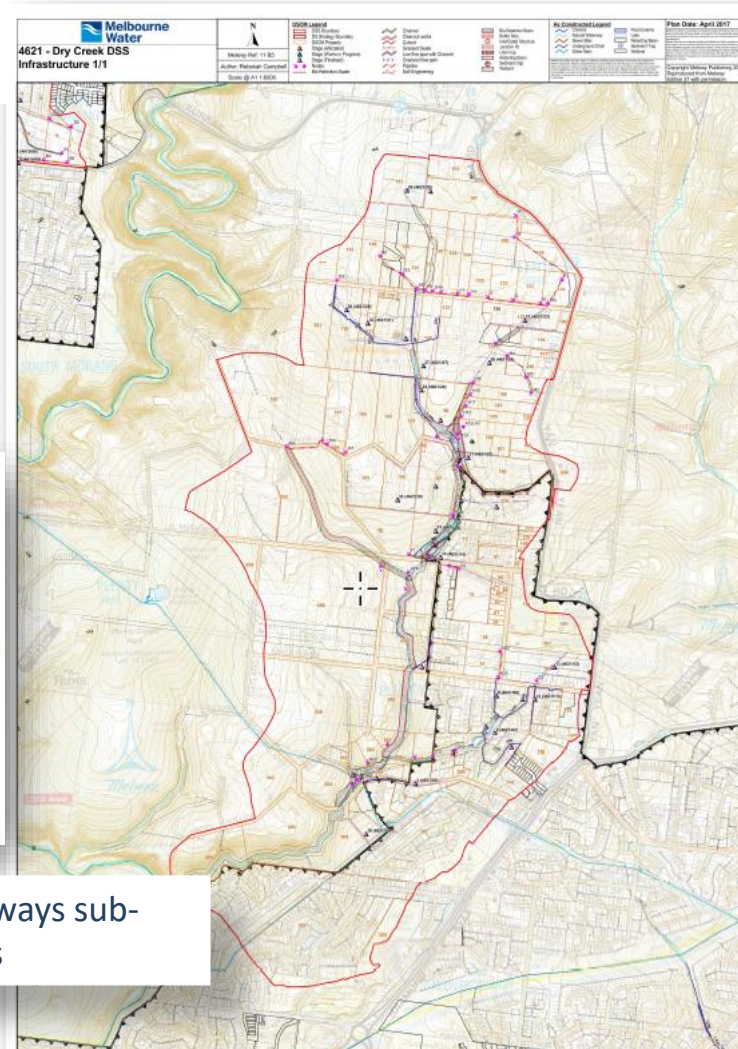
Integrated Water Management Plan

Project partner's websites link to consolidated IWM Plan:

Already know your drainage scheme? [Download a copy of it](#)



IWM schemes spatial areas: develop Healthy Waterways sub-catchment in line with Yarra areas / targets

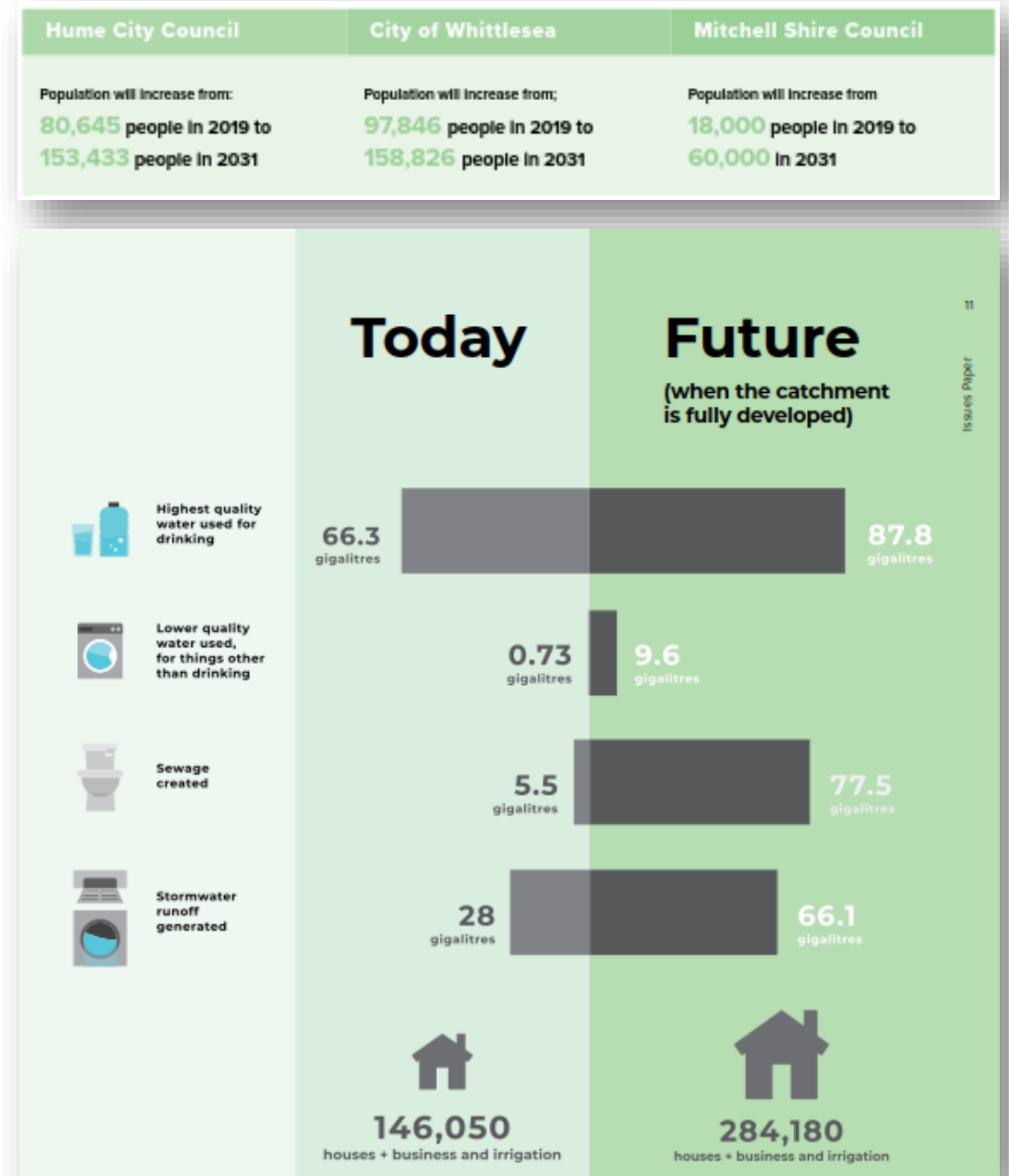
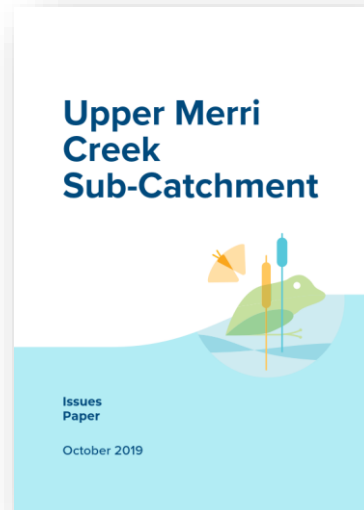


- Details Planning / development requirements aligned with catchment Strategic Directions Statement e.g. on-site retention, low infiltration pipelines
- Shows all community water assets and projected timing for construction e.g. retarding basins, alternative supply treatment plants, water & sewer networks
- Details incentives based funding
 - Contribution rates for growth related network augmentations \$/ha
 - Infrastructure investments funded by MWC, Councils & retailers (capacity shares / benefits split)
 - Any special operating levies or offsets schemes applicable

Issues & Opportunities

- Population growth
- Climate change
- Change in land use
- Stormwater runoff
- Water sensitive urban design
- Alternative water sources use
- Environment
- Aboriginal Cultural values
- Community

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Scenario A: Current Approach

Waterways City

In this scenario we consider what the future will look like in the Upper Merri Creek sub-catchment if we apply the current planning, regulatory, service delivery and governance approach. Through voluntary collaboration, partnering organisations set outcomes to reintroduce biodiversity and improve waterway health (protecting the natural creeks). All agencies commit to stormwater and biodiversity objectives as well as water supply, flooding and sewerage objectives with the focus of minimising adverse impact.

Continuing to plan and deliver new suburbs in much the same way that we have been doing for many years now will still require significant effort to keep up with growth projections and achieve the amount of stormwater harvesting required to protect the waterways and environments in the Upper Merri Creek sub-catchment.

Achievement of collective outcomes such as increased community connectivity, affordability, and biodiversity improvements will rely on voluntary changes to design and/or delivery approaches.

Overarching focus:
Minimise adverse impact

Targets

Private drinking water use
Average residential private drinking water consumption is 150 litres per person per day.

Residential water
In the future water supply for residential development is treated sewage to provide in residential public areas.

Stormwater and drainage
Stormwater is not treated in the future. Stormwater is treated through a combination of on-site treatment and off-site treatment.

Waterways and natural assets
Stormwater is not treated in the future. Stormwater is treated through a combination of on-site treatment and off-site treatment.

Build form: public open space
Stormwater is not treated in the future. Stormwater is treated through a combination of on-site treatment and off-site treatment.

Streetscapes and public open space
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Commercial and industrial development
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Aboriginal inclusion
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Alternative supply and reuse of water
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Governance arrangements
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Questions to consider...

1. Due to the impacts of urbanisation and climate change it is expected that under this scenario waterways conditions will significantly decline. Populations of birds, fish, frogs and macro invertebrates (bugs) will decrease. How comfortable are you about this?

2. Houses and streetscapes will look very similar to what you typically see now and recreational values will be focused into parklands (such as the proposed Merri Creek Park). How comfortable are you about this?

3. How important is it that your local neighbourhood includes green qualities and trees?

4. How important is it for you to have an alternative water supply (non-drinking water) available for watering residential lawns and gardens, and public open spaces?

5. What uses would you consider suitable for a combination of stormwater and recycled water (heavily treated sewerage)?

6. What should drinking quality water be used for?

Scenario C

Water Sensitive City

In this scenario we consider what the future will look like in the Upper Merri sub-catchment if we apply re-imagined planning, regulatory, service delivery and governance approaches. The targets under this scenario are focused on regenerative development. The approach encompasses improving environmental, social, cultural and economic outcomes for communities in the Upper Merri Creek sub-catchment.

In this scenario water is at the centre of the design and maximised to drive positive social, ecological, cultural and economic outcomes for the community.

The design of the neighbourhoods, houses and commercial/industrial precincts is driven by the same approach balancing affordability, viability. Housing options are denser and designed around shared spaces and facilities to improve efficiencies in water use, capture and re-use. The streetscape predominantly natural with an abundance of green spaces and links support by irrigation.

The design of neighbourhoods is driven by innovation, social procurement and opportunities for building strong communities through increased opportunities to connect.

It relies on a collaborative approach across agencies and community - with community stewardship essential.

Overarching focus:
Regenerative development

Targets

Private drinking water use
Average residential private drinking water consumption is 150 litres per person per day.

Residential water
In the future water supply for residential development is treated sewage to provide in residential public areas.

Stormwater and drainage
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Residential development

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Scenario Planning

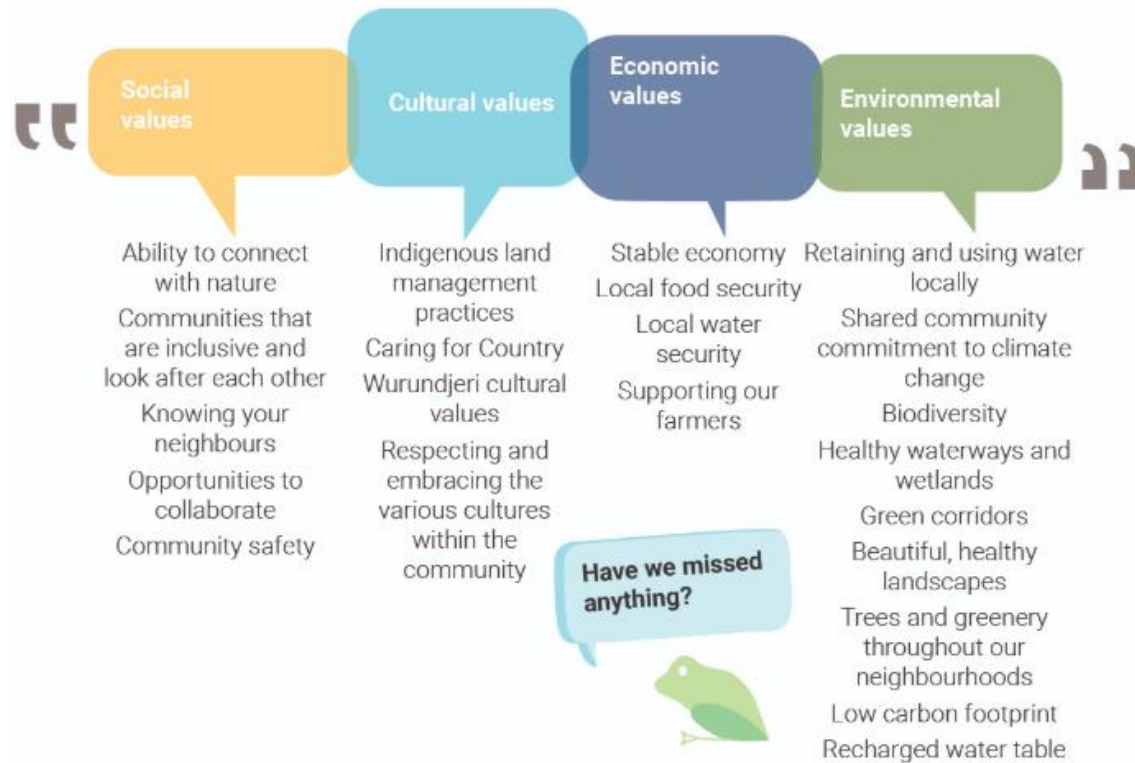


Community co-design

Summary of the community workshop outcomes

Snapshot of the community values

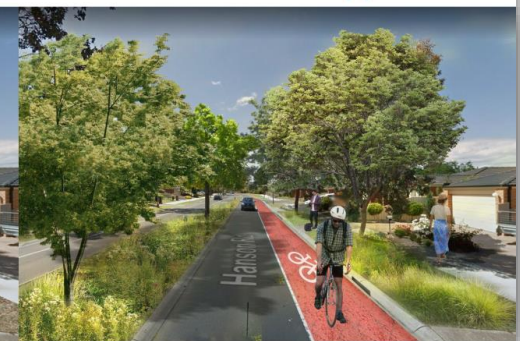
We asked participants what they value most about the Upper Merri Creek sub-catchment. Here is a summary of what they said:



Business as usual approach.



"Water sensitive" approach.





Draft community principles

We asked participants to provide input into a set of guiding community principles for the future of the Upper Merri Creek sub-catchment:

- **Design** of neighbourhoods demonstrate our **shared values** of Caring for Country.
- **Neighbourhoods are place-based**, supporting opportunities for people to be healthy, **connect** with one another and with nature.
- Opportunities to learn, collaborate and work together to build stronger communities are ongoing.
- Available **natural resources are efficiently managed** to ensure the needs of our waterways and natural landscapes are met.
- **Biodiversity and ecological systems are protected and enhanced** across the sub-catchment and throughout residential and commercial areas.
- Supply and use of water are **fit-for-purpose** and make best use of locally captured and treated stormwater and recycled water.
- **Knowledge** of the natural aquatic system and achieving the required **water quality** is continually building and being drawn on.
- Housing options and designs are sustainable, supporting stronger communities and provide for **choice and affordability**.
- **Local food production** is planned at a variety of scales within the sub-catchment, and food growers are supported.



Overarching Messages

- **Business-as-usual is not OK.** Minimising the impact on the environment is important but the focus needs to be on regenerative practices.
- **Water is central** to how to design and develop sustainable, connected and climate resilient neighbourhoods.
- **Traditional and natural methods are preferred over engineered solutions.** This was strongly linked to the support for regenerative practices and using natural solutions that provide environmental benefits and support landscape values.
- **Stormwater and recycled water need to be used more effectively** used to minimise impacts on potable water supplies and to stop runoff into our waterways. However, there were some concerns around the quality of water and how to make alternative water sources fit-for-purpose.
- **Innovation is important, but choice is essential** particularly regarding housing options and design of neighbourhoods.
- **Collaboration with the community is highly valued** to create shared ownership of the solutions and build the capacity of the community to get involved.

Cultural Flows

Michael Browne

Manager IWM Planning, Yarra Valley Water

Jordan Smith

Manager, Wurundjeri Water Unit

Upper Merri
Creek Values:
water quality
and
stormwater
flows

Prof. Vincent Pettigrove

*Chief Investigator for the AQUatic Environmental
STress research group (AQUEST), RMIT University*

Liveability Indicators / water as an enabler

Pat McCafferty

Managing Director, Yarra Valley Water

Chair, Water Services Association of Australia



Q&A Panel



Delivering the shared Vision & Objectives

How do we translate strategies into outcomes

How to make cities liveable / building liveability

Learnings from Singapore

https://int.search.myway.com/search/video.jhtml?n=7857fc93&p2=%5EBA5%5Exdm690%5ES32081%5Eau&ptb=2C62F83D-92D7-4FCC-8208-104B43C972E5&qS=&si=&ss=sub&st=tab&trs=wt&tpr=sbt&enc=2&searchfor=YkdDb2shTmiIajvC4aS1RinNGXfIELSZx5_DvznOsrnfh8trVEMJbU6OC_ZdBtRYgfkUsquqUn2NnA8Bn2GXL17Mso3Qf7gaz1-g2MgHT9_MIoT620f9Xamot8COBYkT_HMUIAH9cqRr3xuTSvWVYNMmxT92clKnm9tj4tMTXt3OT5Gh_Hy9a8YXia1M8rZcBR34DurB4ysay5mCy3BOXXB8SQxDqCO-8M_CBxLgNruMVJf9R-xtCmuneoalpm7f-SsRzMfWTQuDZnxm08XIUR5EYwQWtjMoJRMqKeO9xjDm_WsfciEbMGP9pJKr1DbssbkYAmx8W2ETpzkurC7k4g&ts=1571096805188

Copenhagen case study

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Affordable Housing

Katerra.com

- [Katerra | Global Construction Technology](#)
- <https://int.search.myway.com/search/video.jhtml?enc=0&n=7857fc93&p2=%5EBA5%5Exdm690%5ES32081%5Eau&pg=video&pn=1&ptb=2C62F83D-92D7-4FCC-8208-104B43C972E5&q=&searchfor=Katerra+YouTube&si=&ss=sub&st=tab&tpr=sbt&trs=wtt>

Netherlands Tiny House project: Minitopia

- <https://www.dw.com/en/netherlands-compact-living/av-50003877>

Aboriginal
inclusion:
enabling
economic /
social /
cultural
outcomes

Nina Braid

*Aboriginal Partnerships & Business Development
Manager*

Maximising social impact

Rohan Braddy

Chief Executive Officer, Mambourin

Holistic,
collaborative,
strategic &
dynamic
placemaking

Valli Morphet

Chief Executive Officer, CoDesign Studio

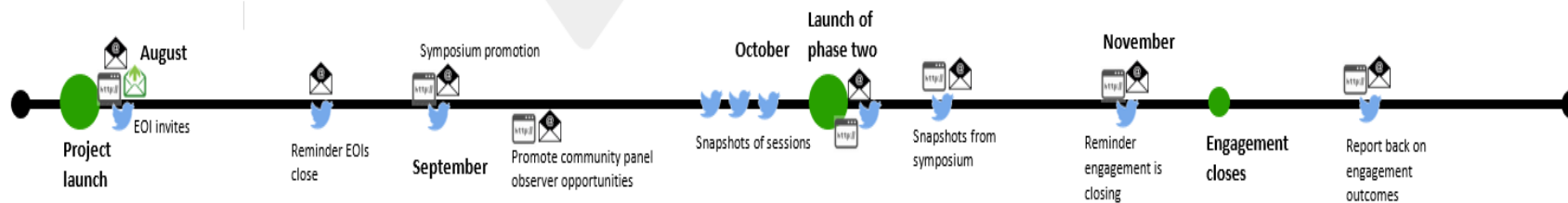


Q&A Panel

Next Steps

- Partnering organisations sign Partnership Statement with Wurundjeri Woi-wurrung Aboriginal Corporation
- Information Sharing Agreement executed for Upper Merri Creek IWM online platform
- water balances and scenarios development to support next phase of stakeholder engagement processes & economic analyses
- Community and stakeholder engagement:

Key timeline for communications activity



- DRAFT Upper Merri Creek IWM plan

