

His Worship the Mayor
Councillors
CITY OF MARION

NOTICE OF INFRASTRUCTURE AND STRATEGY COMMITTEE MEETING

Council Chamber, Council Administration Centre
245 Sturt Road, Sturt

Tuesday, 02 July 2019 at 06:30 PM

The CEO hereby gives Notice pursuant to the provisions under Section 83 of the Local Government Act 1999 that a Infrastructure and Strategy Committee meeting will be held.

A copy of the Agenda for this meeting is attached in accordance with Section 83 of the Act.

Meetings of the Council are open to the public and interested members of this community are welcome to attend. Access to the Council Chamber is via the main entrance to the Administration Centre on Sturt Road, Sturt.



Adrian Skull
Chief Executive Officer



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OPEN MEETING**KAURNA ACKNOWLEDGEMENT**

We acknowledge the Kaurna people, the traditional custodians of this land and pay our respects to their elders past and present.

ELECTED MEMBER'S DECLARATION (if any)**CONFIRMATION OF MINUTES****Confirmation of the minutes for the Infrastructure and Strategy Committee Meeting held on 4 June 2019**

Originating Officer Governance Officer - Belinda Murch

Corporate Manager Manager Corporate Governance - Kate McKenzie

Report Reference: ISC190702R01

RECOMMENDATION:

That the minutes of the Infrastructure and Strategy Committee Meeting held on 4 June 2019 be taken as read and confirmed.

ATTACHMENTS:

#	Attachment	Type
1	Minute_ISC190604 _ Draft_Minutes	PDF File

PRESENT :

Councillor Hutchinson, Councillor Gard, Councillor Crossland, Councillor Hull, Mr Reynolds, Mayor Hanna (from 6:51 pm)

DATE :

Tuesday, 14 May, 2019 - | Time 6:30 PM

VENUE :

Council Chamber

In Attendance

Chief Executive Officer - Adrian Skull

General Manager City Services - Tony Lines

General Manager City Development – Abby Dickson

General Manager Corporate Services (Acting) – Ray Barnwell

Manager City Activation – Greg Salmon

Manager Innovation & Strategy – Fiona Harvey

Manager City Property – Megan Hayward

Environmental Sustainability Manager – Ann Gibbons

Senior Procurement Specialist – Colin Heath

Unit Manager Community Cultural Development - Marg Edgecombe

Education Officer Waste & Recycling - Allison Byrne

OPEN MEETING

Councillor Hutchinson opened the meeting at 6.31 pm.

KAURNA ACKNOWLEDGEMENT

We acknowledge the Kaurna people, the traditional custodians of this land and pay our respects to their elders past and present.

ELECTED MEMBER'S DECLARATION (if any)

The Chief Executive Officer & Senior Procurement Specialist declared a conflict of interest with SRWRA Presentation due to their participation in current waste management tender process.

CONFIRMATION OF MINUTES

Confirmation of the minutes for the Infrastructure and Strategy Committee Meeting held on 7 May 2019 (Report Reference: ISC190604R01)

6:32 pm Councillor Hull left the meeting.

Moved Councillor - Tim Gard

Seconded Councillor - Ian Crossland

That the minutes of the Infrastructure and Strategy Committee Meeting held on 7 May 2019 be taken as read and confirmed.

Carried

6:32 pm Councillor Hull re-entered the meeting

BUSINESS ARISING

Review of the Business Arising from previous meetings of the Infrastructure and Strategy Committee Meetings (Report Reference: ISC190604R02)

- Marino Hall - request Administration consider the order of events for works/community consultation.
- Electric Vehicle - Mr Reynolds provided feedback to Environmental Sustainability Manager. Item has been included for discussion at the Elected Member Forum on 18 June 2019.

Moved Councillor Gard

Seconded Councillor Crossland

That the Infrastructure and Strategy Committee:

- 1. Notes the business arising statement, meeting schedule and upcoming items.**

Carried

CONFIDENTIAL ITEMS - Nil

REPORTS FOR DISCUSSION

6:42 pm Living Kurna Cultural Centre (LKCC) Management Models

(Report Reference: ISC190604R03)

General Manager City Services gave a presentation on the future management arrangements for Warriparinga. Three models were presented for consideration. Each potential model considers the scope of the project, the proposed outcomes and the timeframe in which each model could come to fruition.

The following discussion points were noted by members:

- Council took over LKCC in 2006.
- Outcomes of LKCC service review began in July 2016. Seems to have been plenty of time to achieve targets but haven't been able to get there. Council has worked together with Kurna in this process towards self-determination.
- Kurna have suggested a management model of 51/49 split to allow the Kurna people access to funding for Aboriginal organisations if they have a majority interest.

6.51 pm Mayor Hanna entered the meeting

- Unique site with cultural significance in the area and beyond. We have a responsibility to find the right formula.
- Council could not assist any tenderer to prepare a submission. Briefing could be given and would need to provide that information to all parties.
- FOR Option 2 is a good outcome all around. Acknowledge that the process has taken longer than planned but the Native Title Determination has now provided Kurna with access to funds. Timeframe not important in the big scheme of things but could be profound success. Processes and thinking right. Expression of Interest might be a good step.
- AGAINST Option 2 seems similar to 3 years ago. Concern is we will be in same position as now in 3 years' time if we go with this option.
- FOR Option 1 - provides opportunity for any person/organisation to submit a response with possibilities to get some great ideas. Would be disappointed if Kurna didn't express interest.
- Support for expression of interest.
- Outcomes developed through the Steering group are still relevant and what we want to achieve.

Moved Councillor Hull

Seconded Councillor Gard

That the Infrastructure and Strategy Committee:

- 1. Considers three potential models for the future management of Warriparinga and recommends Model 2 for Council's consideration.**

Lost

Councillor Hull called for a Division:

Voting For: Councillor Hull, Councillor Gard

Voting Against: Councillor Crossland, Mr Reynolds, Mayor Hanna, Councillor Hutchinson

Lost

Discussion continued on the item.

Moved Councillor Crossland

Seconded Mr Reynolds

That the Infrastructure and Strategy Committee:

- 1. Considers three potential models for the future management of Warriparinga and recommends Model 1 for Council's consideration.**
- 2. That council explore an Expression of Interest to test the market to see what people are suggesting.**

Carried

Councilor Hull called for a Division:

Voting For: Councillor Crossland, Mr Reynolds, Mayor Hanna, Councillor Hutchinson

Voting Against: Councillor Gard, Councillor Hull

Carried

REPORTS FOR NOTING - Nil

WORKSHOP / PRESENTATION ITEMS

7:32 pm SRWRA Representative (Report Reference: ISC190604R04)

7:32 pm Chief Executive Officer and Senior Procurement Specialist left the room.

SRWRA CEO and Board Chair gave a presentation around the current challenges with China Sword and other policy/market challenges, as well as future opportunities for waste and recycling in SA.

Following the presentation, the discussion points are noted below:

- Potential to recycle plastics into products such as benches, bollards, road base etc. A number of Council's are doing this. SRWRA Board Chair to provide a list to CEO.
- Potential to include an electric car charging station at SWRWA site.
- Gas power station generating four times electricity production than previous plan and provides a better outcome for the environment.
- Future projects include Solar Projects and potential investment in Material Recovery Facility (MRF), and potential co-location of compatible industry on SRWRA site
- CoM have a traditional waste collection. Taking organics out (put in green bin) reduces waste to landfill. Could collect less frequently to encourage better practices but legislation dictates weekly.
- Education will help to have cleaner recycling and reduce contamination. Paper, cardboard and CDL's are most useful recycled product.

8:05 pm Flinders University Representative (Report Reference: ISC190604R05)

Manager Innovation & Strategy introduced Flinders University Vice-President Corporate Services (Mr Mark Gregory) who gave a presentation on the growth, change, development and sustainability projects at Flinders University

8:09 pm Senior Procurement Specialist re-entered the room.

The following discussion points by members were noted:

- Opportunity for City of Marion to learn from Flinders University. Report being prepared on Council's progress and focus for Renewables and Energy Efficiency for discussion at the next Elected Member Forum.

8:30 pm Councillor Crossland re-entered the meeting.

8:31 pm CEO re-entered the meeting.

- potential opportunity to assist local communities that surround facility to supply excess power - regulatory issue at present but market driving change - commercially would sell excess power to highest bidder.
- asset management/maintenance - payback periods are so efficient there is no concern about long term costs of potential maintenance issues.

8:38 pm Current challenges and future opportunities for management of waste and recycling at the City of Marion (Report Reference: ISC190604R06)

Senior Procurement Specialist and Education Officer Waste & Recycling gave a presentation to provide information on the performance of the three-bin kerbside collection service and current issues affecting waste and recycling management .

The following discussion points were noted:

- approximately 7000 households have a kitchen caddy. Feedback from residents is they want bags.
- user pays - concern about regulating
- residents provided 3 bin system - Tonsley first development to look at alternative solution to specific issue
- upcoming kerbside audit of 200 bins to weigh and classify contents
- follow up with external providers for more detail in the data
- future consideration may look at potentially swapping yellow/red collection frequency but may cause yellow bin to be used for non-recycled waste instead
- commercial collection is where residents have purchased additional bin collections
- target areas for where more contaminated waste happens
- potential option of smaller bins being available for pensioners.
- education is key to influencing better waste management habits

Moved Councillor Hull

Seconded Councillor Crossland

That the Infrastructure and Strategy Committee:

1. Notes the report and presentation;
2. Provides input in the meeting to waste and recycling opportunities and trends that may shape future service delivery.

Carried

PROCEDURAL MOTION

Moved Councillor Hull

Seconded Councillor Crossland

That the meeting be extended to allow a brief update on the Coastal Walking Trail.

Carried

9:30 pm Meeting extended

9:30 pm Mayor Hanna left the meeting

OTHER BUSINESS

Coastal Walkway

General Manager City Development and Manager City Property joined the meeting and gave a brief update on the condition of the Coastal Walkway, current closures and potential risks.

9:39 pm Councillor Hutchinson left the meeting.

9:42 pm Councillor Hutchinson re-entered the meeting.

A report is being prepared for the next General Council meeting.

MEETING CLOSURE - Meeting Declared Closed at 9:45 pm.

CONFIRMED THIS xx DAY OF xx

..... **CHAIRPERSON**

BUSINESS ARISING

Review of the Business Arising from previous meetings of the Infrastructure and Strategy Committee Meetings

Business Arising Statement - Action Items

Originating Officer	Executive Assistant to General Manager City Development - Pauline Corcoran
Corporate Manager	Manager Innovation and Strategy - Fiona Harvey
General Manager	General Manager City Development - Abby Dickson
Report Reference	ISC190702R02

REPORT OBJECTIVE

The purpose of this report is to review the business arising from previous meetings of the Infrastructure and Strategy Committee meetings, the meeting schedule and upcoming items.

RECOMMENDATION

That the Infrastructure and Strategy Committee:

- 1. Notes the business arising statement, meeting schedule and upcoming items.**

Attachment

#	Attachment	Type
1	ISC190702 - BAS and Upcoming items	PDF File

	Date of Meeting	Item	Responsible	Due Date	Status	Completed / Revised Due Date
			<ul style="list-style-type: none"> Update report in 12 months' time on how the 'Economic Statement' has been used 	Donna Griffiths	Sept 2019	
1.	5 March 2019	ISC190305R04	Marino Hall – Update on Development Options <ul style="list-style-type: none"> Redevelopment opportunity comes into the City Property Strategic Asset Management Plan. 	Megan Hayward	30 June 2019	<p>MH is working up an EOI document that can go out to the developer market to see what is possible on the site to deliver a mixed use land development.</p> <p>Once a concept is achieved and costed, we will be able to go out to community consultation on that design.</p>
2.	5 March 2019	ISC190305F01	Marion Golf Club <ul style="list-style-type: none"> Profiling of sports use report to be provided to members. 	James O'Hanlon	2 April 2019	Report presented to General Council 25 June 2019
5.	2 April 2019	ISC190402R02	Business Arising Statement Electric Vehicles <ul style="list-style-type: none"> A report on hydrogen vs electric vehicles to be shared with the members. <p>EV National Panel - forward details to the members</p>	<p>C Reynolds</p> <p>C Reynolds</p>		
9.	5 May 2019	ISC190507R11	Seaview High School Sports Facilities Partnership (Report Reference: ISC190507R11) <ul style="list-style-type: none"> A detailed report be provided to the Committee in July 2019. 	Megan Hayward/Sean O'Brien	2 July 2019	

	Date of Meeting	Item	Responsible	Due Date	Status	Completed / Revised Due Date
10.	5 May 2019	ISC190507R11	Skate Facility Feasibility Study <ul style="list-style-type: none"> seek management cooperation in providing an assessment of potential community need for skating facility and; provide a high level report to the Infrastructure & Strategy Committee meeting in July 2019. 	Megan Hayward/James O'Hanlon	2 July 2019	
11.	19 June 2019	ISC190604R03	Living Kurna Cultural Centre (LKCC) Management Models <ol style="list-style-type: none"> Considers three potential models for the future management of Warriparinga and recommends Model 1 for Council's consideration. That council explore an Expression of Interest to test the market to see what people are suggesting. 	Marg Edgecombe/ Greg Salmon		

	Date of Meeting	Item		Responsible	Due Date	Status	Completed / Revised Due Date
12.	19 June 2019	ISC190604R04	Workshop SRWRA Flinders University <ol style="list-style-type: none"> Notes the report and presentation; Provides input in the meeting to waste and recycling opportunities and trends that may shape future service delivery. 	Ann Gibbons/Fiona Harvey	18 June 2019	A discussion was held at the 18 June EM forum to consider focus areas for energy efficiency and renewables, waste and recycling.	Complete

* Completed items to be removed are shaded

Infrastructure and Strategy Committee 2019

Meeting schedule

5 February	6.30 — 9.30
5 March	6.30 — 9.30
2 April	6.30 — 9.30
7 May	6.30 — 9.30
4 June	6.30 — 9.30
2 July	6.30 — 9.30
6 August	6.30 – 9.30
3 September	6.30 – 9.30
1 October	6.30 – 9.30
5 November	6.30 – 9.30
3 December	6:30 – 9:30

Committee Membership

- Membership – 5 Elected Members + 1 Expert Member
- Quorum - 4 Committee Members

Presiding Member – Luke Hutchinson

Expert Member – Christian Reynolds

Members

- Ian Crossland
- Tim Gard
- Bruce Hull
- Matthew Shilling

Infrastructure & Strategy Committee					
Date: Tuesday, 6 August Time: 6.30pm – 9.30pm					
Venue: Chamber					
Topic	Description	Presentation / Workshop	Duration	External Attendees	Staff Responsible
Strategic Priority – City Property Strategic Asset Management Plan	Progress update on development of Plan				Megan Hayward
Strategic Discussion – Innovation and Entrepreneurship	CoM's focus on Innovation Smart South Consortium (SAEDB) Energy Project (SAEDB) Export Marketing and economic development Workforce of the Future Opportunities through Lot 14 and Tonsley in relation to business attraction and innovation Federal Election commitments, policy change and funding opportunities				Abby Dickson/ Fiona Harvey
Guest Speaker (Options- TBC)	Jim Whalley – Chief Entrepreneur John Spoeher - Factory of the Future Mark Fusco -Advanced Manufacturing Robert Dew – Innovation Management				
Seaview High School Sports Facilities Partnership		A detailed report be provided to the Committee in July 2019			Megan Hayward/ Sean O'Brien

Infrastructure & Strategy Committee					
Date: Tuesday, 3 September Time: 6.30pm – 9.30pm					
Venue: Chamber					

Topic	Description	Presentation / Workshop	Duration	External Attendees	Staff Responsible
ICT Digital Plan + Transformation project					TBC
Edwardstown/Melrose Park Employment Precinct					Greg Salmon/Donna Griffiths
Updates: <ul style="list-style-type: none"> - Oaklands Smart Precinct Project - Capital Construction Program 					Various

Infrastructure & Strategy Committee Date: Tuesday, 1 October Time: 6.30pm – 9.30pm Venue: Chamber					
Topic	Description	Presentation / Workshop	Duration	External Attendees	Staff Responsible
Strategic Discussion/Innovation Opportunities-Future City Transport/Mobility Planning	Hydrogen and Electric vehicles Autonomous vehicles First mile/last mile opportunities				Mathew Allen / Fiona Harvey
Guest Speaker -TBC	Christian Reynolds Renmark Paringa Council – Autonomous vehicle trial experience				

Infrastructure & Strategy Committee Date: Tuesday, 5 November Time: 6.30pm – 9.30pm Venue: Chamber					
Topic	Description	Presentation / Workshop	Duration	External Attendees	Staff Responsible
Strategic Priority – City Property Strategic Asset Management Plan	Progress update on development of Plan				Megan Hayward

Strategic Discussion –Strategic Review of the Customer Experience Plan	Committee’s input into the strategic review of City of Marion’s Customer Experience Plan				Karen Cocks
Updates:					Various

Infrastructure & Strategy Committee		Date: Tuesday, 3 December Time: 6.30pm – 9.30pm				Venue: Chamber
Topic	Description	Presentation / Workshop	Duration	External Attendees	Staff Responsible	
Strategic Discussion – The value of Data					Fiona Harvey	
Guest Speaker (Options- TBC)	Peter Worthington Eyre – Chief Data Officer SA Government Aron Hausler /Matt Salier – NVI Nick Faulkner – Adelaide University					

WORKSHOP / PRESENTATION ITEMS

Update on Recycled Materials in Roads

Originating Officer	Operations Engineer - Carl Lundborg
Corporate Manager	Manager Engineering and Field Services - Mathew Allen
General Manager	General Manager City Services - Tony Lines
Report Reference	ISC190702R03

REPORT OBJECTIVE

The purpose of this report is to present to the Infrastructure and Strategy Committee an outline of current recycled road treatment trials occurring within City of Marion and other road authorities.

EXECUTIVE SUMMARY

With increasing environmental expectations from the community to recycle, Local Governments are integrating circular economy principles and waste minimisation to their day to day operations to find more sustainable options. The restriction to export recycled materials has allowed local markets to remanufacture materials including plastics, glass, rubber tyres and printer toner cartridges.

There has been significant work around sustainability in the bituminous surfacing industry centred on incorporating repurposed materials into asphalt. Road contracting companies are partnering with specialised organisations that have developed recyclable products that can be used in the manufacturing of environmentally sustainable asphalt resurfacing products.

The long term benefits of using recycled materials in road construction is to:

- Reduce the impact on the environment through efficient use of available resources
- Reduced waste to landfill
- Reduce energy required to produce pavement construction materials (recycled materials are less energy intensive to produce than quarry materials)

The City of Marion is currently trialling or investigating a number of recycled products within its road construction program, these include:

- Reclaimed Asphalt Pavement (RAP) – Using since 2012
- Reconophalt – Trial started in 2019
- Crumb Rubber Asphalt

The initial results of trials occurring within the City of Marion and with other road authorities are promising and close monitoring of pavement performance will continue to occur into the future.

RECOMMENDATION

That the Infrastructure and Strategy Committee:

1. **Notes the report.**

DISCUSSION

With the shortage and rising cost associated with the sourcing of traditional natural aggregates and sand

from quarries and increased haulage distances, alternative solutions for road construction materials are required. Road authorities are exploring and trialling recycled materials which would otherwise end up in the landfill. Recycled materials such as crushed concrete, bricks, reclaimed asphalt, crushed glass, plastics, printer toner cartridges, asphalt millings, slag and crumb rubber are been used for new construction or rehabilitation and reconstruction to improve the performance of existing road pavements.

There has been significant work around sustainability in the bituminous surfacing industry centred on incorporating re-purposed materials into asphalt. Road contracting companies are partnering with specialised organisations that have developed recyclable products that can be used in the manufacturing of environmentally sustainable asphalt resurfacing products.

A recent report from NATSPEC (National not-for-profit Building Specification Organisation) which has reviewed the current use of recycled materials for road works in Local Government has identified the City of Marion is leading the state in this sector.

The following provides a summary of the products that are available and/or currently been trialled:

Reclaimed Asphalt Pavement (RAP)

RAP is generated by the milling of existing asphalt pavements, the crushing of waste or returned asphalt and the asphalt material that would otherwise go to landfill. RAP is coated in bitumen which can be regenerated by controlled heating. The recycling of asphalt reduces the overall need for natural aggregate resources and bitumen.

RAP can be added up to 70-100% of the mix in some of production facilities but is generally incorporated at between 10% and 30%. Adelaide City Council was the first council in Australia to trial the first 100% recycled road including RAP and recycled vegetable oil on Chatham Street in the city's south west in February 2019.

The performance of RAP shows in some cases better than conventional virgin asphalt. The City of Marion has been using RAP within it's entire resurfacing program since 2012. In 2018/19 the carbon savings using RAP is approx. 331 tonnes of CO2 which is equivalent of 134 cars off the road for a year.

Reconophalt

Reconophalt is a product that consists of recycled plastic bags, glass bottles, toner from printer cartridges and RAP. This product which is produced by the City of Marion's principal asphalt contractor Downer is a new product. The City of Onkaparinga was the first Council in South Australia to trial the use of Reconophalt along Caribbean Crescent, Happy Valley in December 2018.

The City of Marion is currently trialling Reconophalt in a number of streets. In 2018/19 3,730 tonnes have been laid on the road network (20% of the road resealing program), this is equivalent to recycling:

- 1,990,000 plastic bags and packing equivalents
- Toner from 66,000 used printer cartridges

Currently crushed glass isn't available in South Australia due to the lack of supply facilities to generate the quality required for the Reconophalt mix. The City of Marion will continue to closely monitor the trial sites with Downer to track performance.

Crumb Rubber Asphalt

Australia generates around 56 million end-of-life tyres each year, however only around 10 per cent of that volume is recycled domestically. Crumbed rubber can be added to an aggregate (dry blend) or can be dissolved into a bitumen binder (wet blend) to create crumb rubber asphalt.

The City of Mitcham was the first council in South Australia to trial a wet blend crumb rubber asphalt along Stanlake Avenue, St Marys in December 2018. The City of Mitcham partnered with the TyreStewardship Australia for the trial. The rubber was sourced from Victoria due to the lack of product availability of recycled tyres within South Australia. For the local residential street it was determined that approx. equivalent to 850 tyres (20 tyres per property frontage) was recycled for the trial. The performance of the trial road surface will be monitored over the next two years, with testing for cracking and rutting. There are concerns when laying the recycled rubber asphalt product that it produces an odour that may have safety implications. This is minimised in the wet blend process, and extensive testing has been undertaken overseas. By using a warm

mix additive and RAP the City of Mitcham was able to bring the temperature of the mix down low enough to minimise the odour.

This innovative road surface is anticipated to last longer, be stronger and more durable while also offering environmental benefits and the potential to lower maintenance costs due to the flexible rubber nature of the road.

Other Road Construction Trials

The following road treatments don't use recycled materials but provide a significant environmental benefit:

CoolSeal

During warm weather the black road pavement holds a significant amount of residual heat and as a result can heat up surrounding neighbourhoods. An innovative product called CoolSeal is effectively a preservation treatment in the form of a paint that is put on the road and evenly spread. The water based asphalt emulsion sealcoat is designed to achieve lower surface temperatures through its lighter colour and design to reflect the sun's UV rays.

City of Charles Sturt and City of Salisbury are trialling CoolSeal and have recorded a temperature difference of approximately 10 degrees cooler than the traditionally black road seal. By cooling the ambient air, lighter-coloured asphalt can also help reduce heat island effects.

The City of Marion is currently exploring viable trial sites to implement Coolseal within our road network or within Council owned car parks.

Permeable Paving / Asphalt

Pavers that contain a slit or a gap when laid is known as permeable paving. It allows stormwater that falls onto the pavement to permeate into the base layer, generally consisting of a 10mm screening aggregate (30-40% void ratio) which the water can be stored and allowed to infiltrate into the surrounding soil. This method reduces stormwater runoff into the stormwater system.

The City of Mitcham has laid permeable paved roads, footpaths and car parks for the last several years and it has shown to be a low cost stormwater design solution in areas that have water ponding issues.

The City of Mitcham has also recently laid a permeable asphalt car park in June 2019. Consisting of crumb rubber and aggregate bound together with an epoxy resin, it allows stormwater to flow through the asphalt into the base of the pavement. The data will be collected by a third party and will be monitored over the next few years to track performance.

CONCLUSION

The City of Marion will continue to work with the asphalt industry to find innovative and sustainable products for road construction. The long term benefits of using recycled materials in road construction include:

- Reducing the impact on the environment through efficient use of available resources
- Reduced waste to landfill
- Reducing energy required to produce pavement construction materials (recycled materials are less energy intensive to produce than quarry materials)

SPEAKERS

Mathew Allen - Manager of Engineering and Field Services (City of Marion)

Carl Lundborg - Operations Engineer (City of Marion)

David Bendo - Business Development & Improvement Manager SA/NT (Downer)

Steve Ainscow - Surfacing Manager (Downer)

City of Mitcham Representatives- Recycled Road Materials Presentation

Originating Officer	Elected Member Support Officer - Tom Matthews
Corporate Manager	Manager Corporate Governance - Kate McKenzie
General Manager	N/A
Report Reference	ISC190702R04

REPORT OBJECTIVE

To present the City of Mitcham's recycled road material trial to the Infrastructure and Strategy Committee.

EXECUTIVE SUMMARY

The City of Mitcham's Manager Engineering, Chris Haskas, will have a Project Engineer who worked on their Crumb Rubber Asphalt Trial make a presentation at the Infrastructure and Strategy Committee.

RECOMMENDATION

That the Infrastructure and Strategy Committee:

- 1. Note the presentation**

GENERAL ANALYSIS

Attachment

#	Attachment	Type
1	Crumb Rubber Asphalt Roads Conference PDF	PDF File
2	Email from Chris Haskas re Mitcham's recycled road	PDF File



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Utilising Recycled Tyres in Asphalt for Future Sustainability

Presented by the City of Mitcham

Russell King rking@mitchamcouncil.sa.gov.au

Thankyou



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Tyre Stewardship Australia Liam O'Keefe
who funded the project and Meagan for
her help with publicity!



TyreStewardship
AUSTRALIA

Thankyou



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Team at Topcoat and specifically Rod McArthur the technical expert!



Member of



Performing Locally

Supported Globally

USA (California) - Environmental

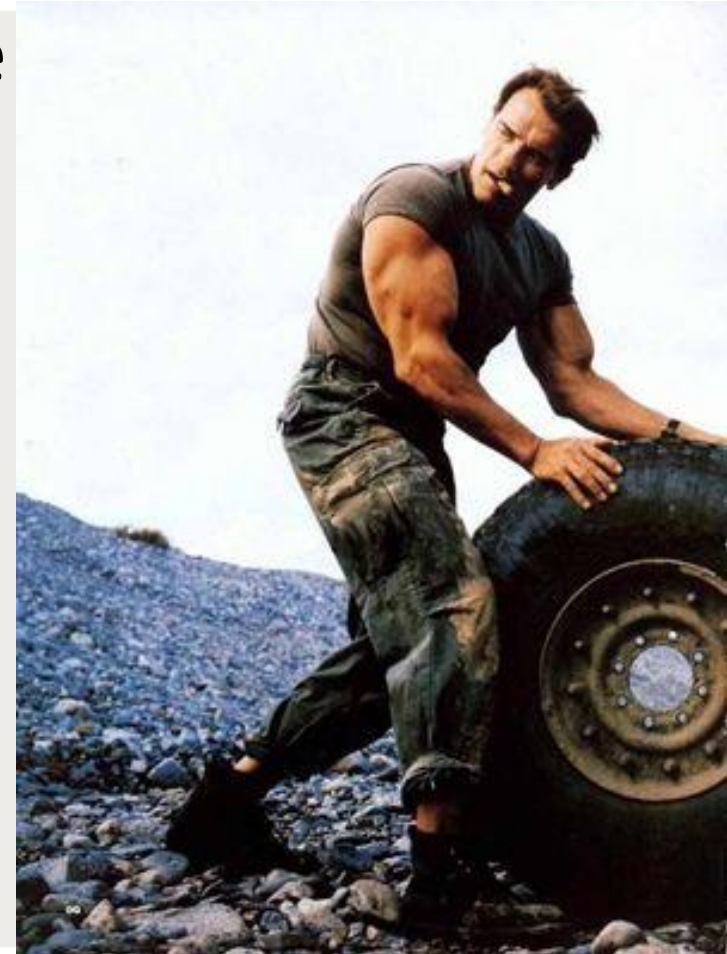


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Used extensively over time
with success

Became mandated for
environmental reasons
with minimum tyre
quantities specified

2016 = 27,620 tonnes of
rubber!!!



Spain- Environmental and Austerity



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Number of rubber tyre fires

Tyre cheaper than bitumen so used to save money and has now done over 1,600kms in last 20 years throughout Spain



But why tho?



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- Longer life through additives within the tyre to prevent oxidation (carbon black)
- Crack resistance through increased flexibility even when done as an overlay on an existing cracked seal
- Strength, particularly resistance to rutting and heavier traffic loads

Whenever you find yourself on the side of the majority, it is time to pause and reflect...

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Hold on, so what exactly is crumb rubber?



So WHAT is a crumb rubber asphalt??



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- **Dry mix** - particles mixed in with the aggregate
- **Wet Mix**
 - Terminal Blend - 100% dissolved into the binder, but then can be stored and transported for later use
 - Mobile Blend – mixed into the binder on site and so the rubber particles don't completely dissolve, however requires specialised pumps and plant

The crumb rubber being used in our trial



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- Wet (Terminal) blend (transported from Victoria)
- 15% crumb rubber in the binder for trial
- Net bitumen binder 4.6% (instead of 5.5%)
- Warm mix additives so no smell (lay at 165°C)
- Extensive preliminary geotechnical investigation, survey marks for movement, NSV for surface defects and on going monitoring

Stanlake Ave, St Marys Trial Site



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- Long straight road (easy for a trial)
- Extremely reactive soil – class E (extreme)
- Low subgrade strength (CBR of 3)
- Extensive environmental cracks in new pavement and seals adjacent within 6 months of completion

So what does it look like when laid?





Lab results of mix

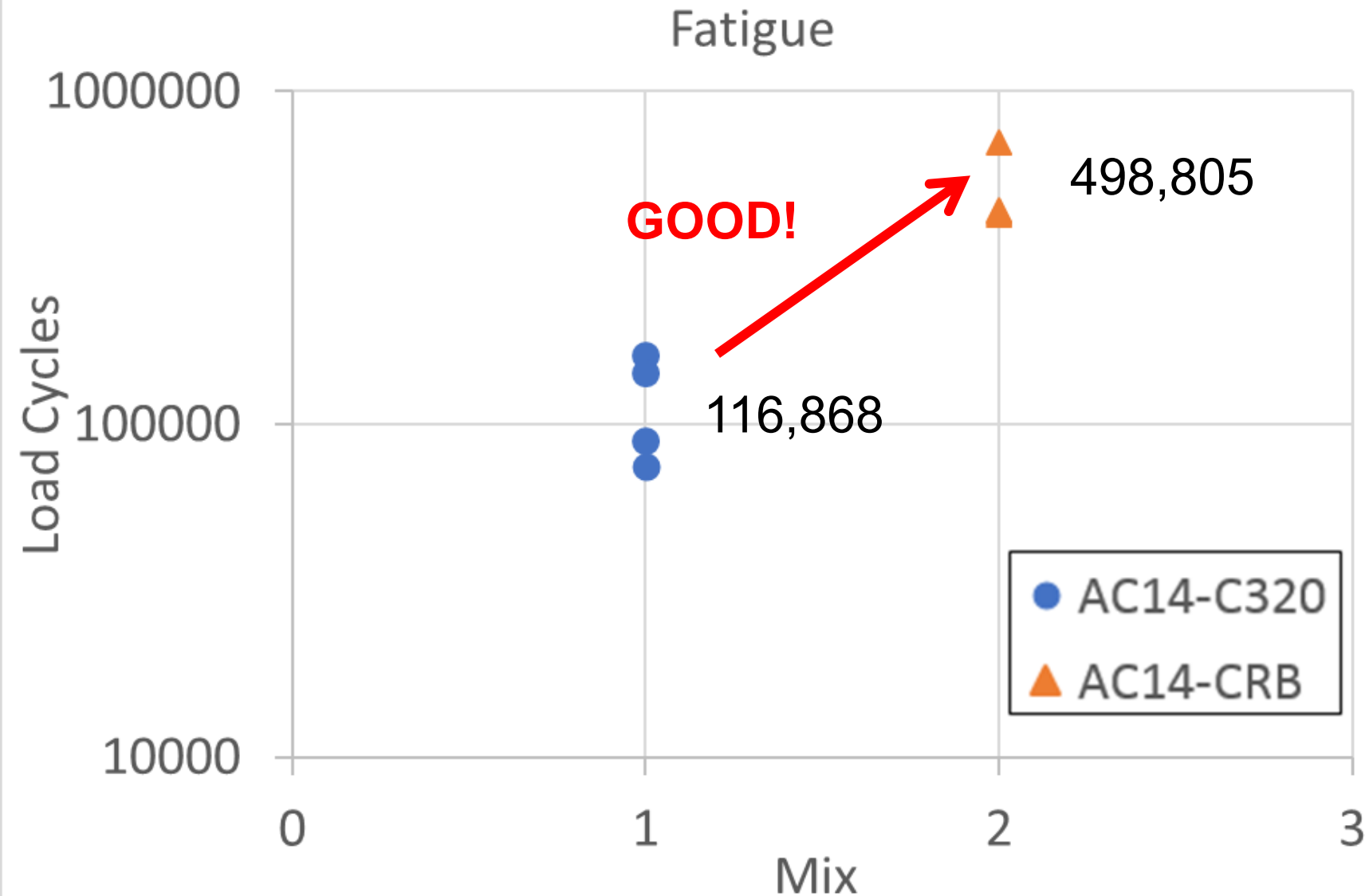


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- Fatigue (cycles to failure)
- Moisture Sensitivity
- Wheel Tracking (rut resistance)

Fatigue – repetitive load until failure

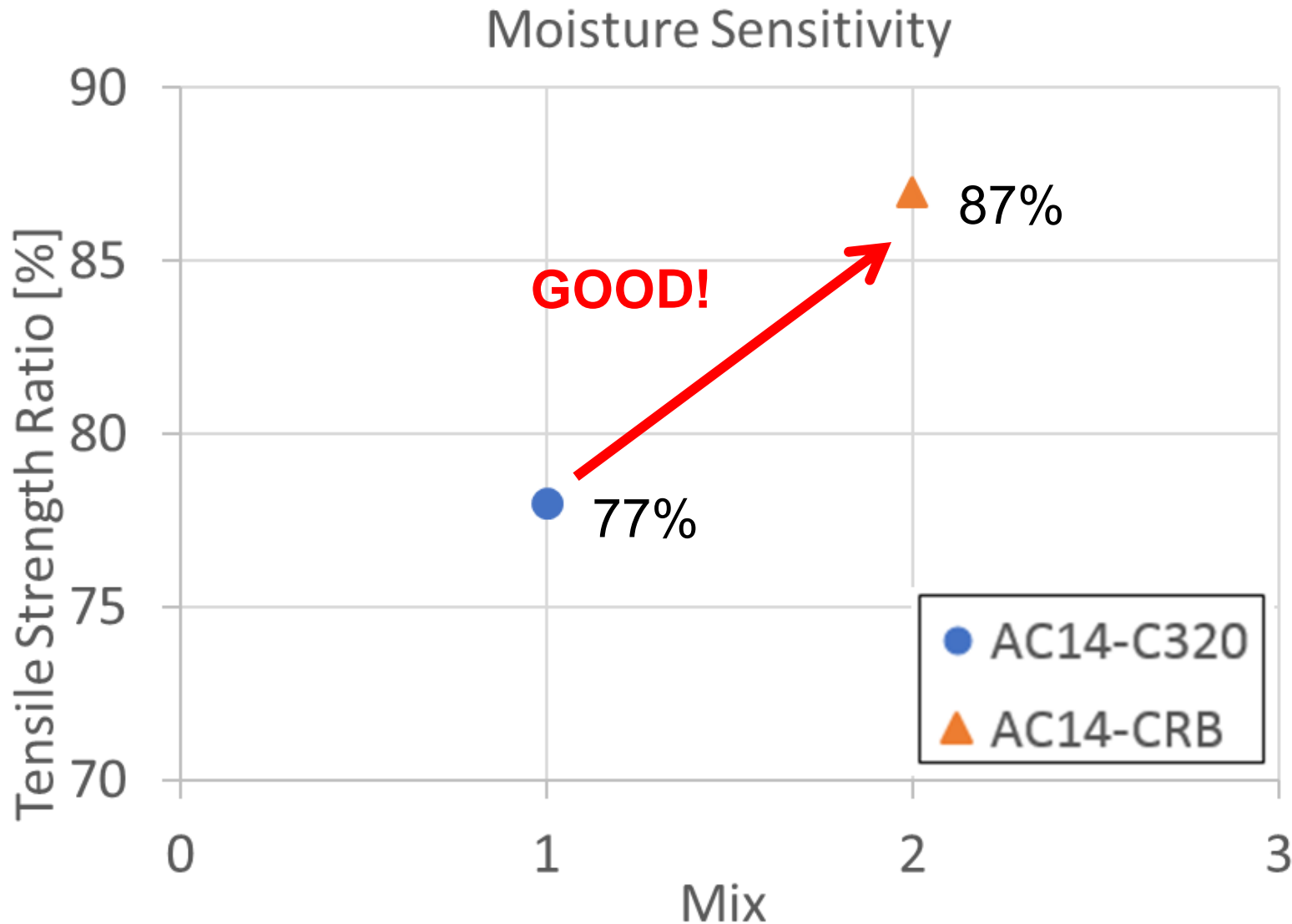
(simulates repeated traffic loading)



Moisture Sensitivity

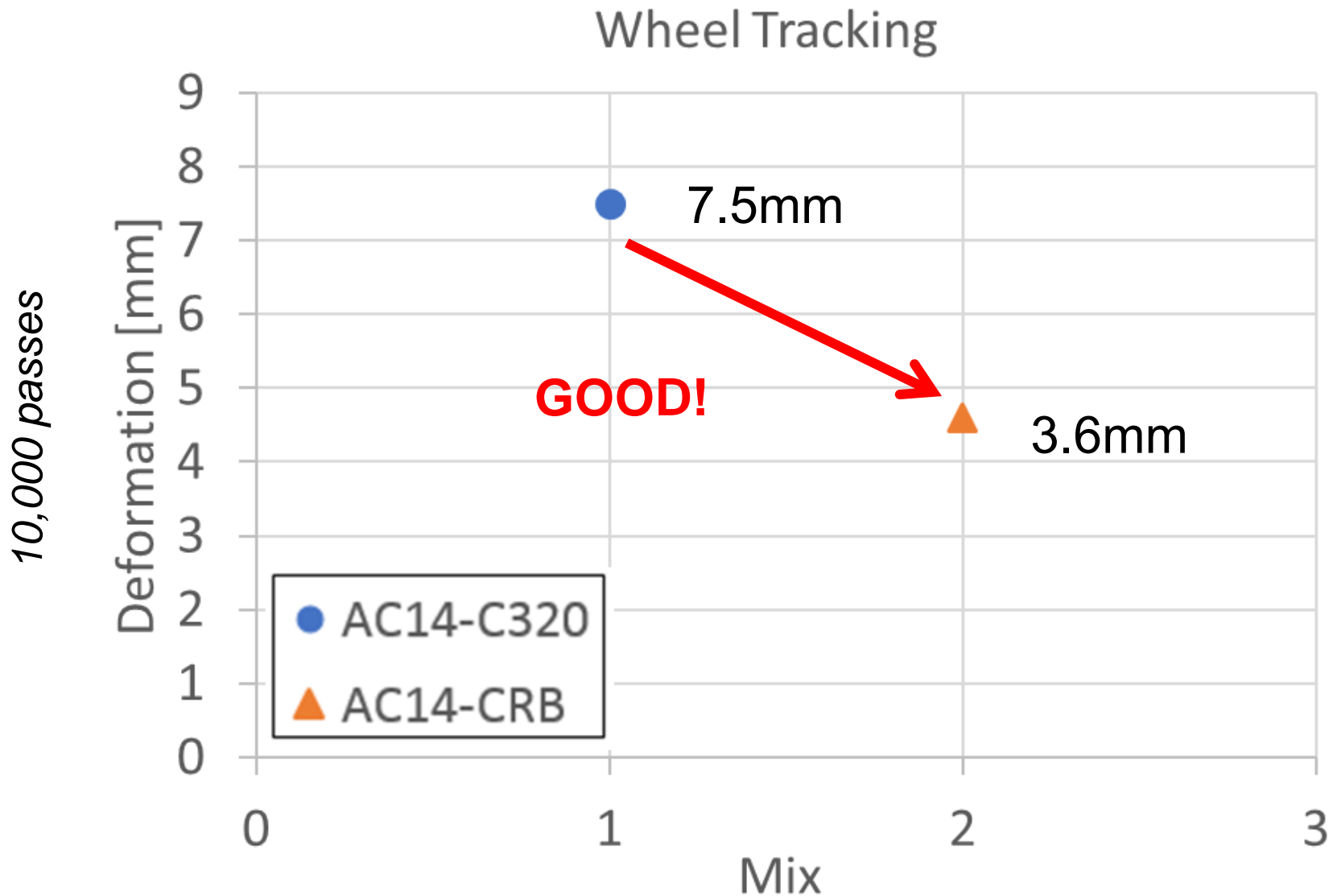
(susceptibility of mix to degradation through water ingress)

Tensile strength before and after soaking in water



Wheel Tracking

(*resistance to rutting*)



Field results and observations



CITY OF
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A lot darker/blacker (the carbon black)

Rolling with steel drum roller instead of rubber tyre roller

Air voids slightly higher than target, but this was consistent with the 'standard' asphalt mix (was actually lower)

Looks like a normal road!



Observations/Summation after 6 months



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The test results would indicate better (or certainly not worse) than 'standard' asphalt, so why not?

Recycling – lots of investigations and research out of California as to the suitability of the product as RAP

Hasn't collapsed or failed! Certainly no cracks yet!!

What next?



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Permeable crumb rubber asphalt!

Trial site is a carpark about 250m away that has many nearby water sensitive urban design features

Same reactive soil (class E) and intent is that by making permeable the underlying soil can retain an even moisture profile instead of wetting/drying and reduce movement





From: Chris Haskas <chaskas@mitchamcouncil.sa.gov.au>
Sent: Friday, 14 June 2019 1:08 PM
To: Mayorea <Mayor.EA@marion.sa.gov.au>
Subject: Crumb Rubber Asphalt - City of Mitcham

Hi Tom,

Below is a summary of the crumb rubber asphalt trial undertaken by the City of Mitcham.

I have also attached a copy of the presentation we presented at several conferences.

If you would like any further information or the team at council would like to meet with my team please contact me and we can arrange a suitable time.

Project Description

Stanlake Avenue, St Marys in the City of Mitcham has been identified as requiring road renewal as part of the 17/18 capital works construction program. The typical underlying soil in St Marys is highly reactive clay (heave >120mm), and a number of roads in the area recently reconstructed (in the last 5-10 years) already show signs of significant cracking and minor failures in the asphalt surfacing related to the soil heave.

The problem of reactive clay soils damaging asphalt seals is not unique to St Marys however, as a large proportion of South Australia's road network is constructed on these underlying clays creating shorter asset useful lives and a reduce level of service that can be provided.

Stanlake Avenue has been identified as an ideal candidate to undertake a trial of Crumb Rubber Asphalt (CRA), using crumbed tyre rubber within the asphalt binder to provide a more elastic, flexible, and self-healing wearing course to withstand the soil reactivity and increase asset useful life and service level. The crumb rubber would be used in the asphalt mix in lieu of other binder additives aimed at creating similar flexible asphalt mixes however which add a significant cost premium to the asphalt mix (~25% extra) and haven't been found to be the perfect solution.



It is intended to install crumb rubber asphalt over a number of segments on Stanlake Ave, while also installing segments of conventional asphalt mixes both with and without polymer modified binders as controls. This will allow direct comparison of the short term and long term performance in the field and allow on going monitoring.

The project has the following objectives:

- Demonstrate a measureable benefit in asphalt performance and asset life for in-situ crumb rubber asphalt versus conventional asphalt mixes both with and without modified binders
- Quantify in a laboratory testing environment the benefits in asphalt performance of crumb rubber asphalt versus conventional asphalt mixes both with and without modified binders
- Provide a 'real life' demonstration site for industry to visit and observe over the long term
- Validate with supporting data that using crumb rubber in asphalt binder provides not only equivalent or improved performance and asset life, but cost savings and helps meet Council's targets in regards to waste minimisation and environmental
- Make the information available amongst industry user groups (both asphalt and local government)

The design, manufacture, and installation of the crumb rubber asphalt will be done by City of Mitcham's asphalt contractor Topcoat. Topcoat will also undertake a significant amount of testing both in the laboratory and in the field from extracted core samples. Third party independent testing will be undertaken by ARRB to provide validation and support of the data outcomes.

The following tests both short term and long term will be undertaken on the crumb rubber asphalt and the control asphalt segments:

In-Situ Testing

- Underlying soil profile testing including reactivity and strength
- Bore monitoring samples to measure soil moisture levels (creates shrink/swell)
- Complex modulus over time (measure of asphalt oxidation and asset life span)
- High resolution surface assessment (measure of cracking, roughness, failures)
- Level survey (monitor times of peak shrink/swell and observed asphalt behaviour)
- Skid resistance testing

Laboratory Testing

- Wheel tracking
- Fatigue resistance
- Volumetric properties (bulk density, air voids, binder content)
- Moisture sensitivity
- Resilient modulus

Cost Analysis

Based on calculations the project is expecting the cost per tonne for asphalt to be as follows:

- Conventional 'standard' asphalt mix - \$177.94/tonne
- Polymer modified asphalt mix - \$212.70/tonne
- Crumb rubber modified asphalt mix - \$181.00/tonne

Volume Demand

The increased cost versus conventional asphalt is mostly down to importing the crumb rubber from interstate, and the requirement of increasing the temperature at which the plant operates in the manufacture of the asphalt. It is expected however that with larger orders for crumb rubber in SA the cost for the raw materials would come down, or someone would undertake the process in SA.

This unit rates 'as is' however clearly show that even if only small benefits are observed over conventional asphalt mixes, the negligible cost increase per tonne is a highly attractive proposition.

Note also, that the increase of bitumen related materials will only ever increase, however the cost of old tyres will always remain fairly static!

Considering only Mitcham's annual asphalt program of 20,000t, if an idealistic amount was considered:

Say, a worst case only 10,000t have the addition of crumb rubber.

Typically asphalt mix is 6% binder, so conservatively say only 3% crumb rubber

$10,000t \times 0.03 = 300$ tonnes of tyre used per annum

Considering this is just for City of Mitcham alone, when considered over all SA Councils this figure increases dramatically, over 20 Councils undertaking a similar volume of asphalt work this becomes 6,000 tonnes of tyre a year.



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REPORTS FOR DISCUSSION

Indoor Skate Facility

Originating Officer	Open Space & Recreation Planner - Amy Liddicoat
Corporate Manager	Manager City Activation - Greg Salmon
General Manager	General Manager City Development - Abby Dickson
Report Reference	ISC190702R05

REPORT OBJECTIVE

The purpose of this report is to provide the Infrastructure and Strategy Committee with information on the feasibility of developing a purpose built indoor skate facility in the City of Marion (CoM).

EXECUTIVE SUMMARY

The 2015 Skate SA Feasibility Study, commissioned by Skate SA provides an overview of the potential use, requirements and revenue implications related to the development of a purpose built indoor skate venue.

The study is clear that whilst there is currently a demand for skating sports and a lack of purpose built facilities, *there is not sufficient income generated through the various skating disciplines to support a stand alone facility.*

The study, highlights the need for new multi-purpose indoor facilities to be built with consideration for competition standard skate facilities being incorporated into the design and recognises the current situation, whereby skating sports are often a low priority for utilisation of indoor sports facilities. However, to accommodate skating sports with a compliant facility a 4 court indoor stadium would be required and this would limit other sports availability of the playing surface. A previous EOI for the Mitchell Park redevelopment demonstrated existing demand to utilise 4 courts during the week. It is imperative that the planning of any new indoor facility is undertaken with a holistic approach.

Recreational and event (eg. birthday parties) skating can be accommodated in a single court and existing council facilities (Marion Leisure) have had skating in the past and could potentially again in the future. Roller derby is also physically possible within a single indoor court space and therefore could be possible in an existing centre if available.

Council recently endorsed a 4-Year Business Plan with an ambitious number of major projects. An indoor skate facility is estimated to cost at least \$4m and therefore would become an additional major project requiring due diligence, additional staff or re-timing of another project.

Further consideration could be given to skate recreational and sport facilities in initiatives identified in the 4-Year Business Plan being the development of Strategic Property Asset Management Plan, and consideration of recreational options for 262 Sturt Road.

RECOMMENDATION

That the Infrastructure and Strategy Committee

- 1. Note the report.**

That the Committee recommend the following to Council:

2. ***That broader recreational options, including recreational and sports skating, be considered in the development of the City Property Strategic Asset Management Plan and in the investigation of options for the 262 Sturt Road site in 2021.***

DISCUSSION

Background

At the May Infrastructure & Strategy Committee Meeting Councillor Prior joined the meeting to discuss the potential development of an indoor skate facility within CoM. The Committee resolved the following:

Councillor Prior asked the Committee to support a request for a feasibility study for a skating facility in the City of Marion. The key points from the discussion are outlined below:

- *Skating options the facility would support include, but not limited to skate boarding, roller skating, roller derby.*
- *Preferably looking at an indoor facility to support year round use.*
- *Skateboarding has been included in the Olympics in 2020 and no facilities available.*
- *Possibly a major project – how does it fit in with priorities?*
- *What is the cost/availability for staff to do feasibility study or need to outsource?*
- *Location is unknown, resourcing unknown.*
- *A report could be considered based on a high level overview with any information that may be readily available.*
- *Important to note this is not a decision making committee. Prudent and right to potentially build into long term planning with considerations to community needs around age, gender, indoor/outdoor, disability.*

This report provides the ISC with high level information on the feasibility of developing an indoor skate facility within CoM addressing the above discussion points raised by the Committee.

Peak body information

In the 2015, Skate SA feasibility study, a lack of public venue access for skating sports and a need to provide fit-for-purpose skate facility to service the needs of the skating community and associated disciplines was identified.

The study highlighted risks associated with skating activities in venues that are not fit for purpose:

- Elevated risk to the skater, as the size of the venue is often too small or does not meet the required dimensions of the skating discipline.
- Flooring surfaces are not specifically designed for the sport and the ancillary requirements for skate sports are often deficient.

Participation Rates

There is limited data on overall skate participation rates as ABS data includes recreational skateboarding and scooter riding and roller skating in one category. In 2012, the Skate SA membership was approximately 500 members.

Existing Facilities

In the majority of locations, it is difficult to access court space due to the requirements of other sports such as basketball, netball, indoor soccer and volleyball. Other reasons for limited court allocation include, the profitability of the activity, the perception that skating damages the sports floor surface and the high and competing demand of other indoor activities.

The study provided the top three venues catering for skating in 2015 being:

- Blackwood Recreation Centre
- Gawler Community Centre and the
- Parks Community Centre (Angle Park).

Both the Blackwood Recreation Centre and Gawler Community Centre are a two court basketball stadium facility. These are used for inline hockey for both junior and senior players as well as casual skating and events (e.g. birthday parties).

Facility Requirements

A purpose built skate facility would need to cater for the six skating disciplines and meet the Skate Australia facility guidelines. The six skate disciplines are:

- Inline Hockey
- Artistic Skating
- Skateboarding
- Speed Skating
- Roller Hockey
- Roller Derby

Skate SA recommends an indoor skate facility of:

- 60m x 30m for international standard; or
- 50m x 25m for domestic competition.

Note: the dimensions for roller derby are 32.02m x 22.86m

Note: a four court indoor netball court layout is typically 74.4m x 40.25m. Netball courts are larger than basketball courts. A compliant indoor skate venue is likely to require access to four courts.

Financial Modelling

The estimated cost of a new facility in 2015 was \$4M

The study identified that it would *not* be feasible to develop a facility without external funding from government (local/state/federal), the private sector or other sources as Skate SA does not have any significant levels of funding that can be invested into a centre.

Financial modelling undertaken by Skate SA indicates a purpose built facility for skating would likely have an operating deficit.

It is unlikely that a single purpose skate facility will be able to be developed as a stand-alone facility and the most likely scenario would be to ensure that any new, redeveloped or existing indoor recreation facility is designed and/or modified with consideration to catering for skating sports.

Skate SA's Feasibility Study highlights that half of the revenue comes from peripheral skating components (eg. birthday parties and events) and would be an important consideration in the development of a skating facility.

Mitchell Park Redevelopment

The Skate SA Feasibility Study referenced the City of Marion's intention of developing a new 3 to 4 court indoor sports centre (Mitchell Park) as a potential option for a new skate facility.

In late 2017 CoM undertook a public expression of interest process to identify additional user groups for the planned Mitchell Park facility and received 10 submissions for a range of sporting groups, school use and private fitness enterprise. The facility is also planned to accommodate regular community use allocations to enable neighbourhood centre programs to be fulfilled at the facility. This EOI process has identified high demand for the facility.

Planning of the Mitchell Park facility has included a sprung timber floor surface to accommodate the specific needs of ball sports. Sports identified through the EOI process, included basketball, korfball, volleyball, gymnastics and school sports. It is understood that a sprung floor surface would not be compatible with skating sports due to the maintenance implications.

Existing Council facilities

Marion's existing indoor recreation centres Marion Leisure and Fitness, Marion Basketball Stadium and Cosgrove Hall do not have the capacity to accommodate a compliant indoor skate track/arena but could be further investigated to understand if there is capacity for sports skating or recreational skating similar to what is being provided at Blackwood Recreation Centre and Gawler (i.e. 2 court basketball being used for inline hockey).

Marion Leisure Centre does not currently have skating sports or recreational skating at the centre, this is due to a lack of demand from the user groups. There was a previous long term hirer who conducted a roller skating school and there has been some use in the past by in line hockey training.

The Skate SA study and other centres currently catering for recreational skating have identified that recreational skating, including events (birthday parties) provides substantial revenue for the centres and may be worth exploring to increase capacity of existing CoM facilities that are underutilised or as a future consideration in the planning of new facilities, such as 262 Sturt Road.

Roller derby may also be physically possible within existing recreation facilities if available.

Recreational and/or roller derby use of any existing facilities may need consideration to additional infrastructure such as skate barriers that would be required to accommodate the programs.

Resources and Capacity

Council recently endorsed an ambitious 4-Year Business Plan with major projects including Morphettville Park Oval, BMX, Southern Soccer, Hallett Cove Foreshore, Cove Sports Facilities, Marion Outdoor Pool, Oaklands Precinct, Marino Hall and Coastal Walkway. An indoor skate facility is estimated in the order of \$4M and is a major project which requires due diligence in its consideration. There is no capacity to undertake an additional major project without Council funding additional project staff or re-timing another major project.

Council would also need to consider its capacity to fund a skate facility and evaluate against other unfunded projects within Council 4 year business plan which include a destination playground; Seaview High School multi-purpose sports facility; upgrade of Marion Cultural Centre Plaza and expanding Council's streetscape program.

Council could give further consideration to the potential for recreational and sports skating through two initiatives identified in the 4-Year Business Plan being the development of the City Property Strategic Asset Management Plan (4YBP Initiative 3), and the investigation of recreational options at 262 Sturt Road (4YBP Initiative 36).

Next Steps

The Infrastructure and Strategy Committee provide a recommendation to Council regarding the future consideration of skating sports and facilities.

CONFIDENTIAL ITEMS**Cover Report - Hydrogen Park SA - AGIC**

Originating Officer	Executive Assistant to General Manager City Services - Colleen Madsen
Corporate Manager	Manager Engineering and Field Services - Mathew Allen
General Manager	General Manager City Services - Tony Lines
Report Reference	ISC190702F01

RECOMMENDATION**That:**

Pursuant to Section 90(2) and (3)(j) of the *Local Government Act 1999*, the Committee orders that all persons present, with the exception of the following persons: Adrian Skull, Ray Barnwell, Abby Dickson, Tony Lines, Mathew Allen and Louise Herdegen excluded from the meeting as the Committee receives and considers information relating to *Hydrogen Park SA - AGIG Presentation*, upon the basis that the Council is satisfied that the requirement for the meeting to be conducted in a place open to the public has been outweighed by the need to keep consideration of the matter confidential given the information the disclosure of which i) would divulge information provided on a confidential basis by or to a Minister of the Crown, or another public authority or official (not being an employee of the council, or a person engaged by the council); and ii) would, on balance, be contrary to the public interest.

Hydrogen Park SA - AGIG Presentation

CONFIDENTIAL

Reason For Passing This Resolution:

Local Government Act (SA) 1999 S 90 (2) 3(j) (i) and (ii): information the disclosure of which (i) would divulge information provided on a confidential basis by or to a Minister of the Crown, or another public authority or official (not being an employee of the council, or a person engaged by the council); and (ii) would, on balance, be contrary to the public interest.

REPORTS FOR NOTING**OTHER BUSINESS - Nil****MEETING CLOSURE**

The meeting shall conclude on or before 9.30pm unless there is a specific motion adopted at the meeting to continue beyond that time.