

Infiltration Devices

managing silt and ground movement

Infiltration Systems: the WSUD assets that keep on giving

Water Sensitive SA seminar, 27 October 2021

Tim Johnson

"A city without trees isn't fit for a dog"

Infiltration Devices

- simple ways to prevent silting of WSUD devices
- reactive soil & WSUD
- would you like trees with that?
- what next?

"A city without trees isn't fit for a dog"

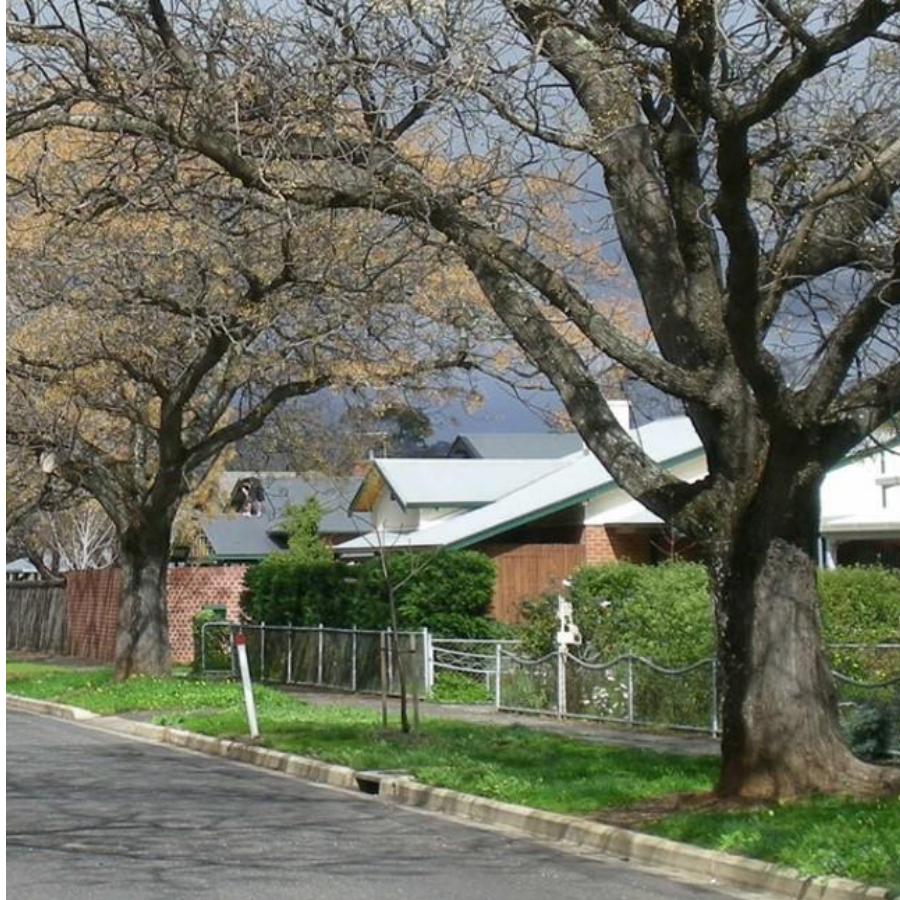






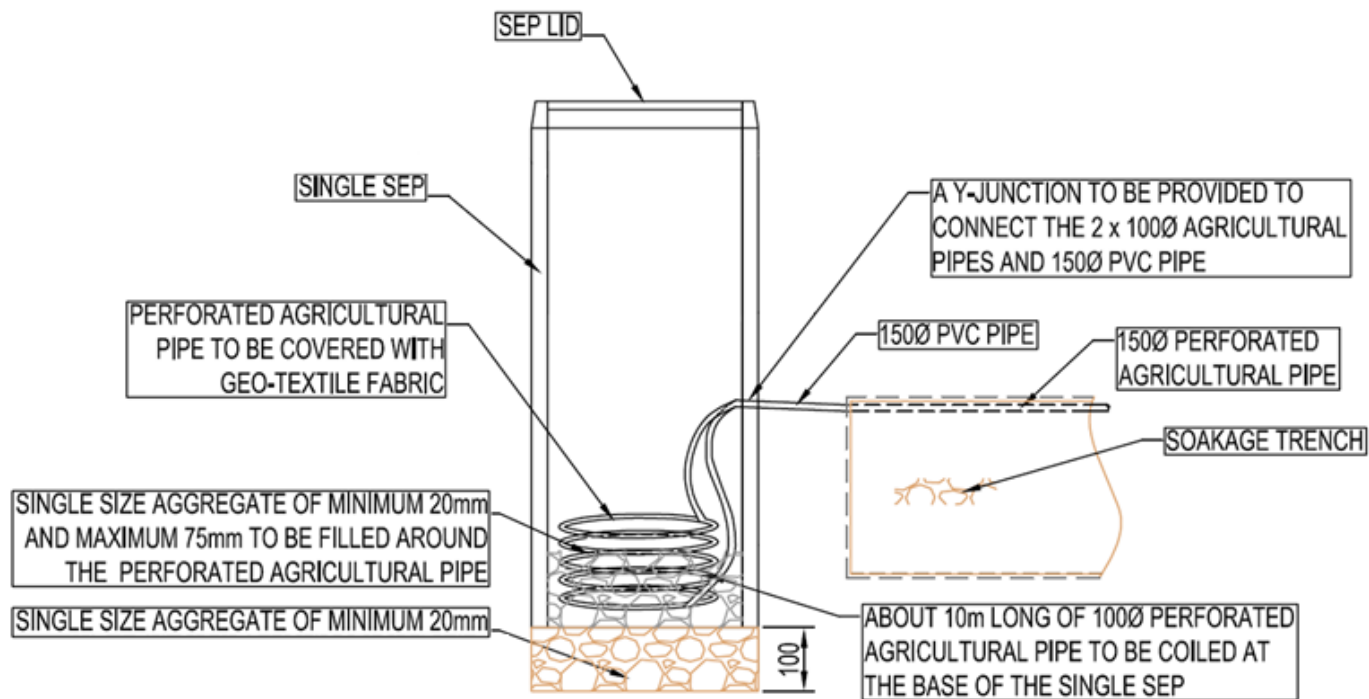








April 2008



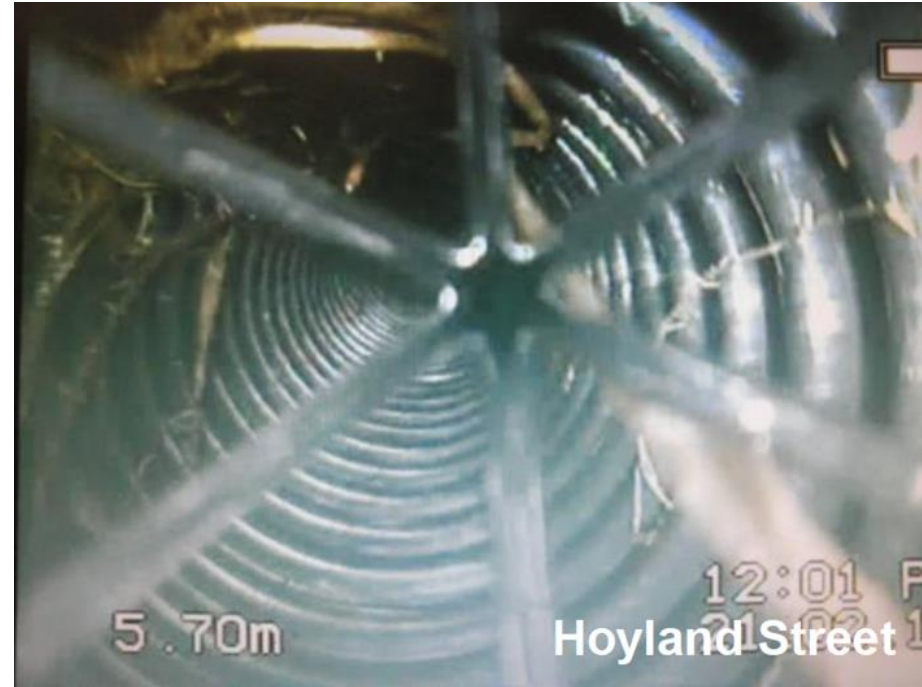






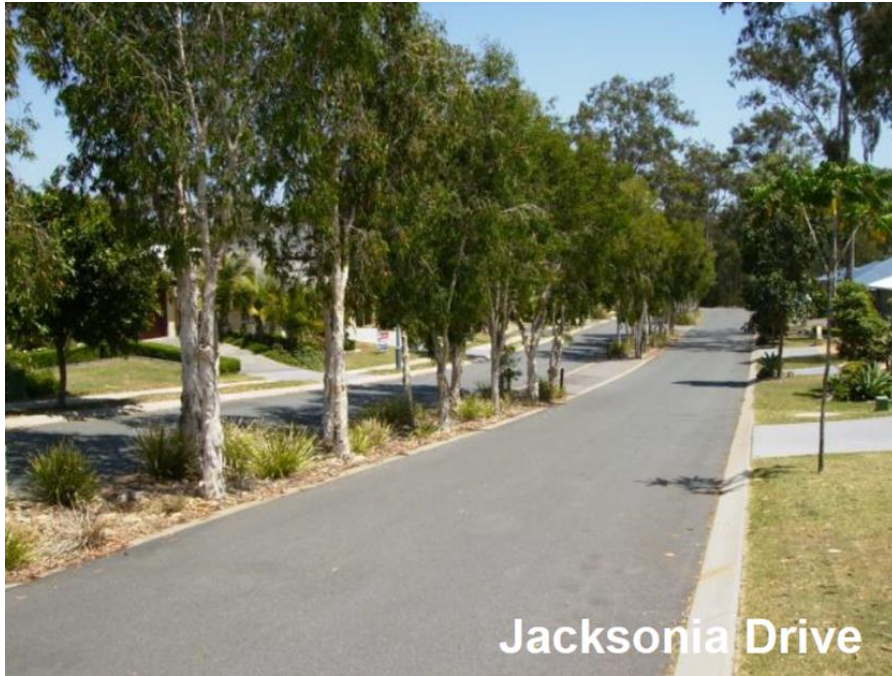
March 2019

Melaleuca, Pittosporum & Lomandra species, 11 years growth, ~0.7m deep



Dalrymple, B. 2012. *Bioretention myths busted!* Stormwater Industry Association, Queensland state conference, Brisbane, Australia.

Melaleuca & Lomandra species: 10 years, ~0.5m deep



Dalrymple, B. 2012. *Bioretention myths busted!* Stormwater Industry Association, Queensland state conference, Brisbane, Australia.





Strand Reserve

15.92

15.20

49.91

38

46.44

16.37

17.55

24.04

33.90

27.53

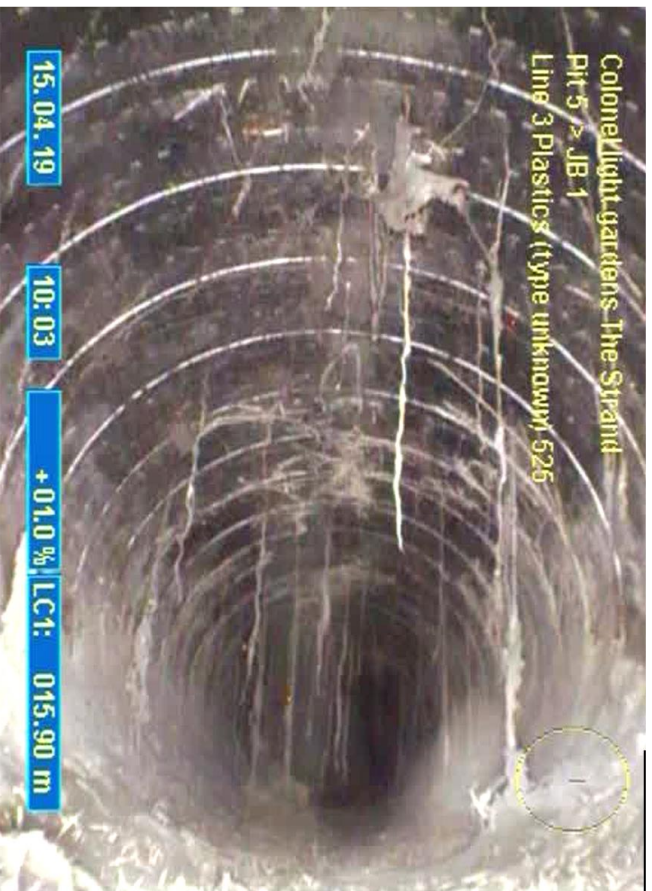
1A

39.27









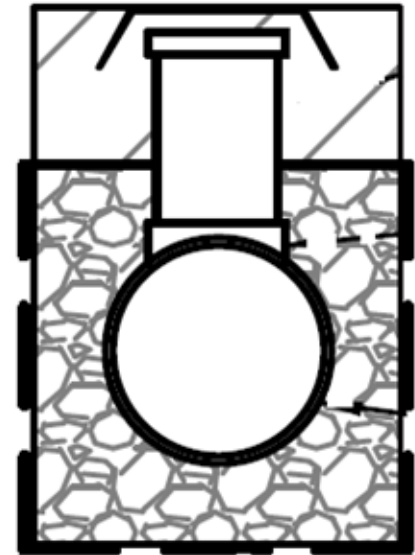
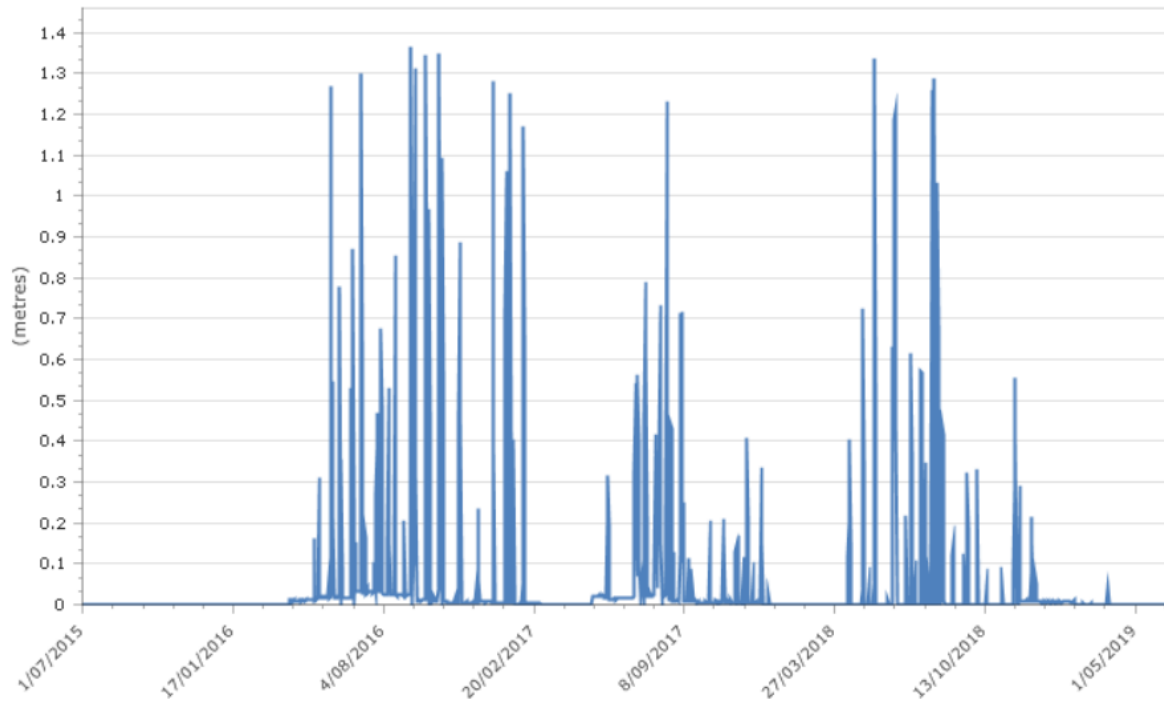








The Strand Res Well 1 - W5040091
Water Level (metres)



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System Performance

As both the sites are underlain by medium and high plasticity clay soils with relatively low permeability, vertical soakage from the systems is expected to be relatively slow, especially once the soils become saturated. As such, water may tend to accumulate in the near-surface soils (fill and topsoil).

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TREENET Inlets



2017 (93 Inlets)

Rainfall: 80,060 m³

Runoff Retained = 407 m³

4.5 kilolitres per inlet

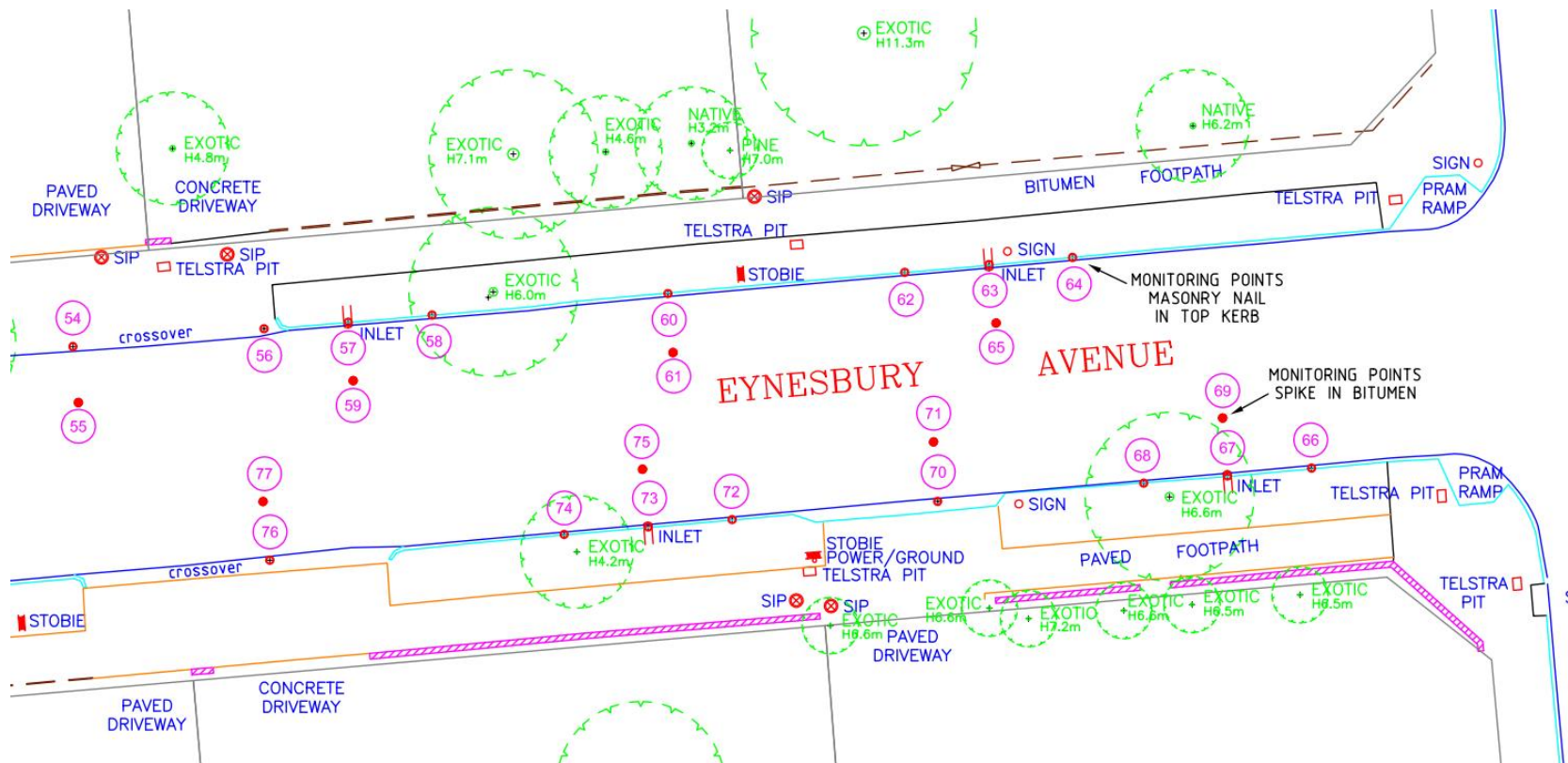
2018 (181 Inlets)

Rainfall: 57,090 m³

Runoff Retained = 330 m³

1.8 kilolitres per inlet

Shahzad, H. 2020. Catchment Hydrology – Before and After WSUD Treatments. *Proceedings of TREENET 21st National Street Tree Symposium*, Adelaide South Australia, September 4-28





<https://www.britannica.com/animal/platypus>

"A city without trees isn't fit for a dog"

<https://www.frogid.net.au/frogs/litoria-raniformis>



"A city without trees isn't fit for a dog"



*A man diving off a board at
the Gilberton Swimming
Pool, watched by other
members of the Adelaide
Swimming Association
c.1920.*



"A city without trees isn't fit for a dog"

