CITY OF SUBIACO

Remediating environmental degradation caused by sedimentation

Friday 8 November 2019

Jualbup, Shenton Park

Subiaco Common

Mabel Talbot, Jolimont

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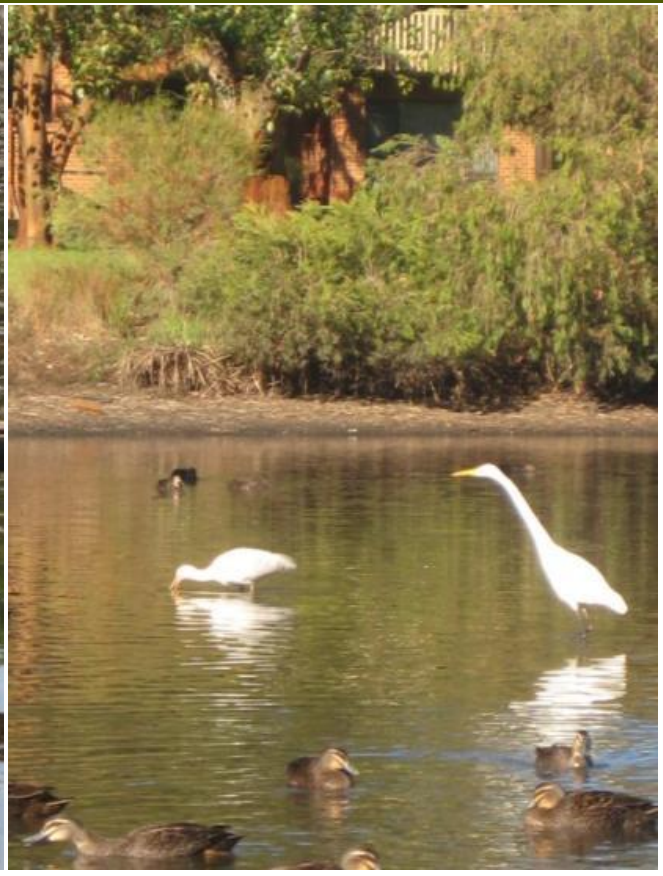

Example of issue

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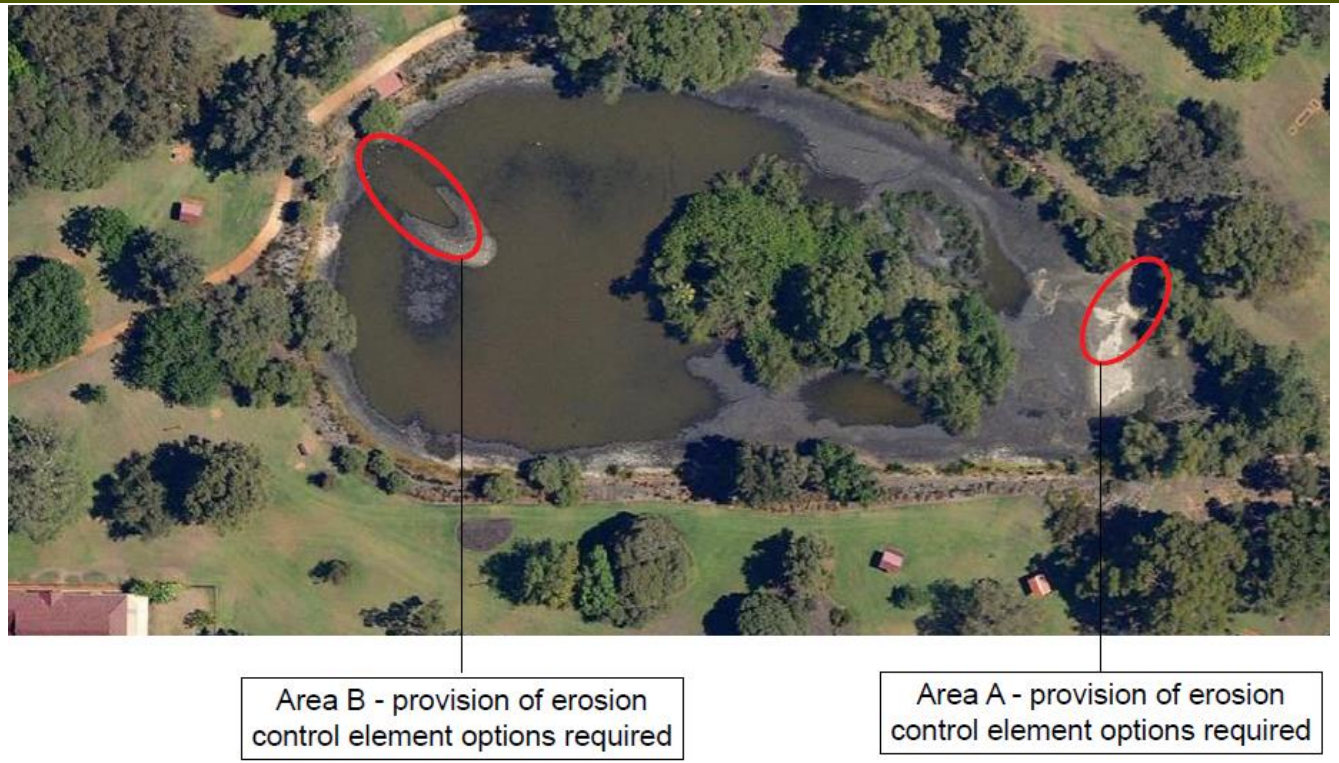
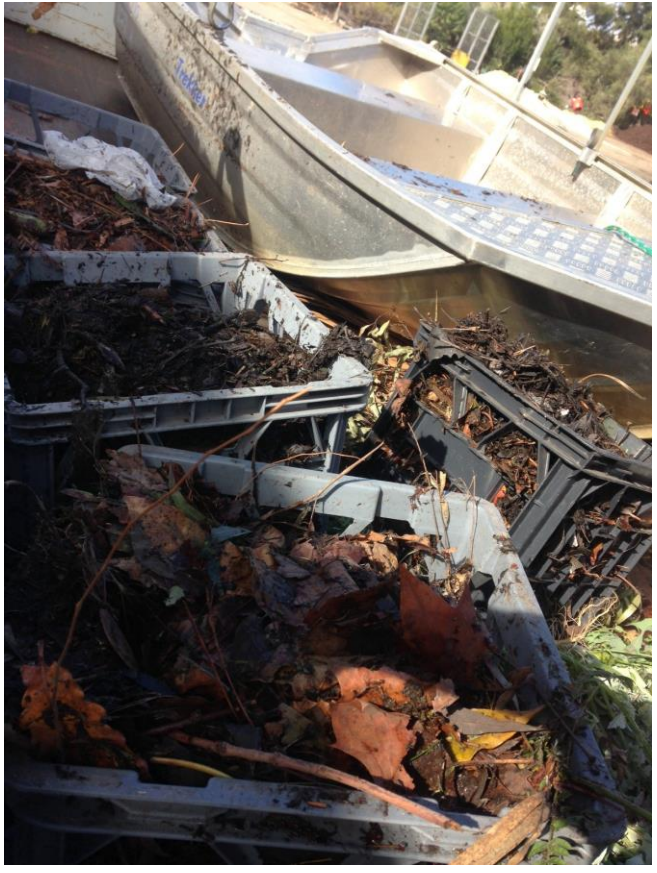
Sediment build up – Mabel Talbot



Mabel Talbot Lake - Areas requiring engineering design for erosion control

Manual Clean up

Manual Clean up



- Cost of over $36,000
- 7 tonnes of sediment was removed from the lake
- Required a team of 3 people
- Over 5 days
- Does not allow some materials such as oil, fuel, micro particulates or even litter to be thoroughly removed as effectively as the GPT

Gross Pollutant Trap

The GPT is designed to capture:

- 98% solid pollutants
- 87% free oils and grease
- 91% total suspended solids
- 30% total phosphorus
- 13% total nitrogen

Gross Pollutant Trap

Improved the water quality of:

Water body of the lake

Recharge of the underlying superficial aquifer from the lake

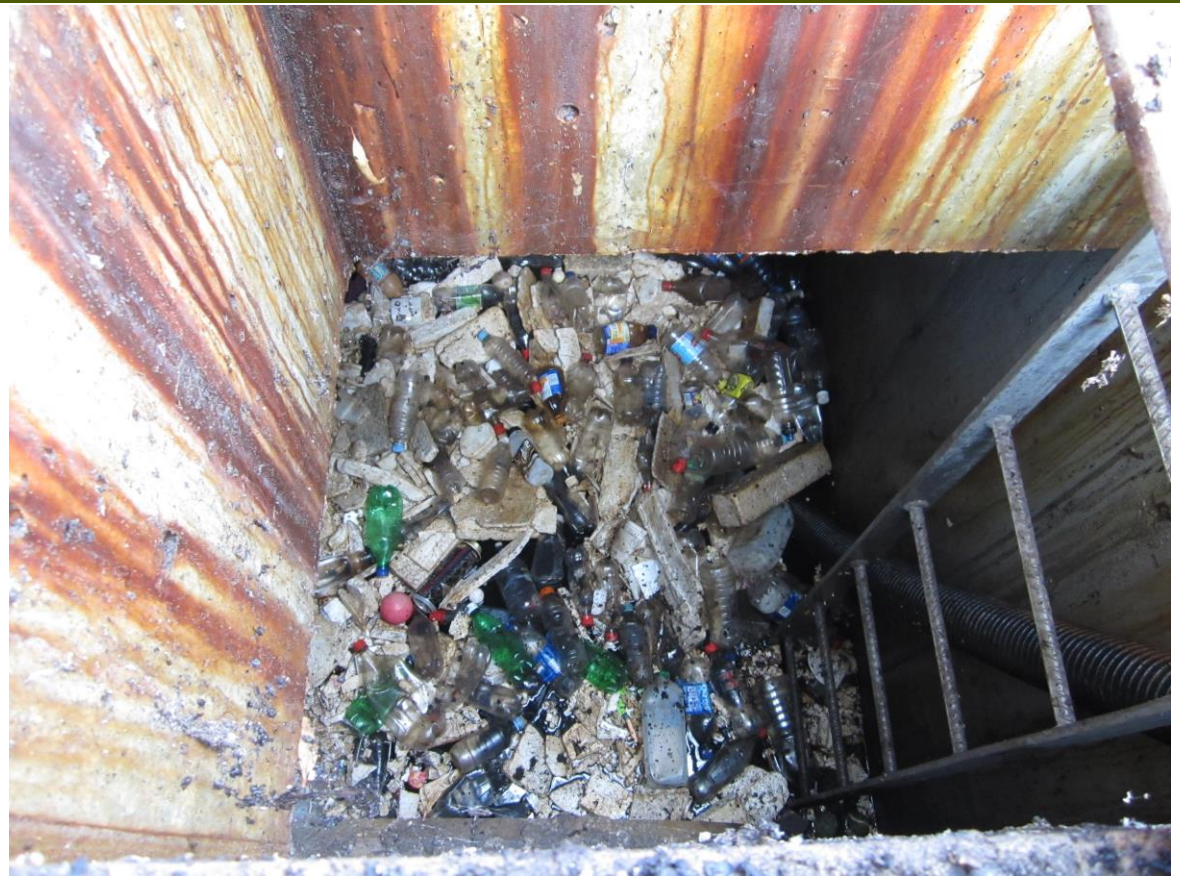
Overflow of water to Lake Monger and Perth's Swan River

5 November 2019

Gross Pollutant Trap – Mabel Talbot Example

- 2 Gross Pollutant Traps installed at Mabel Talbot
- 3 GPT at Lake Jualbup
- Latest installed in 2017 - $162,000
- They tackle 12 tonnes of sediment annually
- Emptied 4 times a year
- 3 tonnes of undesirable material each time
- Audits of the GPTs to collect data
- Help better understand and control sediment volume and movement throughout the City
- Demonstrate the benefits of installing GPTs as a remediation tool
- Without GPT, the City would have to continue to undertake a recurring manual clean out

Gross Pollutant Trap



Seabin – Lake Subiaco Common

- Installation in November 2019
- Catch bag holds 20 kg

- Filter captures fuel, grease

- Emptied every day

Seabin

- 95% organic debris
- 5% other (plastics, cigarette butts…)

Seabin


MICRO PLASTICS = SMALLER THAN 5MM
Micro debris
< 5mm
Macro debris
> 5 cm
Meso debris
5mm - 5cm
Partner: Subiaco Council
Citizen Scientist: Veronique Largier
Location: Subiaco Lake, Australia
Date: 05 November 2019
Filtering time: 24 hours
SEABIN PROJECT
FOR CLEANER OCEANS