



GREENING the PIPELINE



www.greeningthepipeline.com.au

In partnership with:



**Greater Western
Water**



Department
of Transport



Vision



The Plan





ABOUT WYNDHAM

- Located on the western edge of Melbourne, between Melbourne's CBD and Geelong
- 542km² with 27.4km of coastline
- 2020 population: 288,122
- 2041 population: 512,591
- 13 babies born each day
- One of the fastest growing areas in Australia, adding 18,836 residents between 2018 and 2019
- Almost half born overseas, from 162 different countries
- One in three moved to Wyndham in past five years.
- 58% of residents are aged 35 or below

Wyndham City Council would like to pay respect and acknowledge the Bunurong and Wadawurrung People's as the Traditional Custodians of the land on which Wyndham Council is located.

Community Priorities and the Council Plan



- Improve public open spaces
- Revegetation planning
- More trees
- Increase tree canopy
- Protect grasslands
- Take the lead on climate and environmental action

CHALLENGES:

- Wyndham has the lowest tree canopy in the nation: 5.4% covered by trees, according to RMIT study.
- Low rainfall, 500-600mm annual
- Public Open Space Deficit in older suburbs including Tarneit, Werribee, Hoppers Crossing

We're working to cover 25% of our streets and 35% of open spaces by 2030.

We're planting 20,500 trees this year as part of the Zone 5 works, between Skeleton Creek and Forsyth Road.



Greening the Pipeline Zones map



Collaborative Funding:

- \$9M State Government DELWP Suburban Parks Program and IWM
- Project Coordinator role at Council funded by Melbourne Water and Greater Western Water
- \$300k funding from Melbourne Water's Living Rivers towards Zone 5 Stormwater Harvesting Scheme
- \$1M funding from Greater Western Water for Stormwater Harvesting Scheme and
- 20,000 trees planted this year through DELWP Trees for a Cooler Greener West
- WCC Cap Ex approx. \$3M
- Melbourne Water Cap Ex contribution from ESC \$800k



Greening the Pipeline Partners

Collaborative Management and Maintenance:

- Sec 15RMA Agreement between WCC and DoT
- Operation and Maintenance Agreement between GWW and WCC for Stormwater Harvesting Infrastructure
- Asset transfer Agreement between WCC and MW for Repurposed MOS
- Deed of Agreement between DoT and MW, to be amended to include WCC
- Maintenance Agreement between WCC and MW for Pilot Park
- Maintenance Agreement between WCC and MW for MOS (pending HV permit condition)



Greening the Pipeline Partners

Heritage

Listed on the Victorian Heritage Register for its scientific (engineering) significance to Victoria.



Heritage

MAIN OUTFALL SEWER - Permit Exemption Policy

The whole of the Main Outfall Sewer is a vitally important component of the sewerage system constructed to service Melbourne metropolitan area at the end of the nineteenth century. The elements that characterise the entire sewer are open brick lined channels, open concrete channels, covered brick lined channels, brick aqueducts, brick road bridges, concrete road bridges. It is intended that the sewer should be retained and conserved in such a condition that it is able to illustrate its function and construction. Since its replacement by the Western Trunk Sewer, the Main Outfall Sewer's function has been made redundant and instead the reserve will be mainly used as a recreational trail. It is intended that there will be agreement between the owners, managers and Heritage Victoria to ensure that in making safe the sewer, evidence of its existence will not be swept away. Instead, safety and repair work will be undertaken to an agreed methodology which will ensure public safety, minimise negative effect on the cultural heritage values and maximise potential for interpretation of those values. Until such time as this agreement is formalised into a permit exemption, the general exemptions listed below should remain in force.

Over recent years the sewer reserve has been used for the dumping of hard and soft rubbish, and road waste. As well, weeds and vegetation, including trees, have been allowed to proliferate such that their root systems affect the structural integrity of the sewer. The removal of these threats should be encouraged.

While ensuring that construction of the recreational trail and day to day maintenance of the sewer is enabled without a permit, it is still intended that any major construction or demolition which affects the cultural heritage significance of the structure of the sewer be subject to the permit process, except as listed below.

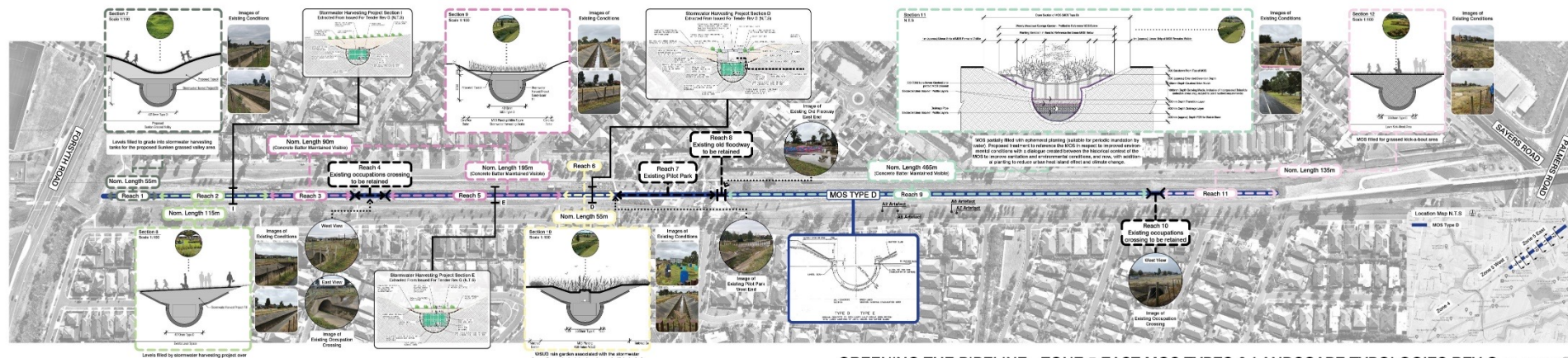
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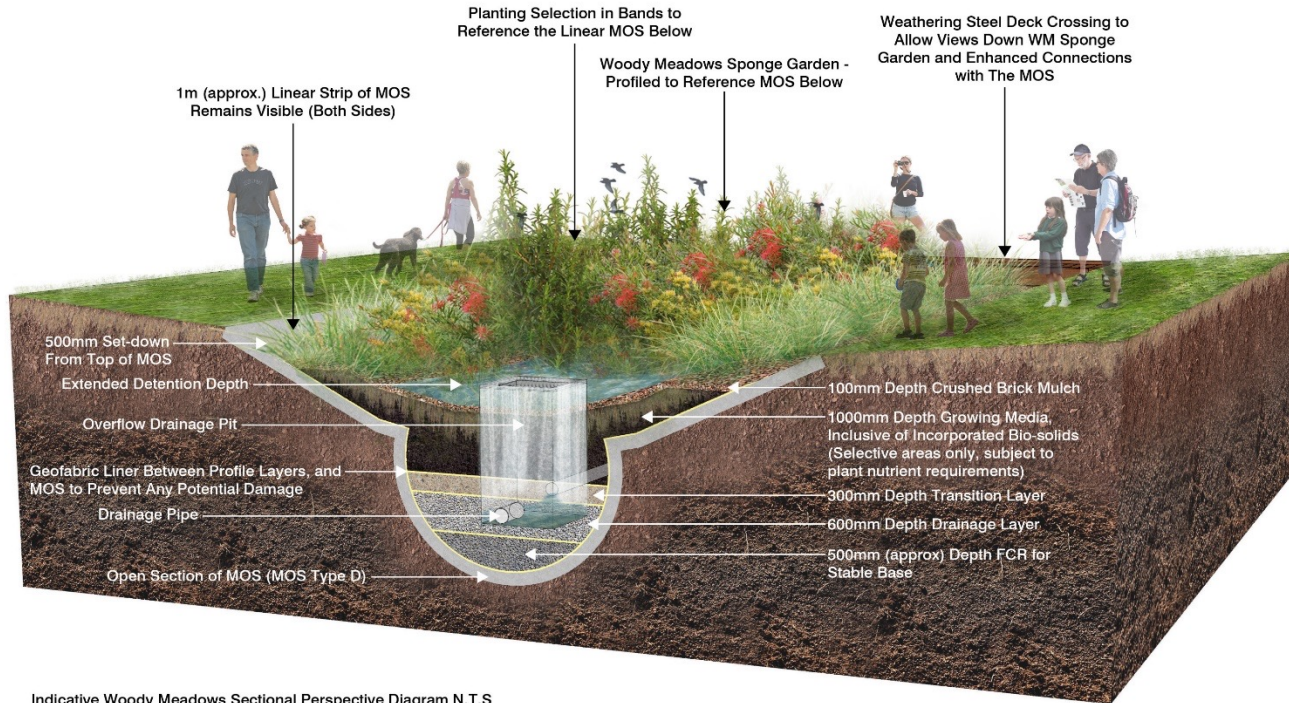
Adaptive Reuse of Industrial Heritage: Opportunities & Challenges

"The best way to conserve
a heritage building, structure
or site is to use it ...
Adaptation links the past to
the present and projects into
the future."

'New Uses for Heritage Places.'

HERITAGE
COUNCIL
VICTORIA
HERITAGE
COUNCIL
VICTORIA





Indicative Woody Meadows Sectional Perspective Diagram N.T.S

The MOS adaptive reuse as a Green Infrastructure Asset, providing Ecosystem services.

Ecosystem services are the benefits people obtain from ecosystems . They help regulate microclimates and reduce pollutants that improve our health and enhance our daily lives. Ecosystem services come from the habitats and environments that support and maintain urban biodiversity as well as the parks and public spaces that we use for recreation, cultural expression and relief from the stresses of daily life.

(AILA Position Statement on Green Infrastructure)

Heritage Act, Section 101, 2 (d) if the applicant is a public authority, the extent to which the application, if refused, would unreasonably detrimentally affect the ability of the public authority to perform a statutory duty specified in the application;



Enhancing Life & Liveability

Melbourne Water makes a vital contribution to the famous Melbourne lifestyle
by: underpinning human health | enhancing community wellbeing | supporting economic growth | balancing the natural and manufactured environment



We are responsible for the supply of:

- affordable, high quality water
- outstanding sewage system
- healthy waterways
- integrated drainage
- flood management services



Healthy People

Strengthening the wellbeing of the community.



Healthy Places

Co-creating the world's most desirable places to live.



Healthy Environment

Enhancing the natural environment.

Helping to make greater Melbourne a fantastic place to live.

Melbourne Water is the applicant for the Heritage Permit process

OPEN SPACE STRATEGY FOR
METROPOLITAN MELBOURNE 2021

Open space

FOR EVERYONE



GREENING THE PIPELINE



Above: The Greening the Pipeline initiative is transforming the heritage-listed Main Outfall Sewer (MOS) reserve and the Federation Trail bike path into a parkland. The Pilot Park at Williams Landing (pictured) is the first stage connecting communities and providing shade and cooling, courtesy GHD.

A creatively-designed green corridor

The Victorian government is working with Melbourne Water, Wyndham City Council, City West Water, Greening the West and the Department of Transport to transform the heritage-listed Main Outfall Sewer pipeline reserve along the Federation Trail bike path in the western suburbs into a community parkland.

The Greening the Pipeline project will repurpose 27km of the reserve to connect communities, improve cycling and walking options for the area, celebrate its heritage and provide a creatively designed green corridor where water is managed sensitively.

In 2017, Melbourne Water completed the first-stage pilot park at Williams Landing, to demonstrate the potential of the project as a green linear parkland.

This 100m section was designed in collaboration with the local community and project partners.

The park incorporates water-sensitive urban design principles and harvests stormwater to green the reserve and reduce stormwater impacts on local waterways and surrounding areas.

The state government has contributed \$9 million to be delivered over three years. This will fund the construction of the next 3.8km section of the parkland project, to improve community connectivity and provide new, high-quality open space between Williams Landing and Hoppers Crossing.

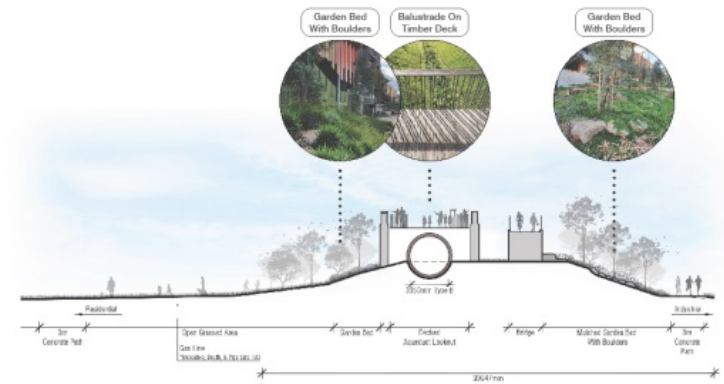
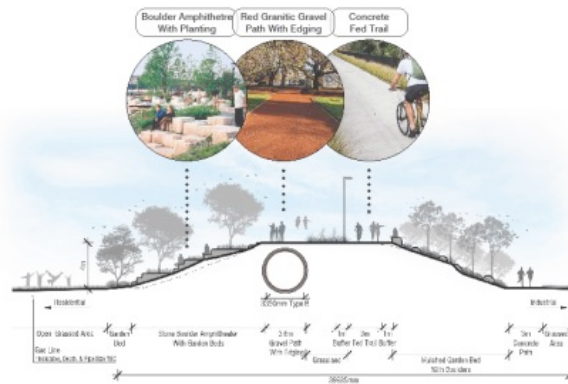
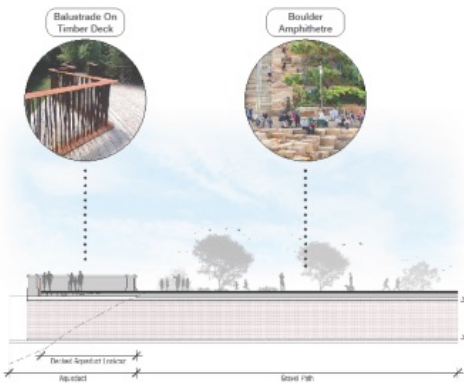
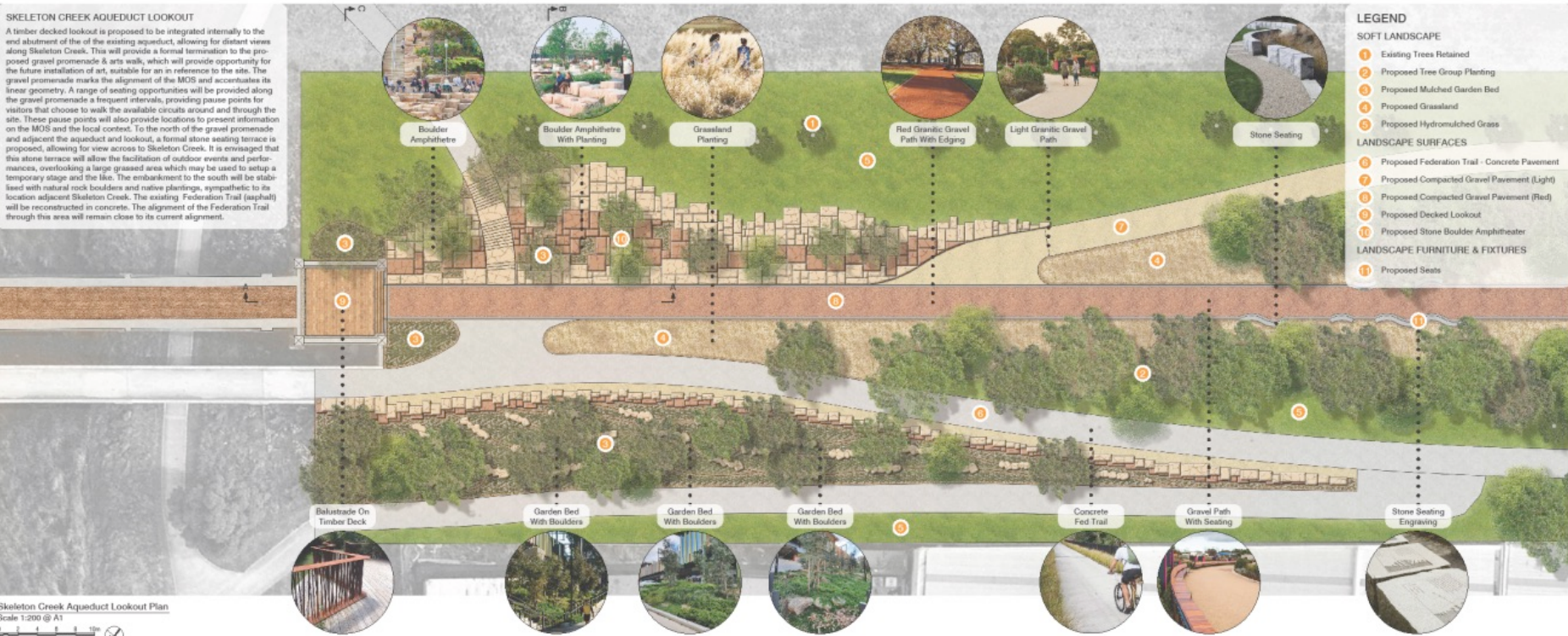
For more information about Greening the pipeline, visit greeningthepipeline.com.au





SKELETON CREEK AQUEDUCT LOOKOUT

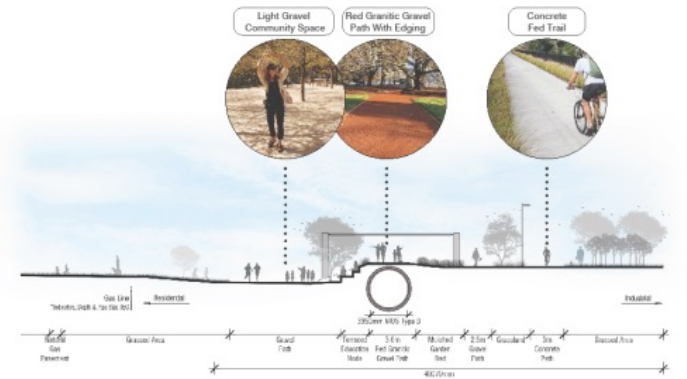
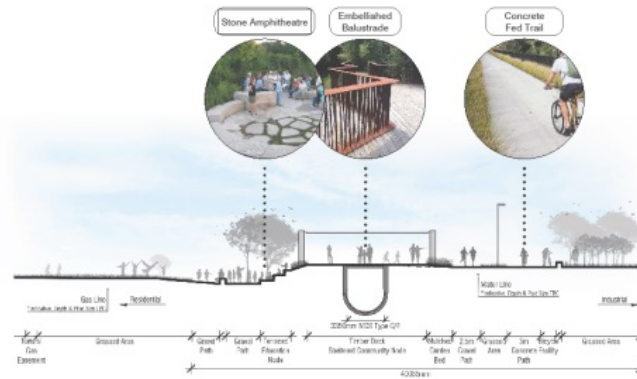
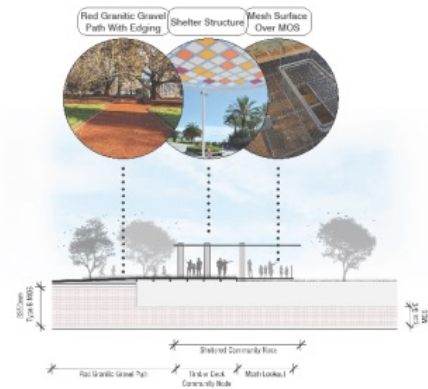
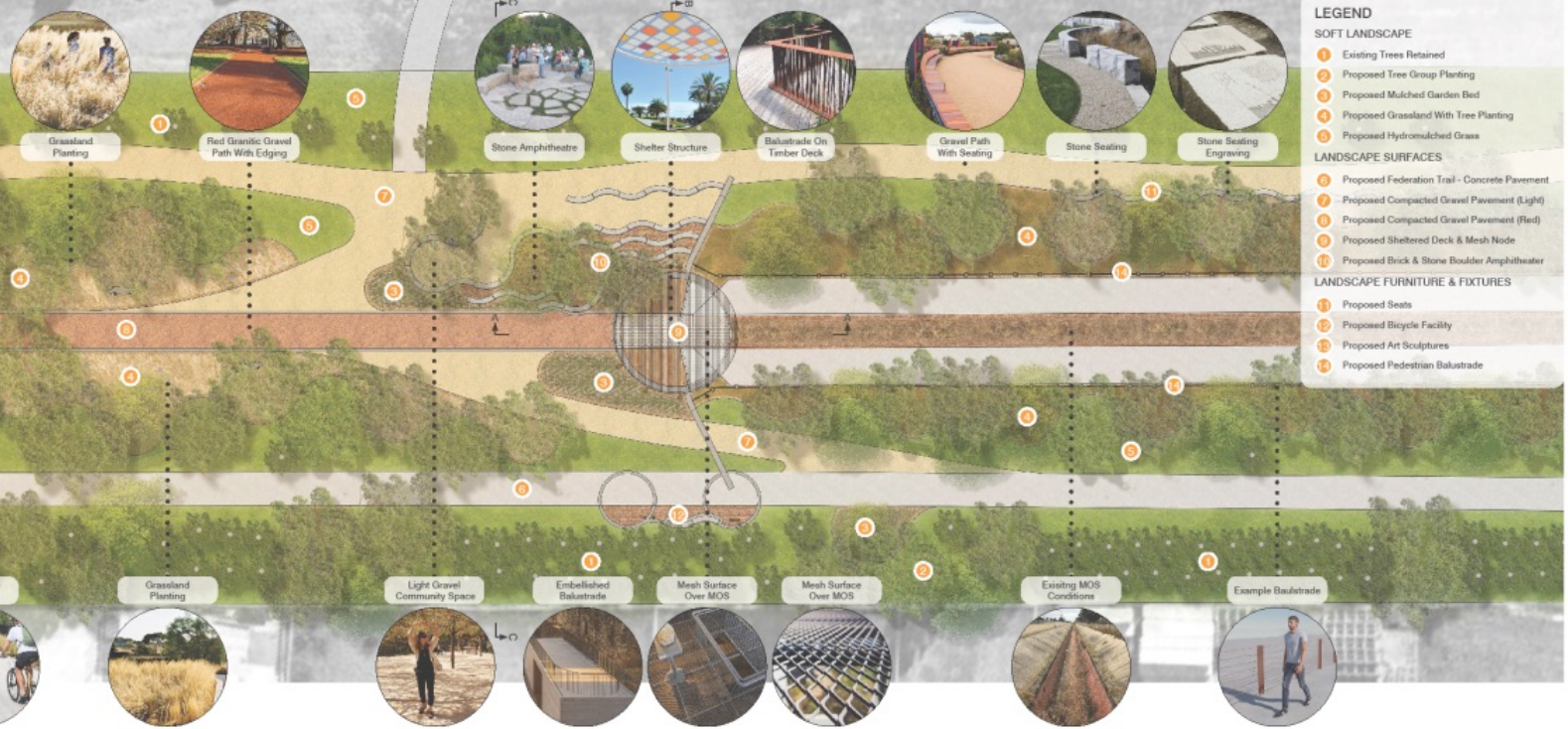
A timber decked lookout is proposed to be integrated internally to the end abutment of the existing aqueduct, allowing for distant views along Skeleton Creek. This will provide a formal termination to the proposed gravel promenade & arts wall, which will provide opportunity for the future installation of art, suitable for an in reference to the site. The gravel promenade marks the alignment of the MOS and accentuates its linear geometry. A range of seating opportunities will be provided along the gravel promenade at frequent intervals, providing pause points for visitors that choose to walk the available circuits around and through the site. These pause points will also provide locations to present information on the MOS and the local context. To the north of the gravel promenade and adjacent the aqueduct and lookout, a formal stone seating terrace is proposed, allowing for view across to Skeleton Creek. It is envisaged that this stone terrace will allow the facilitation of outdoor events and performances, overlooking a large grassed area which may be used to setup a temporary stage and the like. The embankment to the south will be stabilised with natural rock boulders and native plantings, sympathetic to its location adjacent Skeleton Creek. The existing Federation Trail (asphalt) will be reconstructed in concrete. The alignment of the Federation Trail through this area will remain close to its current alignment.





EDUCATION NODE

The education node complements the outlook and provides a 'bookend' to the gravel promenade. The education node is located where the MOS transitions to be open to the air, and presents the opportunity to look down its length, along one of its brick lined sections. A sheltered deck spanning the MOS will include grating decking, allowing for view down directly into the MOS also. Seating will be provided under the shelter, allowing for a sheltered space to sit out of the weather. It is also proposed that solar panels are considered on top of the shelter, allowing a sustainable source of power for feature lighting proposed throughout this zone of the project. A brick paved seating terrace is proposed to the north of this sheltered node, allowing for small gatherings and education on the MOS alongside an outdoor classroom / learning space for the adjacent Truganina South Primary School.



GREENING THE PIPELINE - EDUCATION NODE

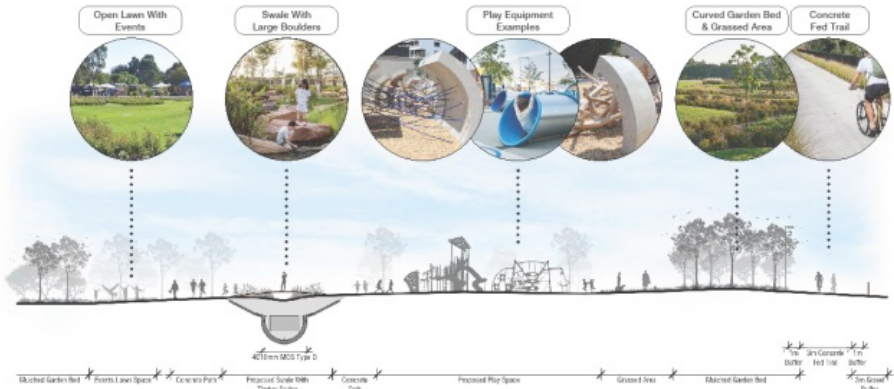
PLAY SPACE & EVENTS LAWN

Located east of Forsyth Road, this section of the MOS is filled above the underground water tanks associated with the Andwell Park Stormwater Harvesting Project to provide an undeveloped open space for the provision of a new play-space and community events lawn. To maximise the available uninterrupted space, it is also proposed that the Federation Trail be relocated through this zone to run closer to Wingfield Play and Maldon St. The play-space will have an emphasis on nature based play opportunities with a focus on referencing the MOS below. A proposed dry creek bed to the north will provide opportunities for passive water play in specific reference through contrast to the MOS below. Excess water will be allowed to drain into the underground tanks below for enhanced sustainability outcomes. The play-space will provide for traditional play opportunities (such as slides, swings, spinners and carousel) within a carefully crafted space which provides strong reference to the site and its context. Adjacent the play space, and to provide enhanced community and social sustainability, a larger lawn space is proposed which will allow for events (such as markets and small community festivals) alongside everyday use such as picnics, kite flying and throwing a ball around. This space will provide a strong point of connection for the community - a space where the community both side of the MOS may come together, and enjoy a green and activated parkland.

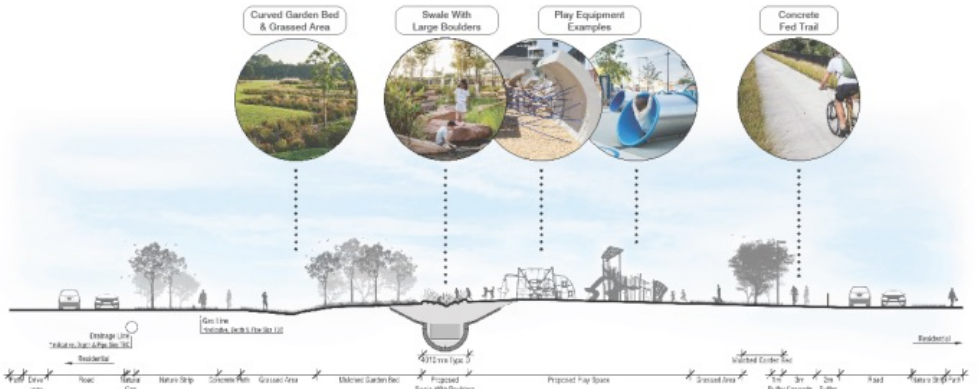


- LEGEND**
- SOFT LANDSCAPE**
- 1 Existing Trees Retained
 - 2 Proposed Tree Group Planting
 - 3 Proposed Mulched Garden Bed
 - 4 Proposed Events Lawn
 - 5 Proposed Hydromulched Grass
 - 6 Proposed Synthetic Turf Mound
 - 7 Proposed Natural Turf Mound
- LANDSCAPE SURFACES**
- 8 Proposed Federation Trail - Concrete Pavement
 - 9 Proposed Extension of Gravel Pavement (Light)
 - 10 Proposed Rubber Soffball Play Space
 - 11 Proposed Swale With Boulders & MOS Planting
 - 12 Proposed Terraced Boulder & Water Pump Play
 - 13 Proposed Timber Deck Bridge
- LANDSCAPE FURNITURE & FIXTURES**
- 14 Proposed Play Equipment
 - 15 Proposed Bicycle Facility

Play Space & Events Lawn Plan
Scale 1:200 @ A1
Scale 1:200 @ A1 / 1:400 @ A3

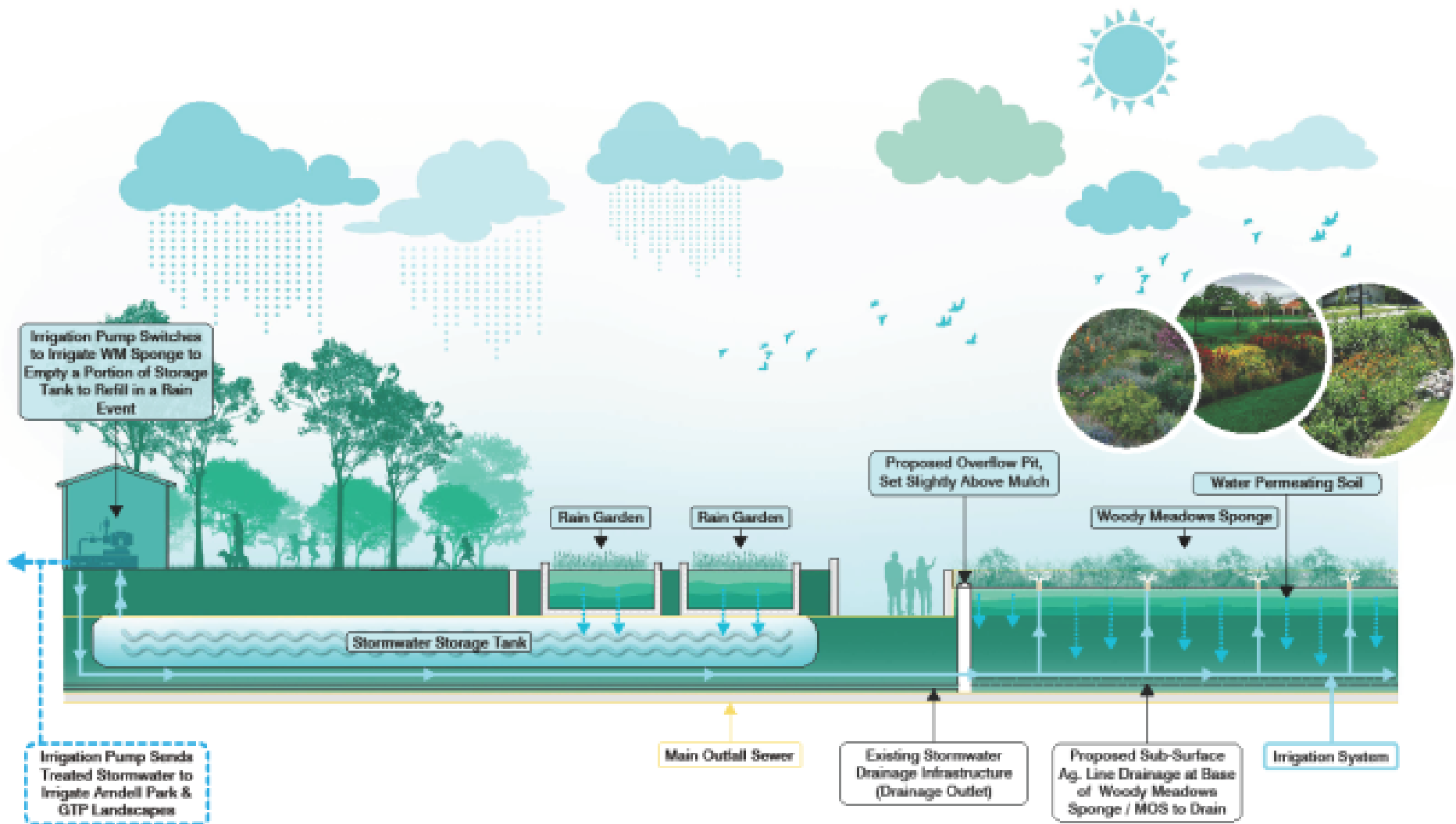


Section A - A
Scale 1:200 @ A1
Section Through Events Lawn, Proposed Swale With Timber Bridge & Play Space



Section B - B
Scale 1:200 @ A1
Section Through Proposed Swale With Boulders and MOS Planting, Play Space & Fed Trail

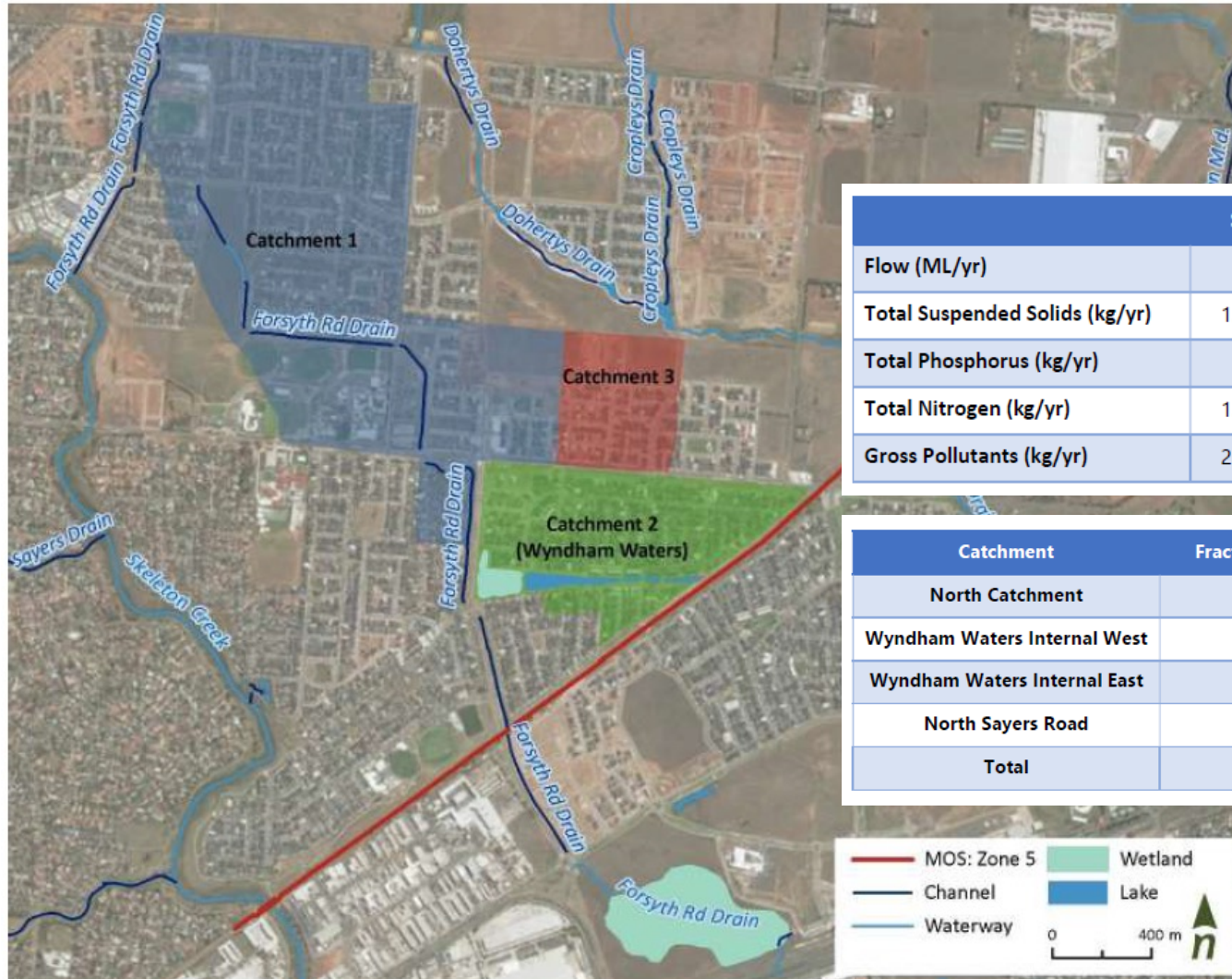
GREENING THE PIPELINE - PLAY SPACE & EVENTS LAWN



Woody Meadows Sponge Irrigation Diagram

Diagram Not To Scale & Shown As Indicative

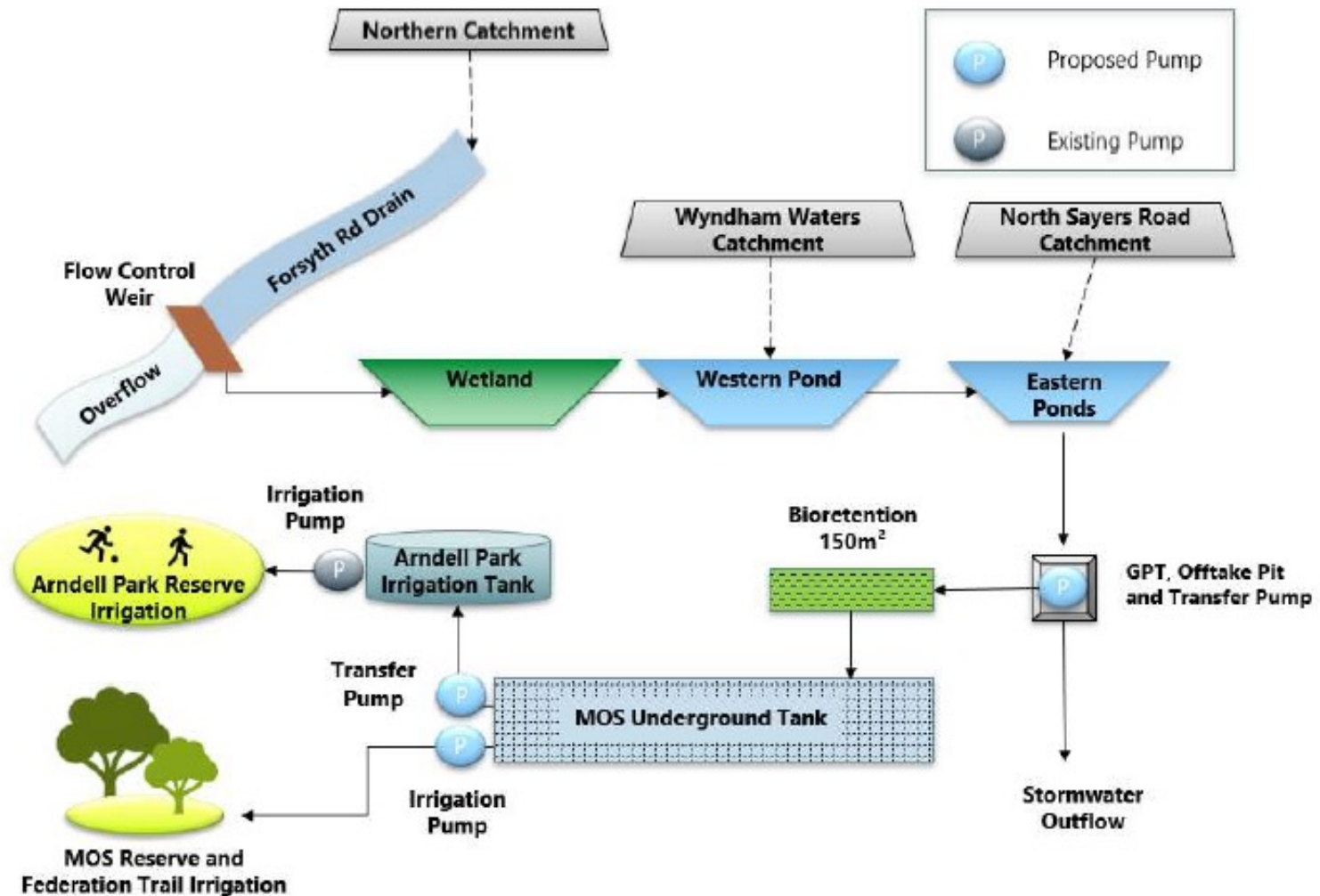
Stormwater Harvesting Scheme

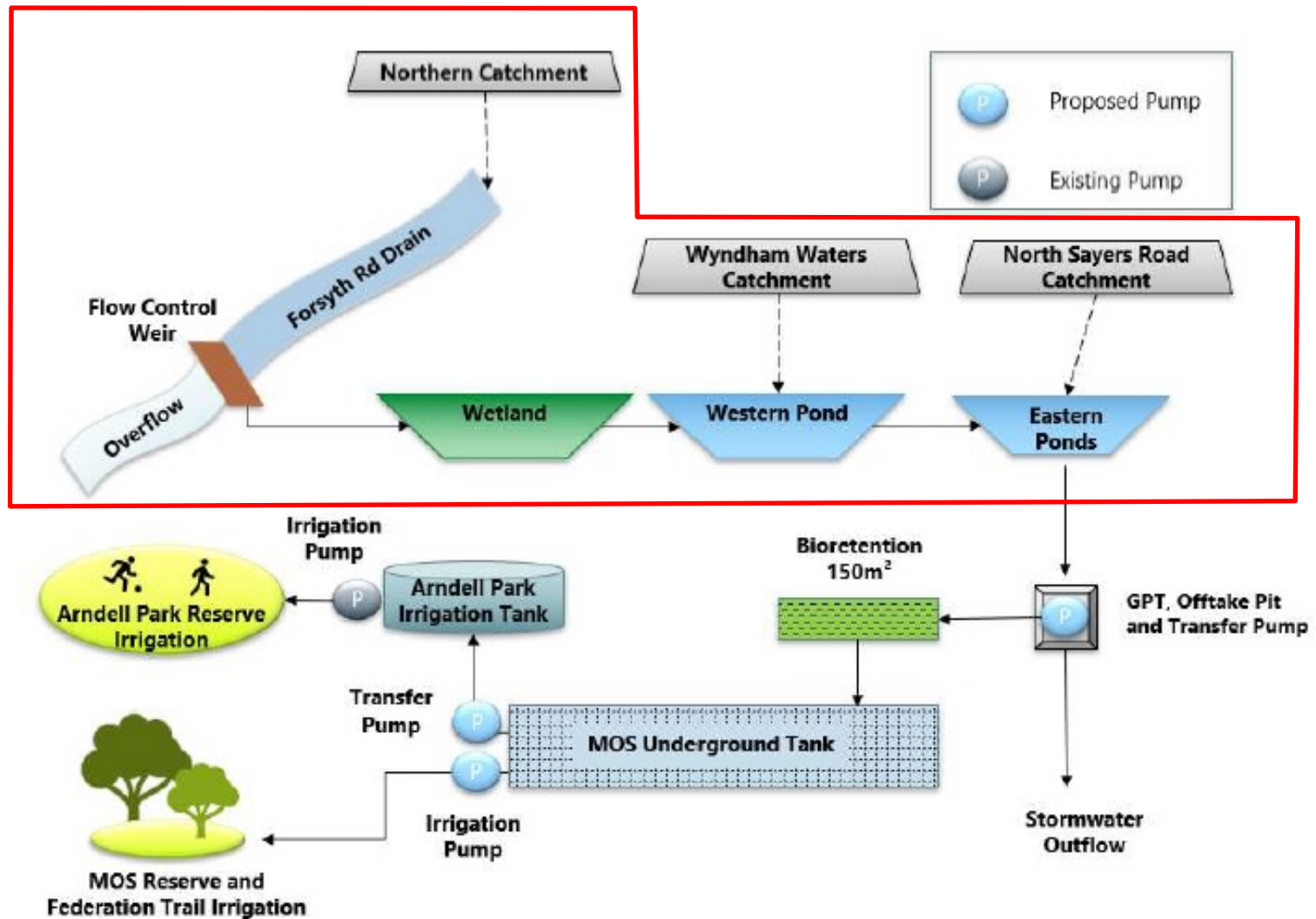


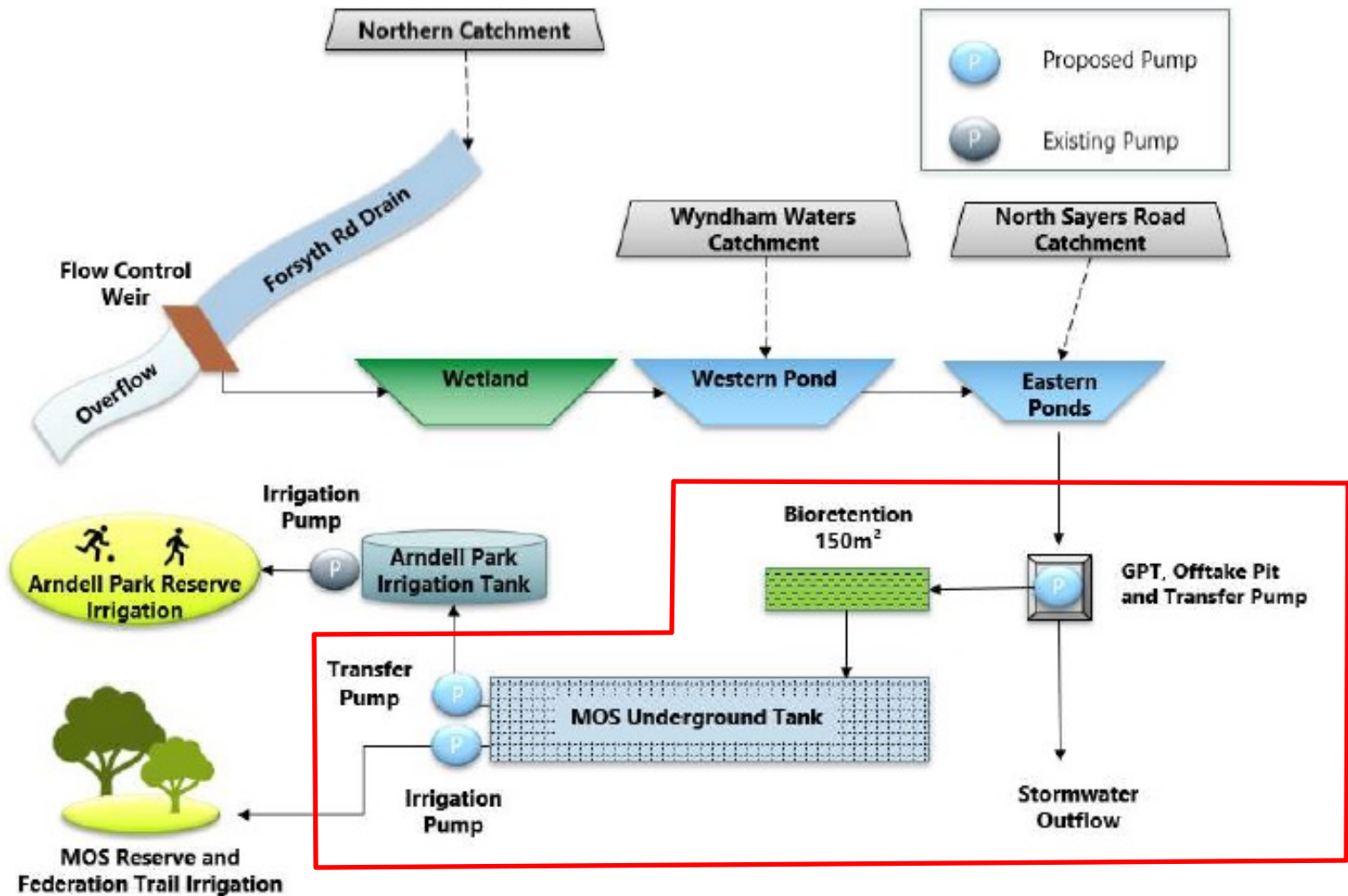
	Source	Residual Load	% Reduction
Flow (ML/yr)	677	476	30%
Total Suspended Solids (kg/yr)	1.24E+05	1.73E+04	86%
Total Phosphorus (kg/yr)	261	70.7	73%
Total Nitrogen (kg/yr)	1.88E+03	658	65%
Gross Pollutants (kg/yr)	2.77E+04	2.48E+03	91%

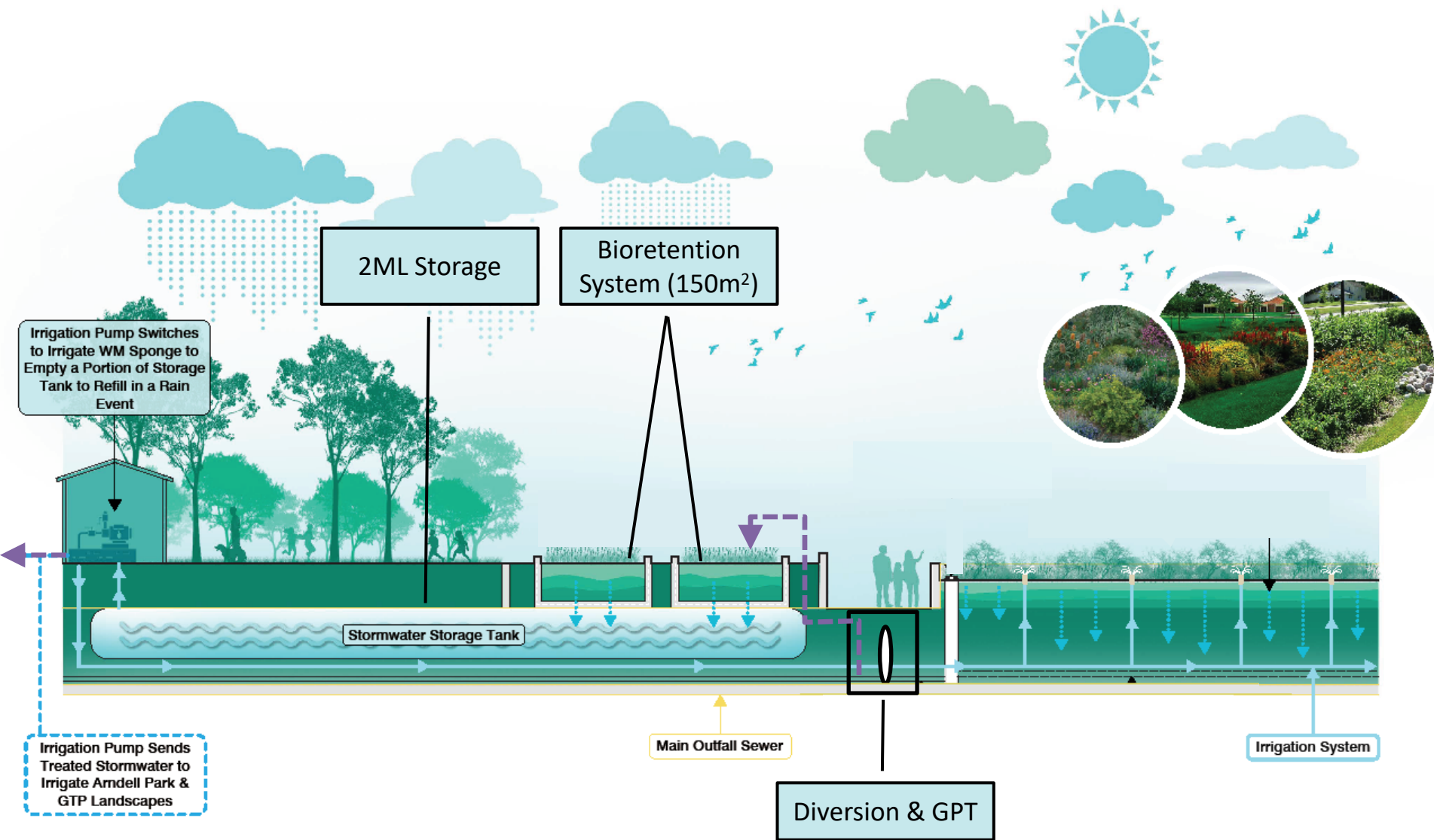
Catchment	Fraction imperviousness	Total Area (Ha)
North Catchment	47%	183
Wyndham Waters Internal West	55%	21
Wyndham Waters Internal East	55%	31
North Sayers Road	50%	25
Total		260

Stormwater Harvesting Scheme



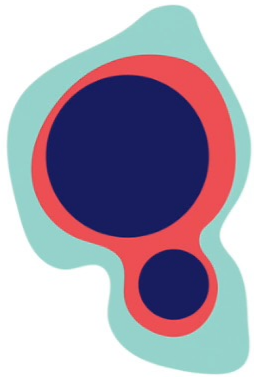












**Greater
Western**
Water



**Melbourne
Water**



Environment,
Land, Water
and Planning

vic roads

FRÄNKISCHE

TIMELINE Zone 5 East and West

Civil Works

- Works Commenced Feb 2022
- Works approx. 50% complete
- Works due for completion Aug. 2022

Landscape Works

- Works commence June 2022
- Landscape Works complete Feb. 2023
- Planting Sept 2023

Next Steps- Zone 4 Masterplan, Detailed Design and Construction 2023-2026

Acknowledgements



Thankyou



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Department
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