

WSUD implementation on Linear Transport Infrastructure, how are we doing?

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Linear Transport Infrastructure

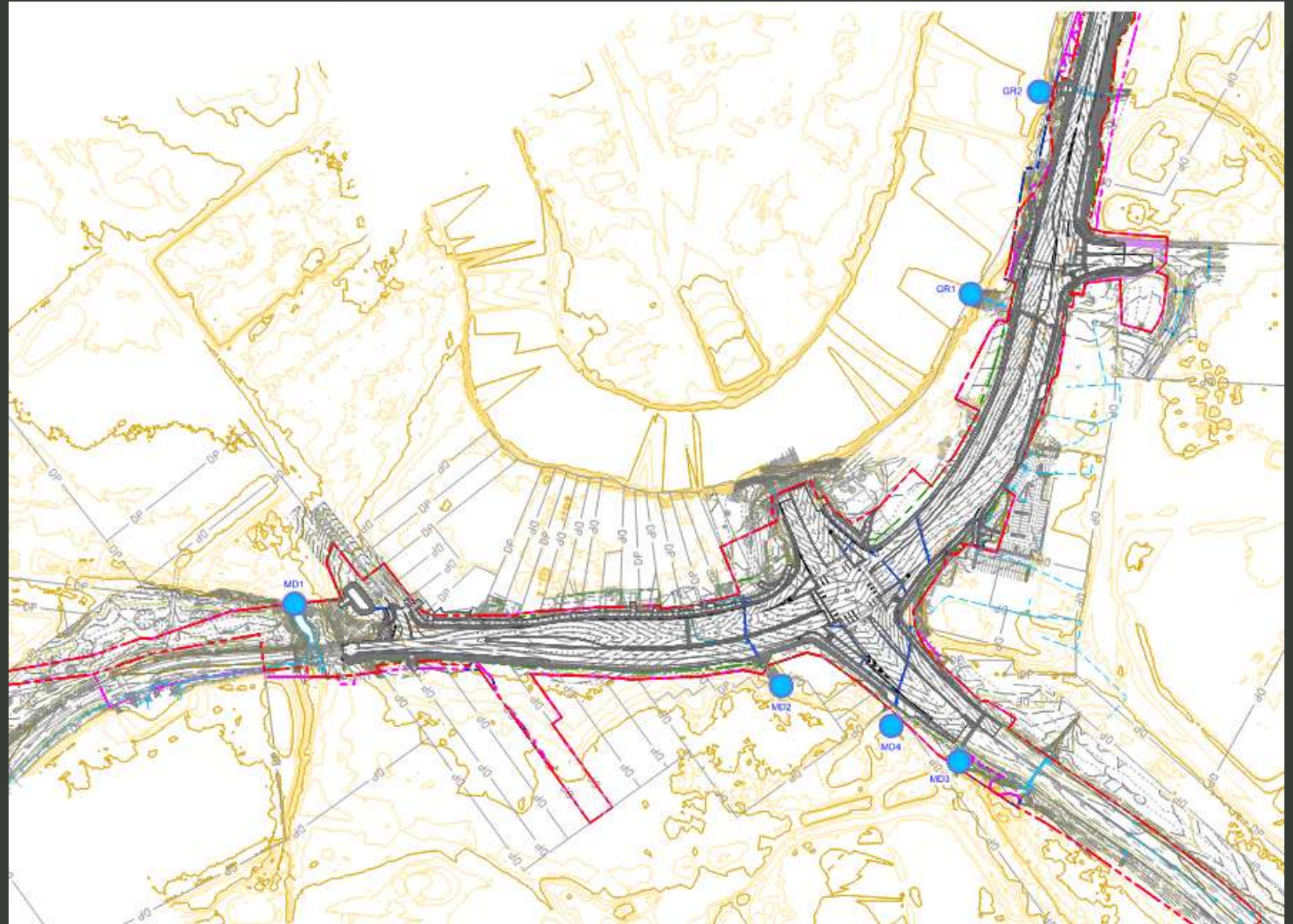
- ❖ Roads
- ❖ Tunnels
- ❖ Bridges
- ❖ Rails/Metros/light rails



Bringing ideas to life

Linear Transport Infrastructure

- ❖ Long & Narrow
 - ❖ Tight project boundary
 - ❖ Potential through sensitive environment (harm natural habitats)
 - ❖ Through varied terrain
 - ❖ Multiple stormwater discharge outlets
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- ❖ Red line – project boundary
 - ❖ Blue dots – stormwater discharge points



Bringing ideas to life

What were we doing?

WSUD measure	Application	Pros	Challenge
Sedimentation basin	Largely adopted. In particular in regional Hwy, such as Pacific or Princes Hwy	Relatively low maintenance Effective for spill containment	Space requirement
Vegetated swale	Widely implemented in brown and green fields whenever space is available	Along with the linear corridor Effective for conveyance and water quality	Safety concerns in urban areas

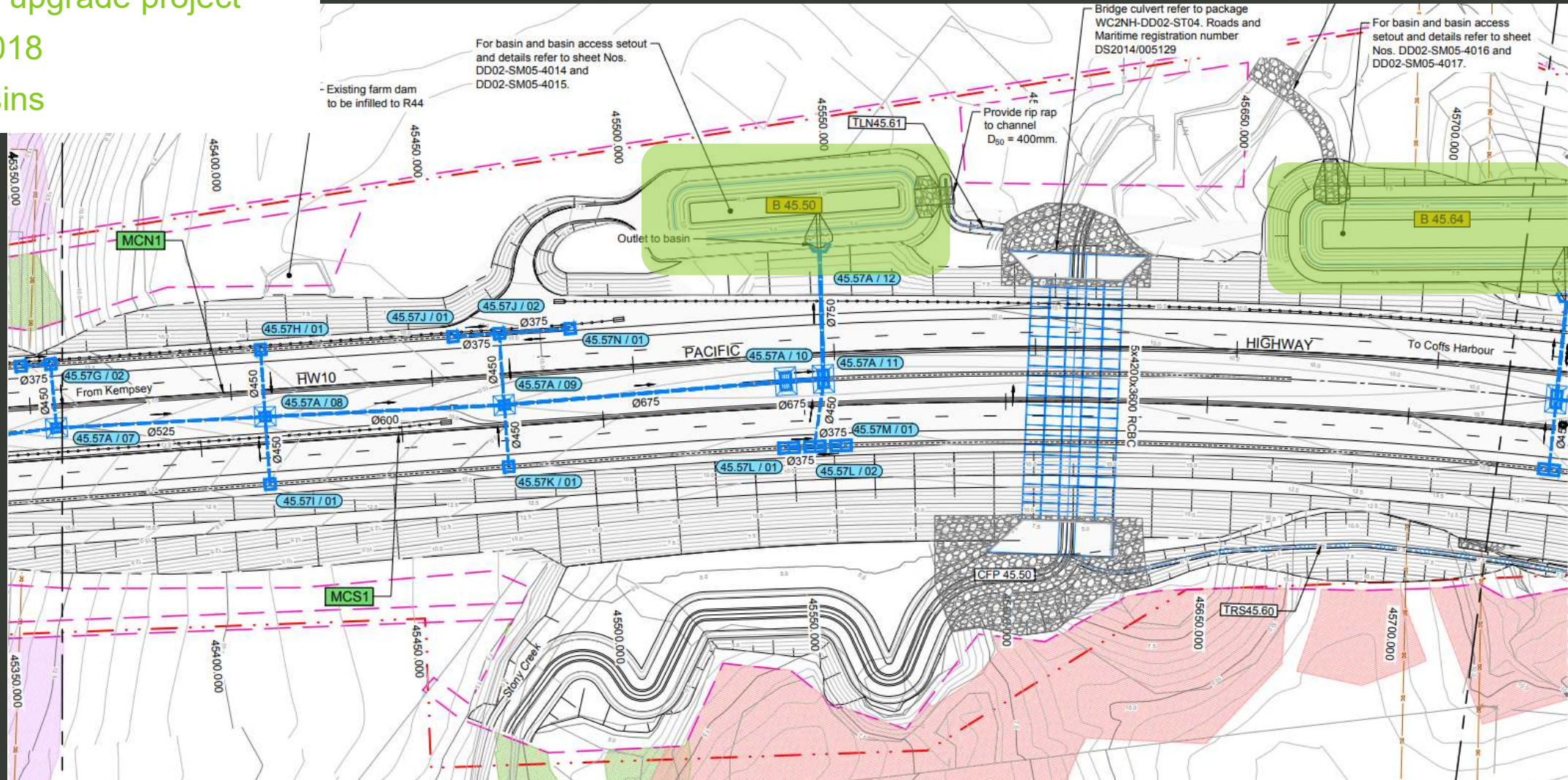


WSUD on Linear Transport Infrastructure

A Pacific Hwy upgrade project

Completed 2018

Sediment basins

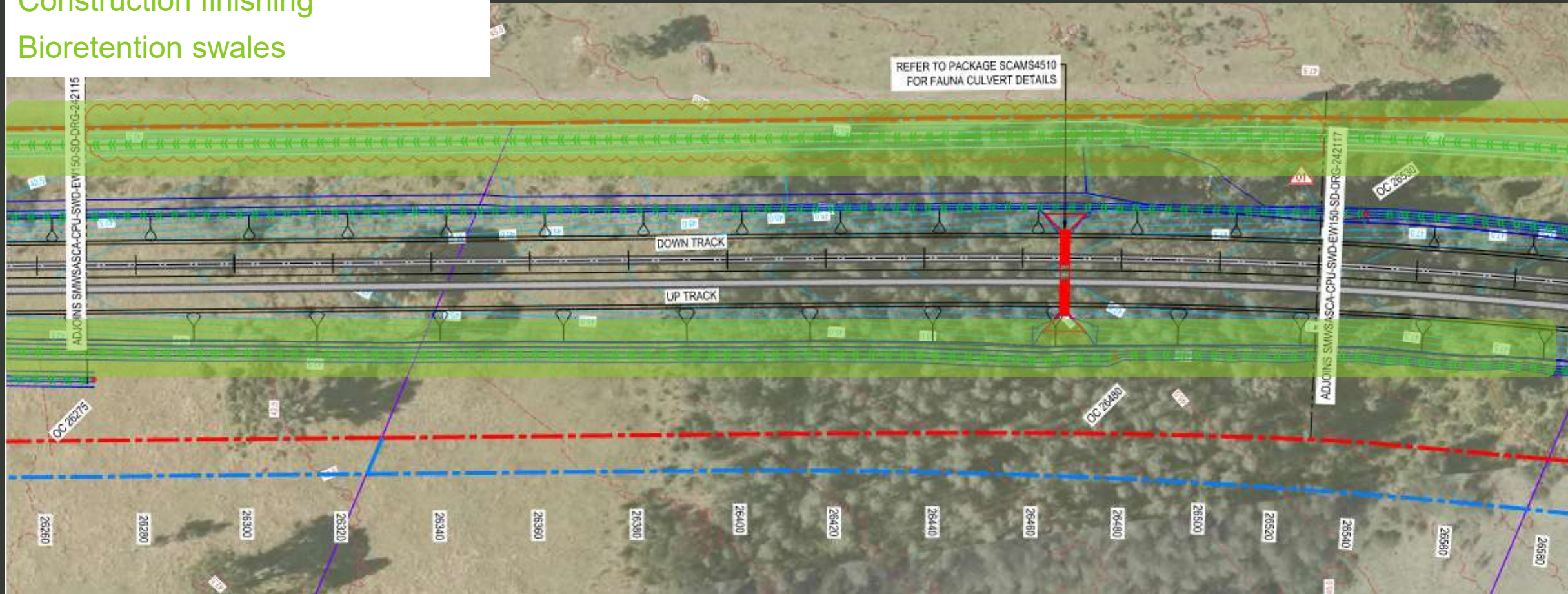


WSUD Linear Transport Infrastructure

Metro project

Construction finishing

Bioretention swales



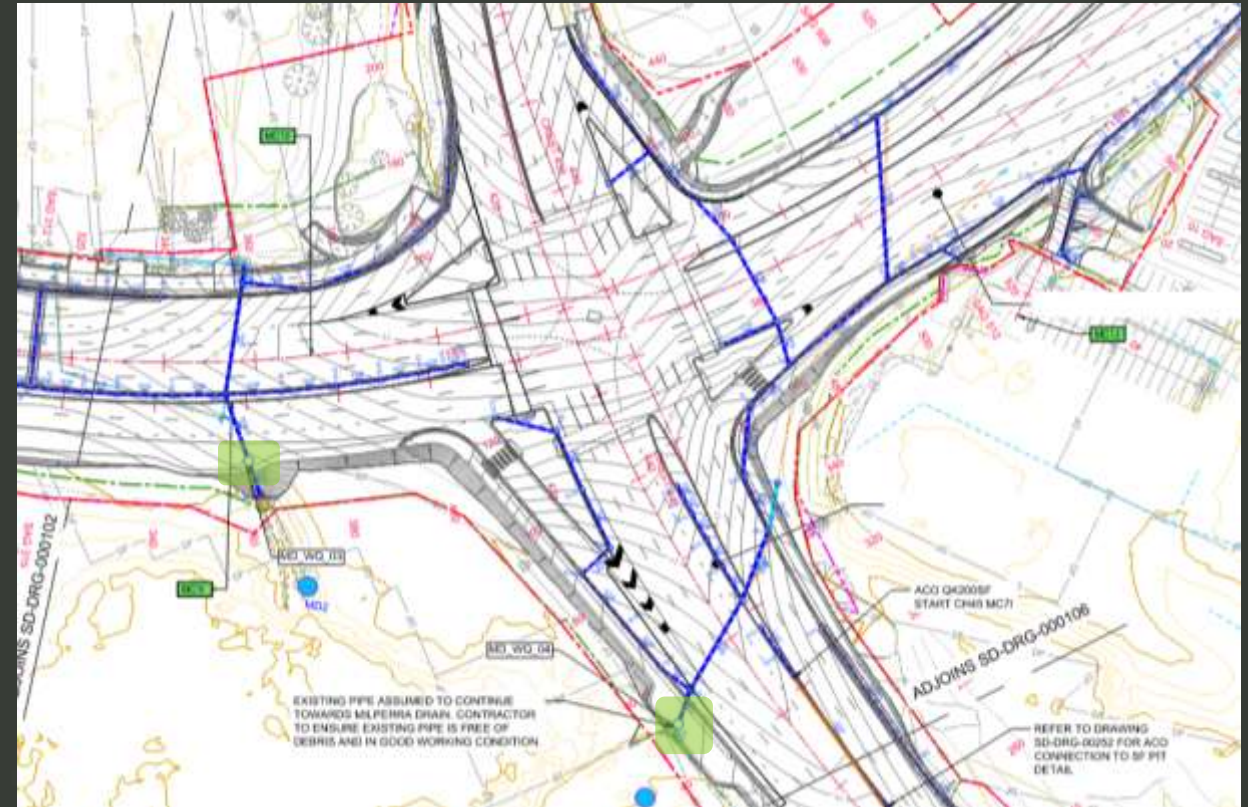
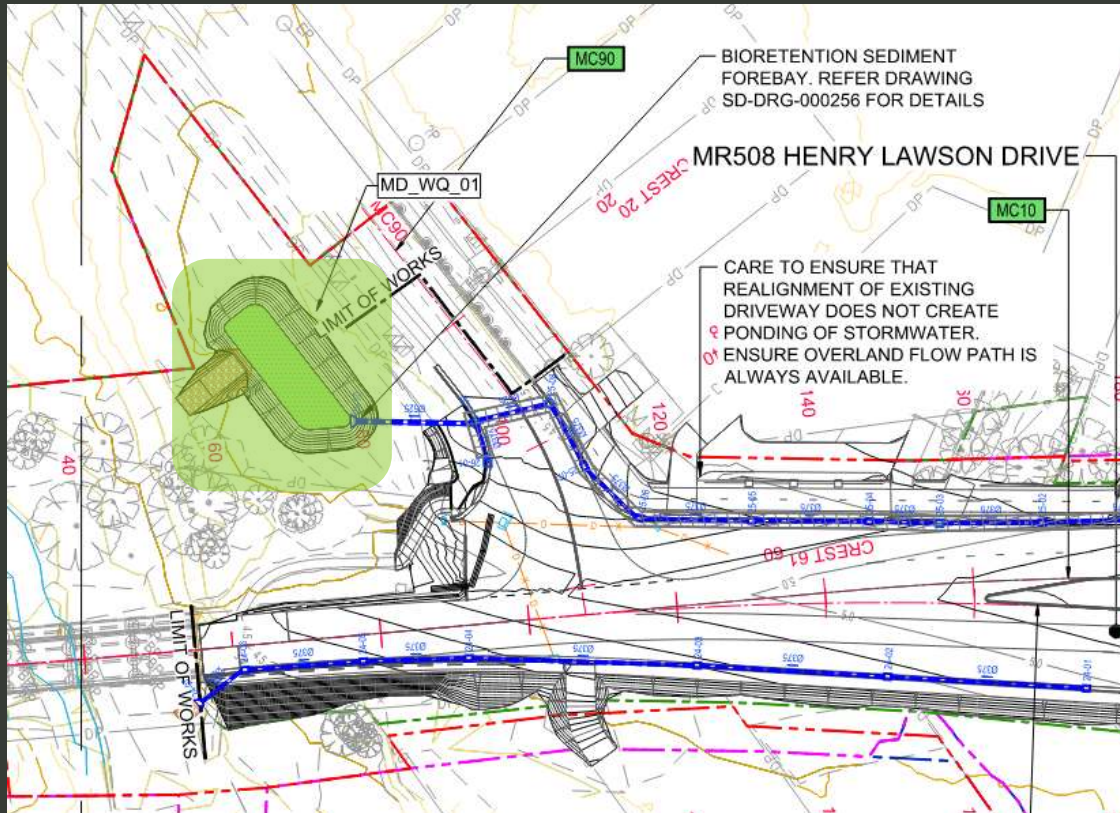
Bringing ideas to life

WSUD Linear Transport Infrastructure

An arterial road upgrade in Sydney

Completed 2025

Bioretention basin, grass swales and GPTs



Bringing ideas to life

What are we doing?

WSUD measure	Application	Pros	Challenge
Proprietary device	Largely established urban area	Limited space requirement	Ongoing maintenance Clash with urban utilities
Bioretention system (basin/swale)	Implemented in brown and green fields	Effective to achieve WQO	Ongoing maintenance

Sed basin / Swales still preferred



Linear Transport Infrastructure

Changes of approval conditions through the years

Protect sensitive environment such as SEPP 14 wetlands

As a minimum, no adverse impact

Identify all feasible/reasonable mitigations...to no adversely impact ...receiving environment

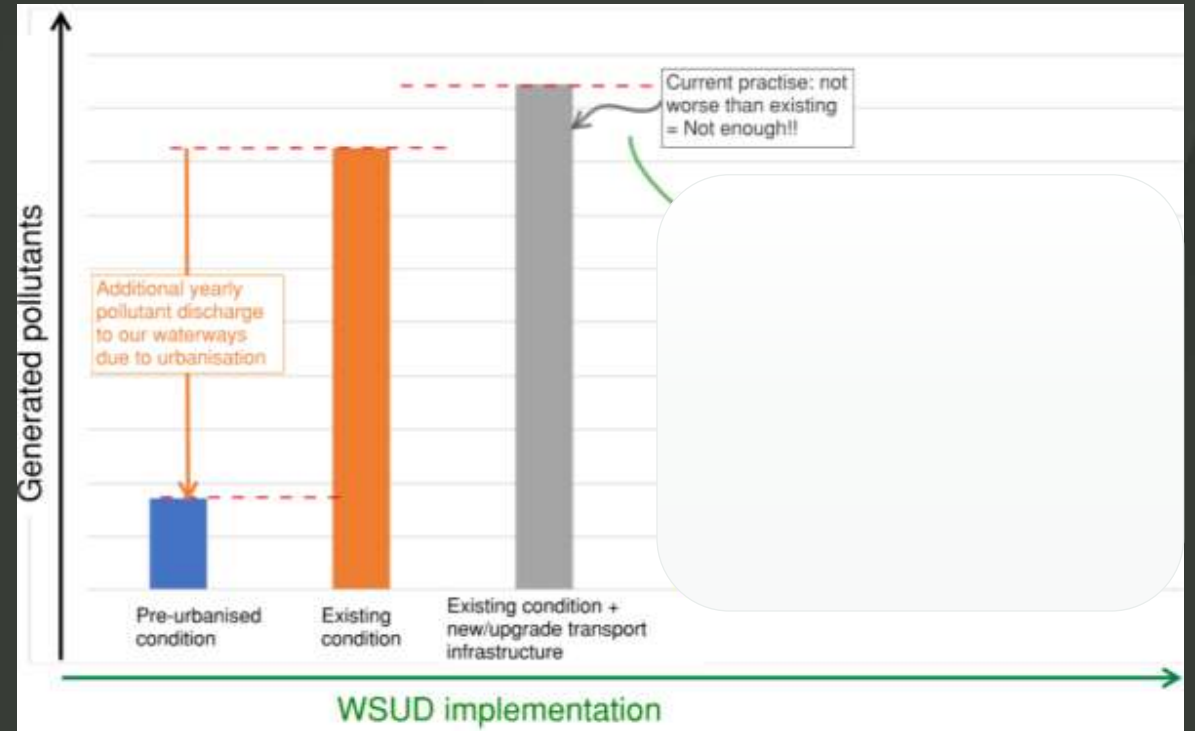
Where ANZ WQO are being met, they will continue to be protected or; If not being met, should contribute towards ANZ WQO

How are we doing?

- ❖ Lack of statutory planning policies
- ❖ Knowledge gap in WSUD technology
- ❖ Space constraint and limited funding
- ❖ Low priority

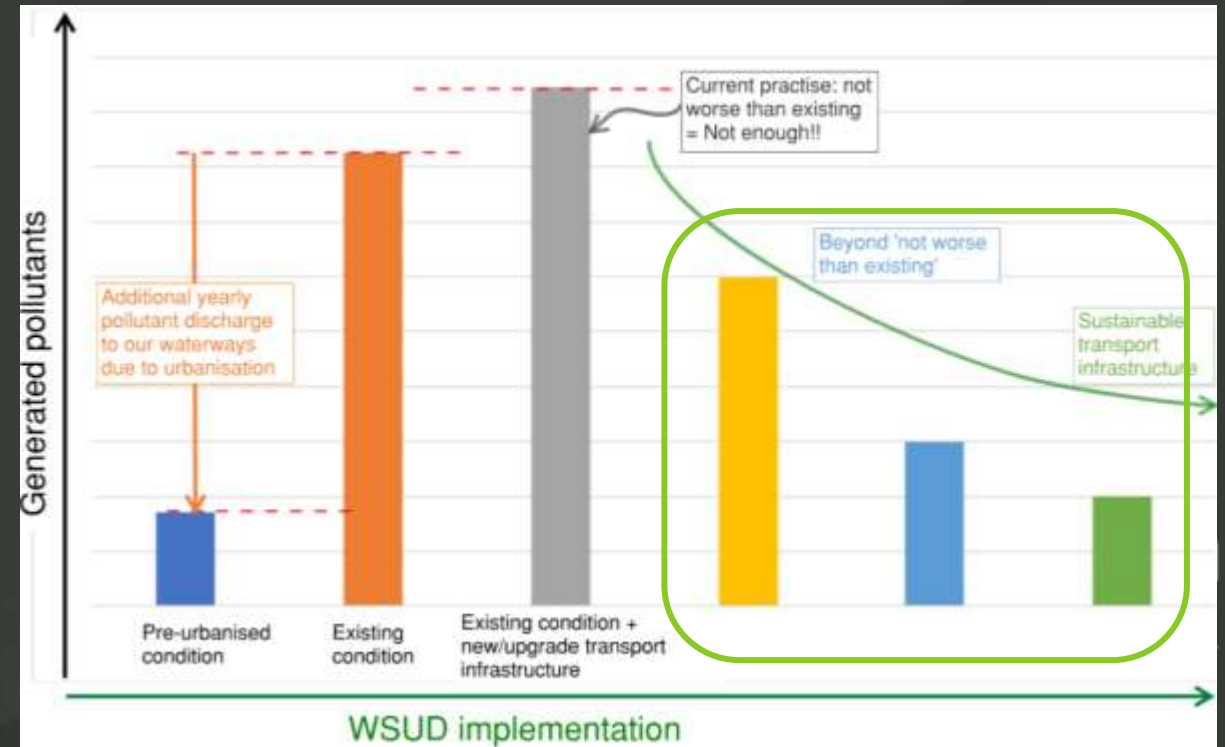


- ❖ **Clearer policies/requirements**
- ❖ **Considered in early planning/concept design level**
- ❖ **Higher priority – Sustainability visions**
- ❖ **Wider adoption**



Where are we going from here

- ❖ Policy makers
 - ❖ More stringent/clearer/consistent policies
- ❖ Asset owners (state governments, waterways authorities, local government etc)
 - ❖ Higher priority
 - ❖ Embedded in early planning/concept design level
 - ❖ Maintenance
- ❖ Good design
 - ❖ Knowledge sharing
 - ❖ Not just ticking the box
 - ❖ Consider life cycle (O & M)





Bringing
ideas
to life

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