



Future Ready Project Webinar Series

Southern Program Alliance



Upcoming Webinars

Tell your friends

Creating Smart Cities for the Future

Tuesday 5 May, 12pm (AEST)



Ron Cruickshank
Sales Director - Digital

Designing Transport Facilities for all Ages and Abilities (AAA) in the Community

Wednesday 13 May, 12pm (AEST)

Acknowledgement of Country

We would like to pay our respect and acknowledge all the traditional custodians of this land, including the Wurundjeri and Bunurong peoples of the Kulin Nation, for it is in their country that the project will be built.

We would like to pay our respects to Elders past, present and future.



Future Ready Project Webinar Series
Southern Program Alliance



Future Ready

**See the future
more clearly**

**Design for
it today**

**Better outcomes
for people and
places**

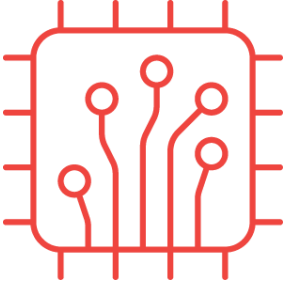
Taking a Holistic View



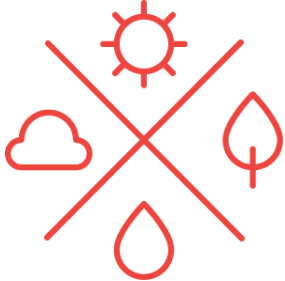
Climate



Society



Technology



Resources

Speakers



Sasha White

Senior Principal Structural Engineer



Bernadette Fitzgerald

Director - Sustainability

Southern Program Alliance in Melbourne

Key Highlights

The Victorian Government is removing 75 dangerous and congested level crossings across Melbourne by 2025.

Removing level crossings will:

- Significantly improve safety for road users and pedestrian.
- Help people get home safer and faster.
- Revitalise town centres

Removing level crossings will:

- Improve travel around our city for public transport users, pedestrians, cyclists and drivers.
- Create thousands of jobs during construction.



Project Location



- North Western
- North Eastern
- Caulfield to Dandenong (WSP)
- Southern Program Alliance (WSP)
- Western

Southern Program Alliance & Participants

SPA level crossing removals

- IWP - 4 at Carrum & Seaford
- AWP1 - 3 at Mentone & Cheltenham
- AWP2 - 5 at Edithvale, Bonbeach, Chelsea
- AWP3 – Hurstbridge line
- AWP4 – 2 at Glen Huntley



Southern Program Alliance in Melbourne

Key Highlights



Southern Program Alliance

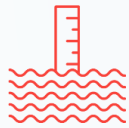
Future Trends



Climate



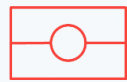
More Extreme
Weather



Coastal Risks



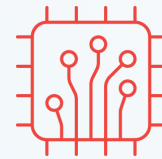
Society



Indigenous
Influence



Densification



Technology



Digital Expectations



Automation



Resources



Circular Economy

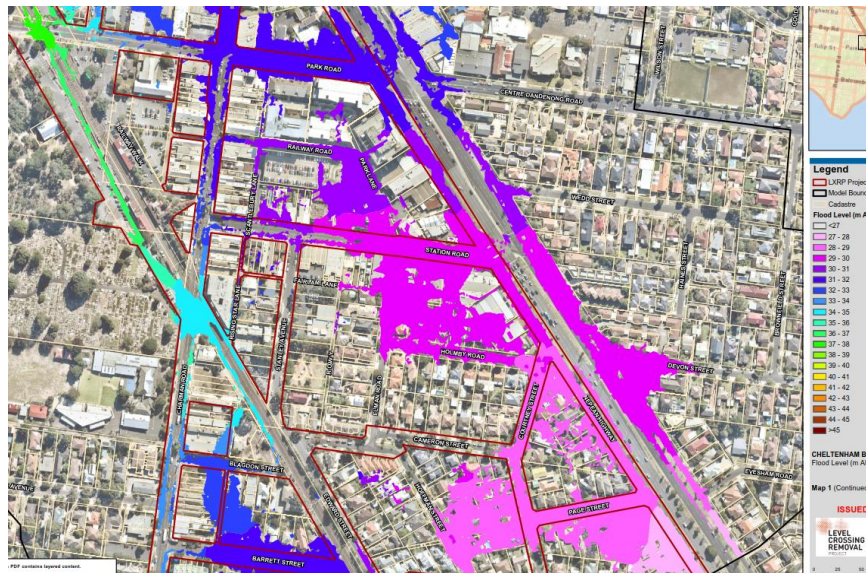


Renewables
Reign



Future Trends

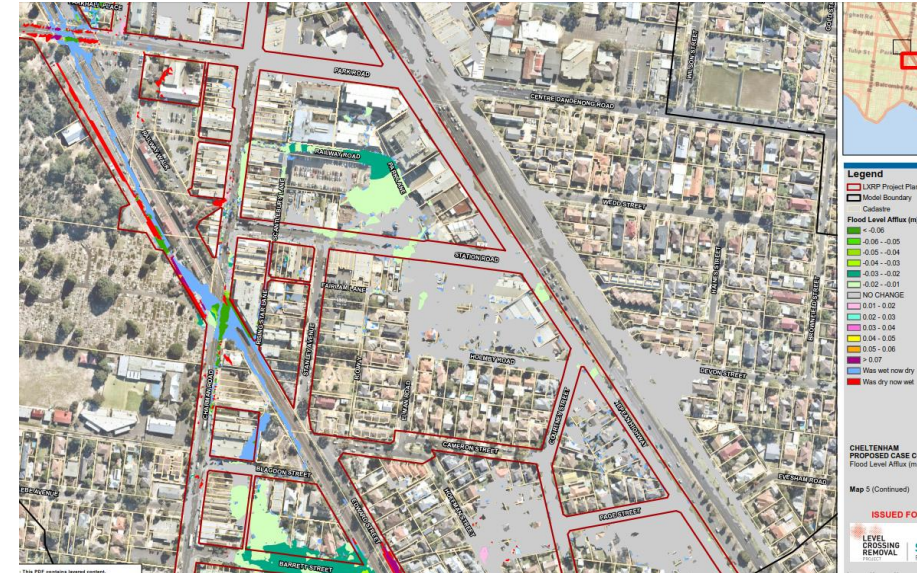
Designing for more extreme weather



1 in 100-year flood levels - current



Drainage design



Change in flood levels post construction



Future Trends

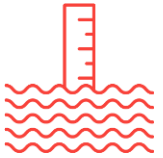
Climate Change



Hydrological impacts considered in drainage design:

More extreme weather:

- Stormwater runoff & flooding
- Scouring & washout of foundations
- Increased wear on roads & pavements
- Drainage system capacity



Coastal risks:

- Scour and washout of foundations & ballast
- Afflux and drainage back
- Temporary inundation of tunnels & trenches
- Associated safety risks

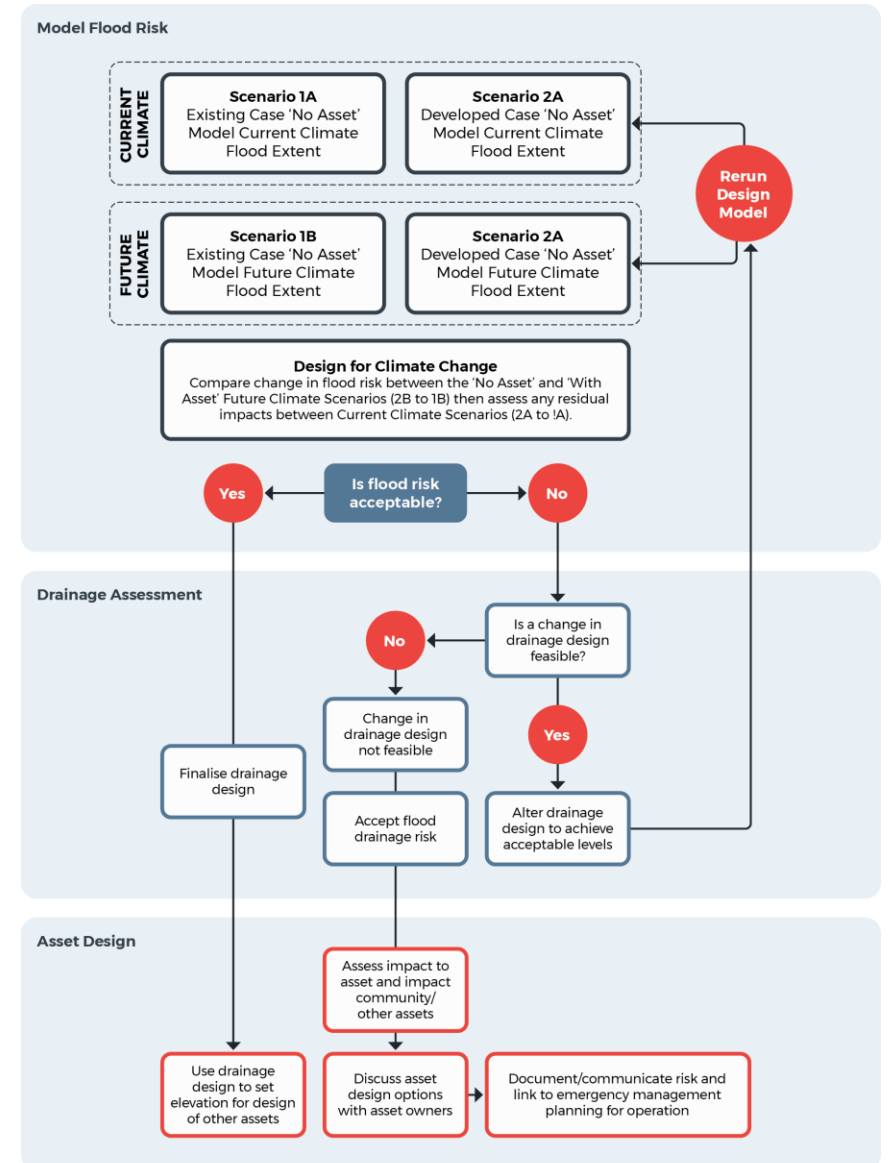


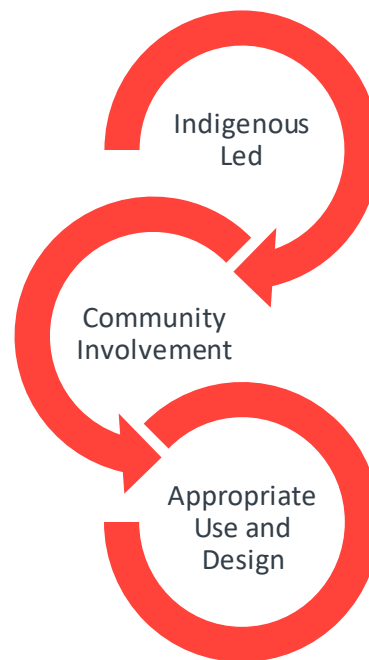
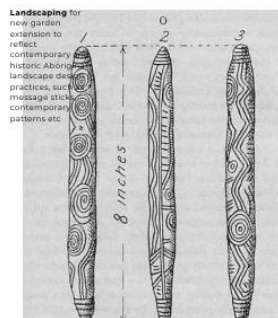
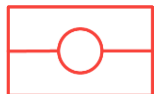
Figure 1: Decision tree - integration of climate change considerations into drainage and engineering design



Future Trends

Indigenous Influence

- Cultural design concepts
- 'Songline' vision
- Embedding cultural awareness throughout SPA
- Alliance leadership support

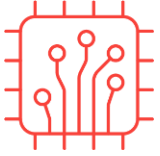




Future Trends

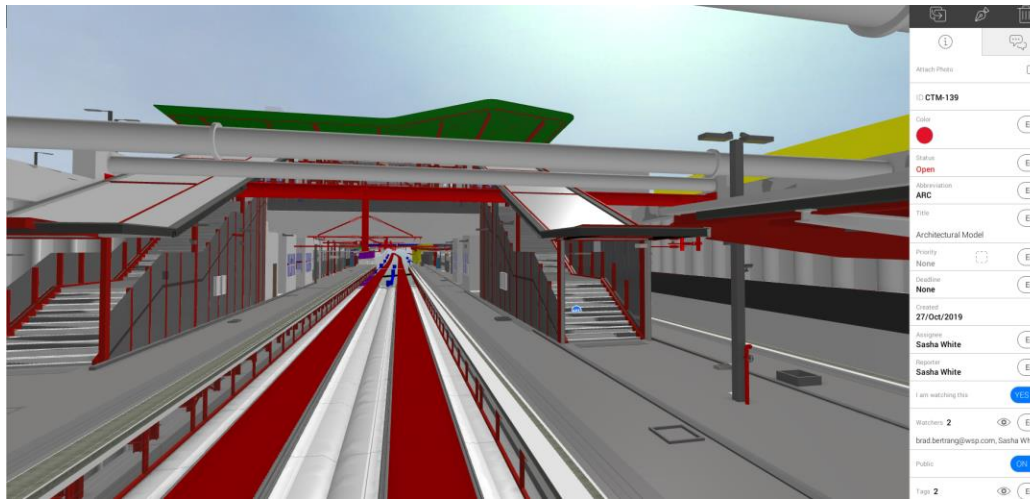
Densification



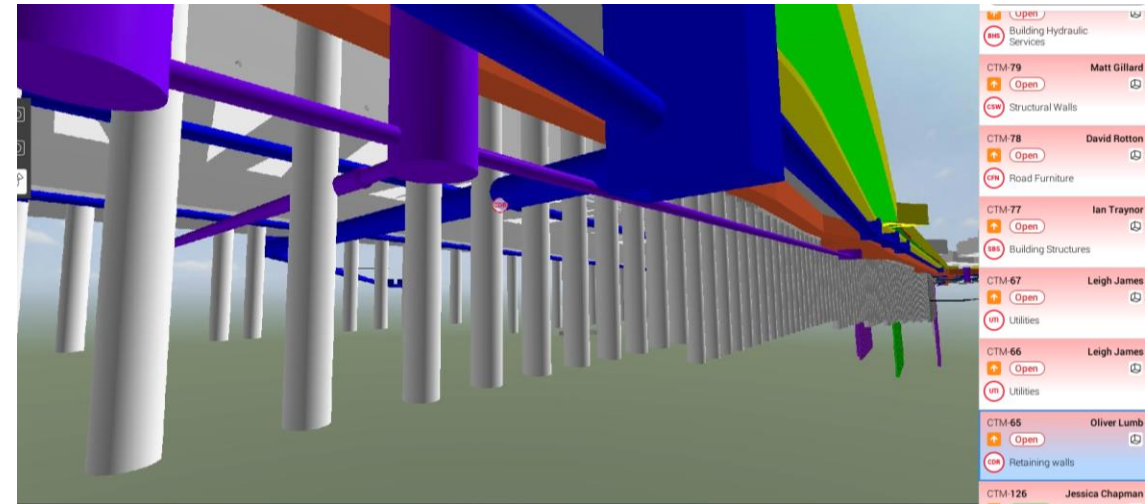


Future Trends

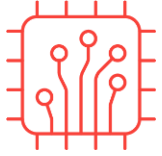
Digital Expectation – Digital Engineering Initiatives



3D Co-ordination and Interdisciplinary reviews.

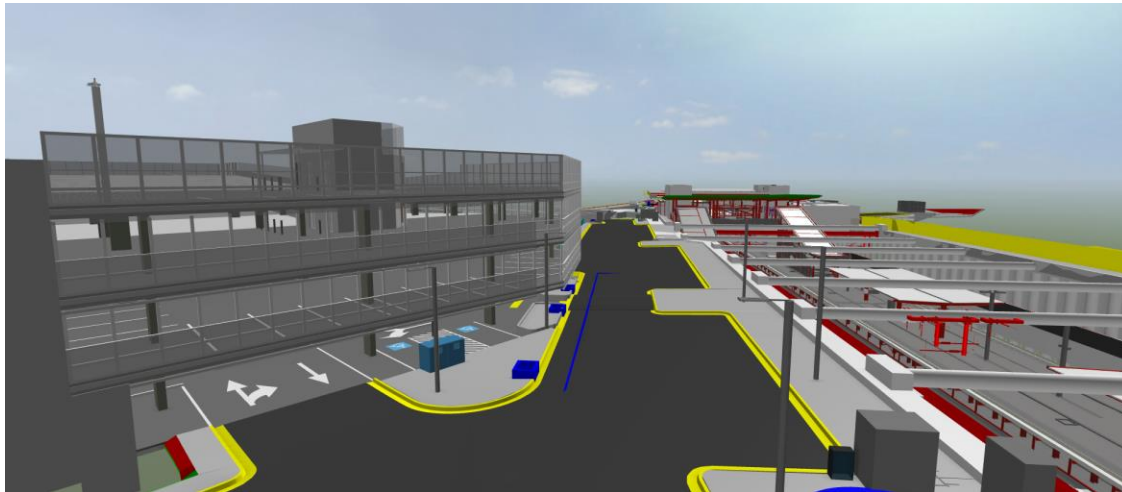


Clash detection

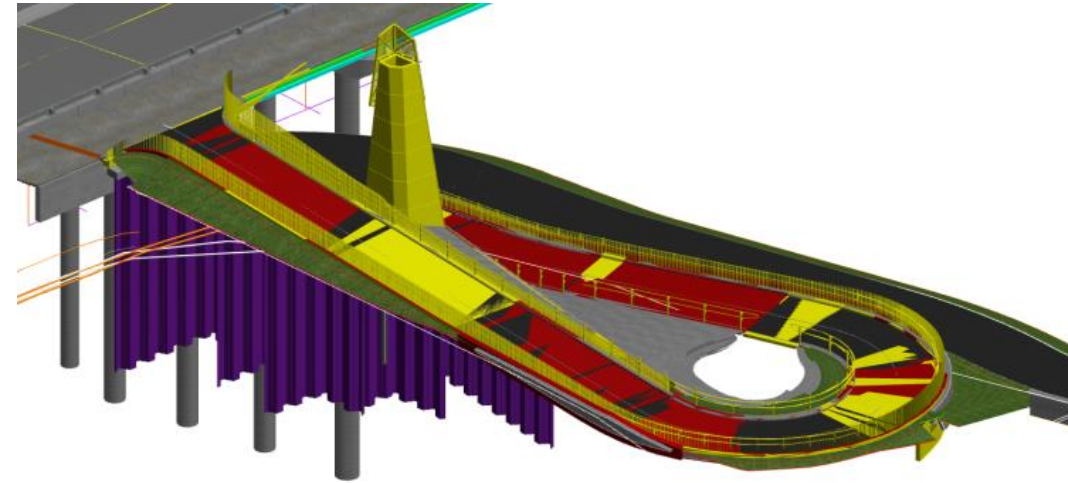


Future Trends

Digital Expectation – Digital Engineering Initiatives



Stakeholder reviews



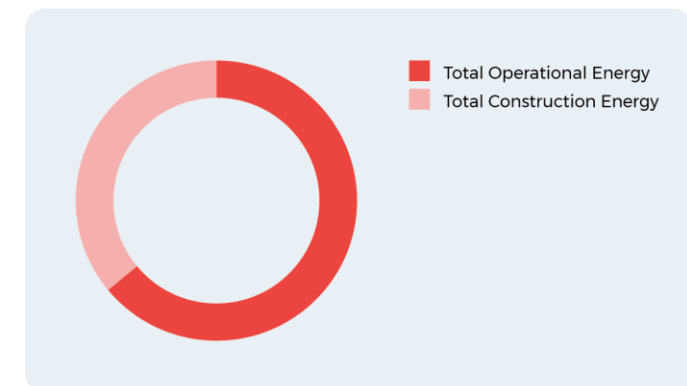
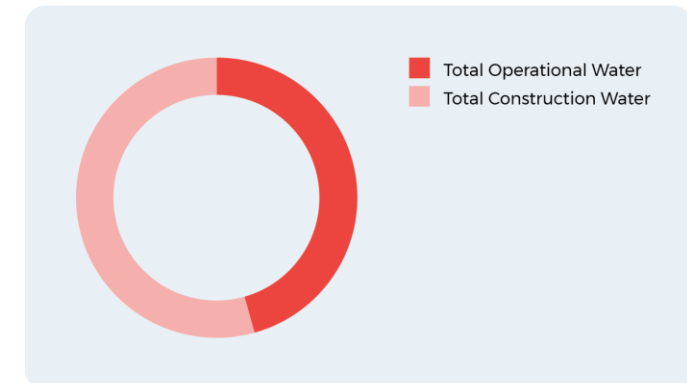
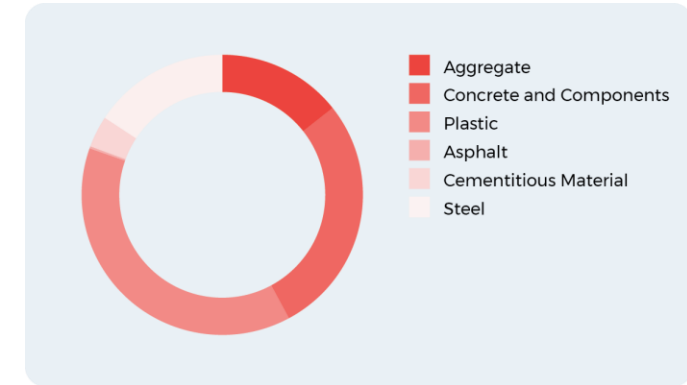
Paperless submissions



Future Trends

Understanding the circular economy

- Supporting government policy implementation
- Assess most material opportunities
- Early identification for procurement
- Support for emerging technologies and industries





Assuring best practice



High visibility program - with substantial public interest.

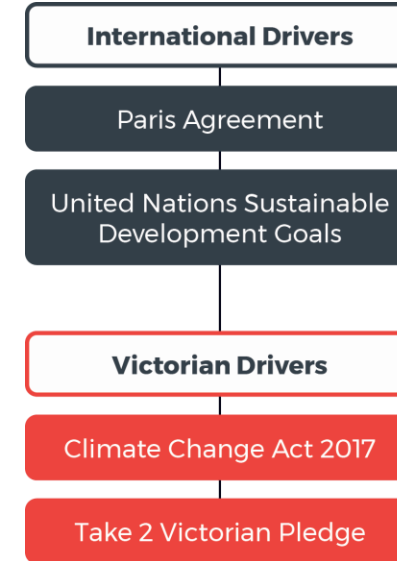


Significant state infrastructure investment over extended delivery timeframe.



Demonstration of excellent environmental, social and economic outcomes:

- Reduce carbon emissions from materials and energy
- Promotion of livability
- Building climate resilience
- Measure outcomes and demonstrate through assurance processes



Southern Program Alliance

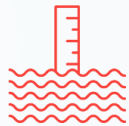
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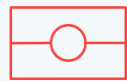
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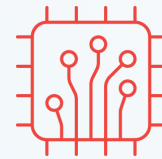
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Q & A

Sasha White and Bernadette Fitzgerald

Sasha.White@wsp.com

Bernadette.Fitzgerald@wsp.com

*WSP Australia Pty Limited
Level 15, 28 Freshwater Place
Southbank, VIC
3006 Australia
wsp.com*

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