VICTORIA'S
BIG BUILD

## ecologia Greener Infrastructure Conference 2023

18-20 September 2023



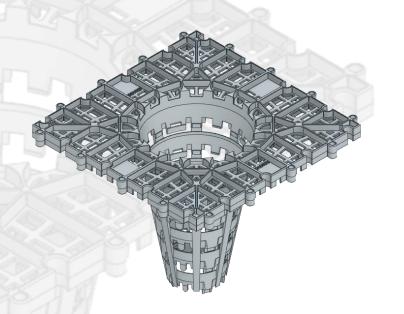


JOHN STEHLE
Inventor/Director,
Robovoid

### THE PRODUCT Details



WHAT IS ROBOVOID?



A patented void former invention for concrete structures and other applications.

✓ Manufactured from 100% recycled plastic (diverted from landfill).

FR. LIB.

✓ Available in a range of sizes.

#### **DECARBONISING CONSTRUCTION**

PRI LINE

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## THE PRODUCT Features



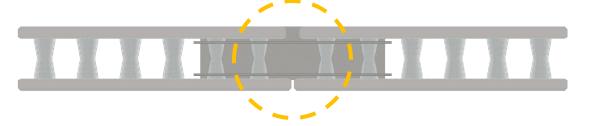
What It Does With Concrete

**SUSTAINABILITY** 



Up to 70% less CO2/mass for the same flexural strength and thickness as normal concrete.

Robust, fast and efficient structural connections.





Insulated version for facades. Excellent thermal performance and energy savings.

#### **DECARBONISING CONSTRUCTION**



### THE PRODUCT Features



WHAT IS ROBOVOID?







STACKABLE LIGHT WEIGHT WALKABLE

#### **DECARBONISING CONSTRUCTION**



### THE PRODUCT Performance









OVER 300
STRUCTURAL
LOAD TESTS ON
PERFORMANCE



#### **DECARBONISING CONSTRUCTION**



### THE PRODUCT Performance





FAÇADE FIRE TEST

CERTIFICATION ACHIEVED





FLOOR FIRE TEST

4-HOUR FIRE RATING FOR 275MM THICK FLOOR ACHIEVED



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## THE PRODUCT Performance







FLOOR LOAD TEST

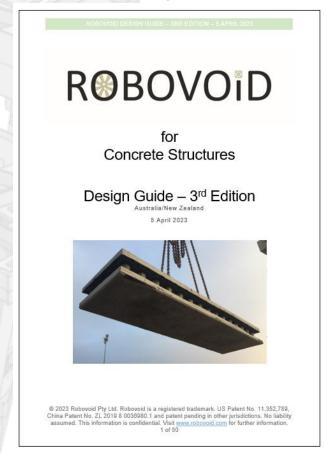
In progress

#### **DECARBONISING CONSTRUCTION**



## THE PRODUCT Design





		Contents
		Contents
1	Intro	oduction and Terms of Use
2	Sun	nmary
3	Des	ign and Delivery Process
4	Mat	erials
4	.1	Void formers
4	.2	Concrete
4	.3	Grout
4	.4	Reinforcement
4	.5	Studs
4	.6	Lifting Anchors
4	.7	Fixings
4	.8	Insulation
4	.9	Cavity closers
4	.10	Fire-rated sealants
5	Perf	formance
5	.1	Mass
5	.2	CO2
5	.3	Durability
5	.4	Fire
5	.5	Element Strength
	5.5.	1 Shear strength of unfilled panels
5	.6	Joint strength
_	.7	Lap length
5	.8	Deformation and crack control
5	.9	Ground slab design tables
5	.10	Load-span tables
5	.11	Thermal Insulation
5	.12	Acoustic insulation
6	Qua	ality Control
7	Турі	ical Details
7	.1	General geometry
7	.2	Curved geometry
7	.3	Joint bars

7.4	2-way slab layout
7.5	Primary plank element
7.6	Secondary plank element
7.7	Slab element (with air diffusers)
7.8	Air diffuser
7.9	Wall element
7.10	Foundation to wall connection
7.11	Foundation to retaining/basement wall connection
7.12	Free-standing retaining wall
7.13	Post and plank retaining wall
7.14	Slab to slab/wall to wall connection
7.15	Slab to concrete beam connection
7.16	Slab to steel beam connection
7.17	Slab to wall comer connection
7.18	Slab to wall external connection
7.19	Slab to wall internal connection
7.20	Wall to wall corner connection
7.21	Slab to column internal connection
7.22	Steel beam to wall connection
7.23	Shed slab
7.24	Ground slab
7.25	Ribbed ground slab
7.26	Twin biscuit ground slab
7.27	Façade element
7.28	Façade details around penetration
7.29	Façade details – horizontal/vertical joint
7.30	Façade details – corner joint
7.31	Double void façade to foundation connection
7.32	Double void façade to façade connection
7.33	Double void façade to façade corner connection
7.34	Slab to double void façade connection
7.35	Slab to double void façade/parapet connection
7.36	Steel roof to wall
7.37	Block element
7.38	Block stacking
7.39	Embedded steel plate
	3 Robovoid Pty Ltd. Robovoid is a registered trademark. US

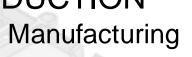
ROBOVOID DESIGN GUIDE – 3RD EDITION – 5 APRIL 2023	
Steel plated element	94
Façade fixing	95
Services fixing	95
Edge protection socket	96
Push-pull prop to wall connection.	96
Push-pull prop to slab connection	97
Cone lifting anchor	97
ROBOCLUTCH lifting device	98
2-way slab propping	99
Floor finishes	99
Slab recess	100
Pipe penetration	100
endix A	101
Interaction curves for unfilled and filled panels	101
Interaction curves for joints	181
erences	256
nowledgements	259
	Steel plated element

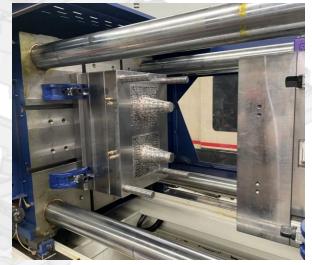
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#### **PRODUCTION**









#### Automated/containerised production process for economy

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**R@BOVOiD** 

## PRODUCTION Manufacturing





#### STRUCTURAL PANEL PRODUCTION







#### **DECARBONISING CONSTRUCTION**

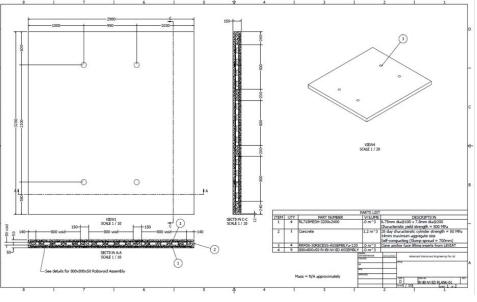


#### PROJECTS Complete





#### Apartment Building, Mumbai, India







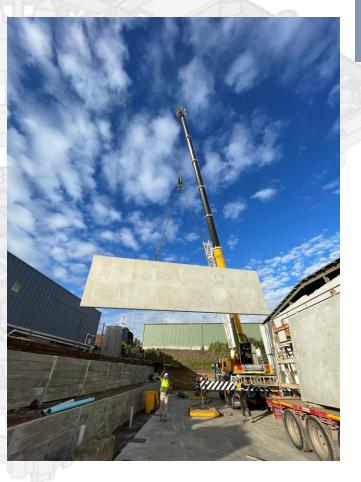
#### **DECARBONISING CONSTRUCTION**

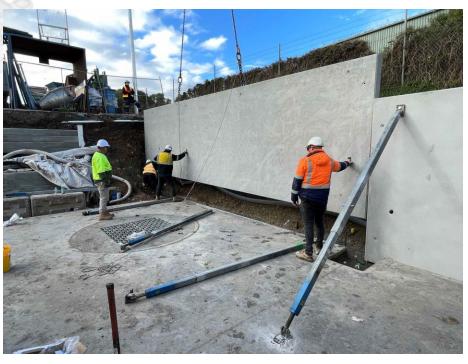


#### PROJECTS Complete





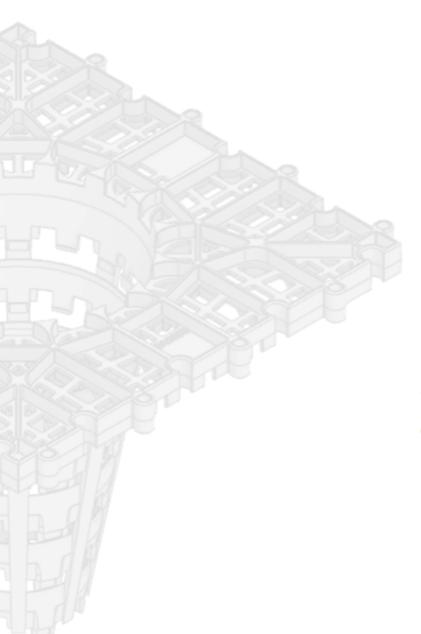






#### **DECARBONISING CONSTRUCTION**





#### THANK YOU!

Our Website: www.robovoid.com

Get In Touch: info@robovoid.com





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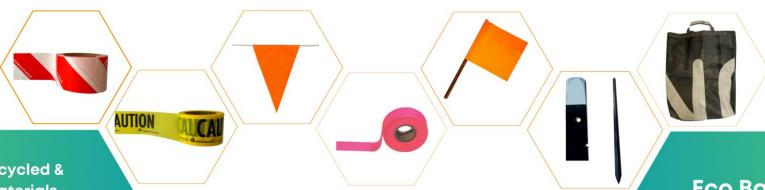




## JACKSON ELLIS Founder, Cacti Conserve



### **ECO SITE SAFETY**





Made with Recycled & Recyclable Materials



Manufactured Locally



Plant Based Compostable & Biodegradable Alternatives



**Low Risk Social Procurement** 



#### Cacti Conserve Pty Ltd

ABN: 13 637 751 305 www.cacticonserve.com.au Factory 13 / 69 Acacia Rd, Ferntree Gully VIC **Eco Barricade Tapes** 

**Eco Safety Bunting** 

**Eco Traffic Flags** 

**Eco Flagging Tapes** 

**Eco Safety Posts** 

**Eco Carry Bags** 

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## TIM LEED Director, Melbourne Rotomould



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## PRAVIN SWAMINATHAN Business Development Manager, Tyrecycle











## Tyrecycle

Managing Waste as an Industry Leader



A RESOURCECO COMPANY

Think – Safety, Quality, Customer





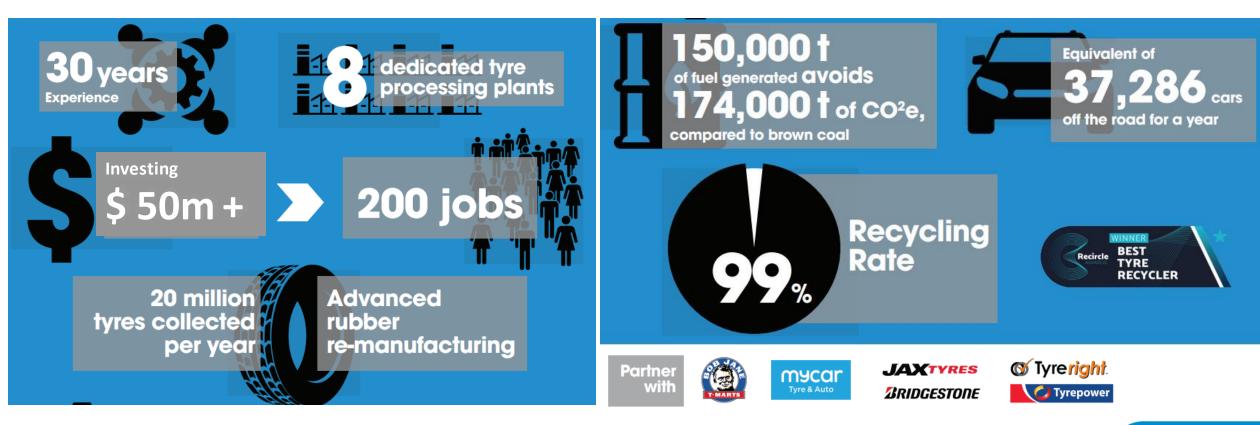






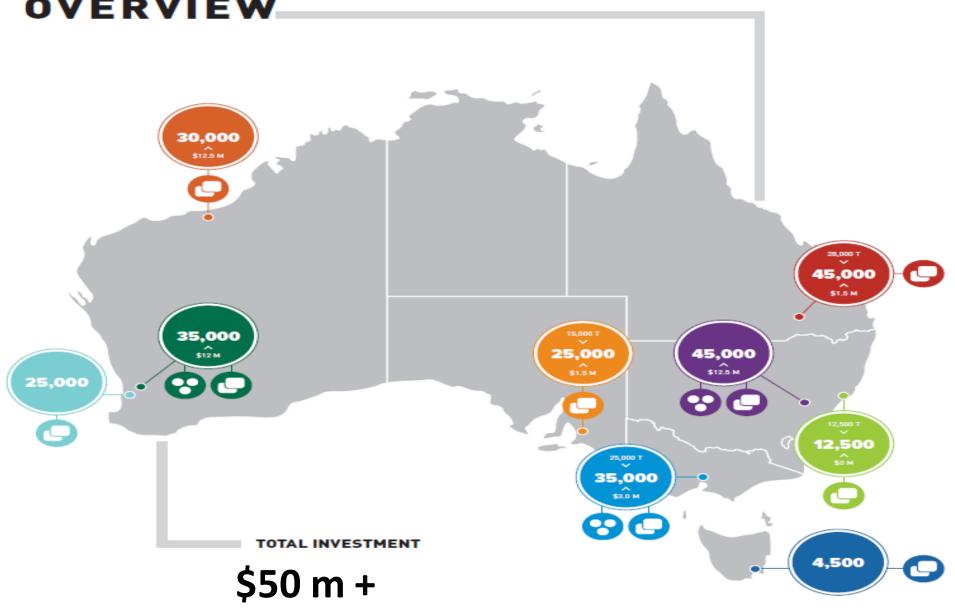
## Global leader in tyre recycling.

Materials destined for landfill. Economic, environmental and social outcomes.



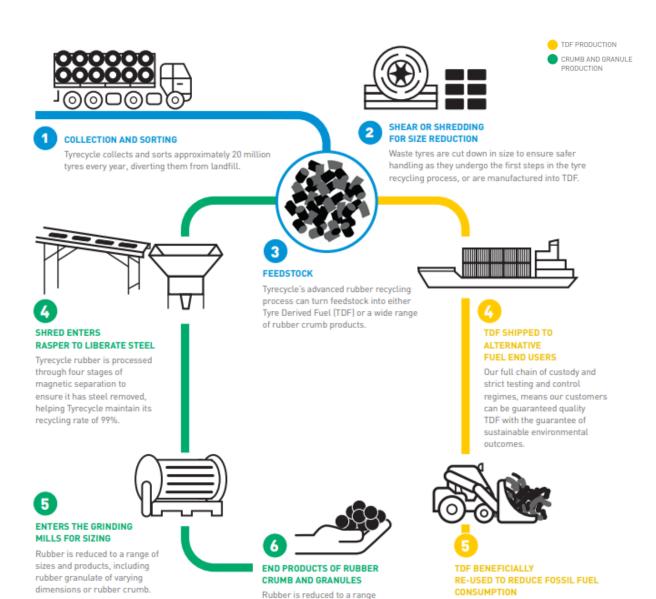


## MANUFACTURING OVERVIEW\_\_\_\_





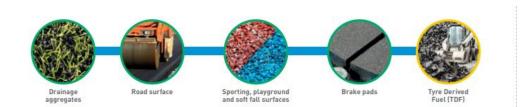
#### The tyre recycling process.



of sizes and products, including

rubber granulate of varying dimensions or rubber crumb. 150,000 tonnes of TDF is equivalent to taking 37,286 cars off the road for a year.

At Tyrecycle, we've been giving old tyres new life for over 30 years. With a national network of dedicated tyre processing plants Australia-wide, we deliver strong economic and environmental outcomes by re-purposing materials otherwise destined for landfill.





### Global leader in tyre recycling.

Unsurpassed bona fides.







tyrestewardship.org.au

ACCREDITATION NO. 20150259



































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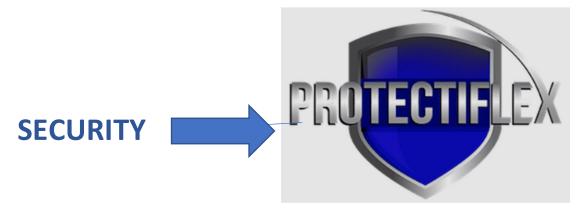




## GARY BULLOCK Managing Director, Flexiroc



#### **FLEXIROC TECHNOLOGY & APPLICATION**

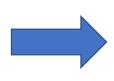






FLEXIBLE PAVEMENT



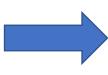




GOLFLEX LEARN MORE



SPORT SURFACES











#### ProtectiFlex

#### Concrete



**Contact charge** 





Close-range charge







## Weapon Testing (RPG)





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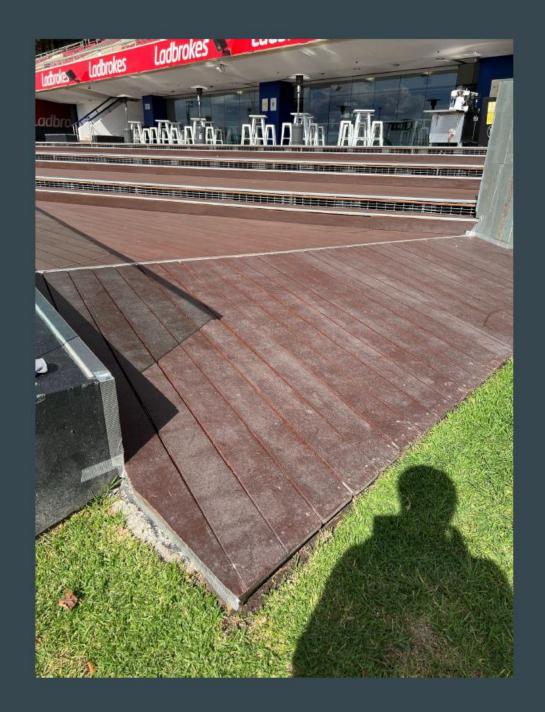


# VINCENT CADDY Market Manager/Product Development Manager, Coloured Recycled Group



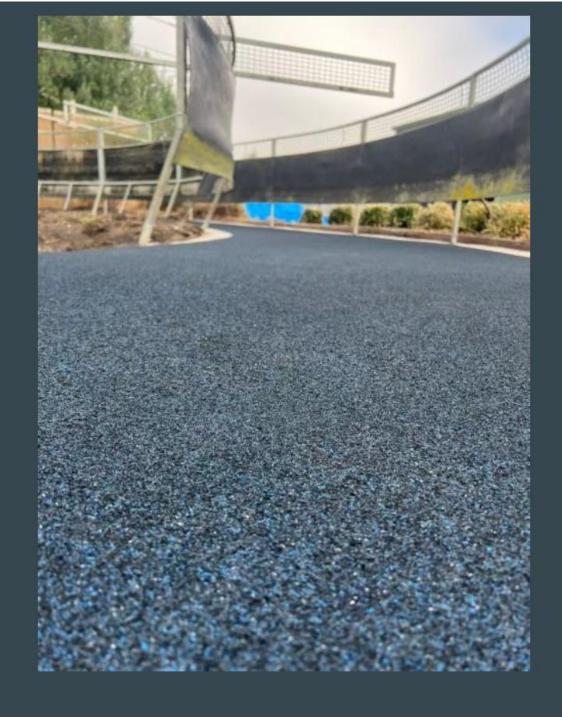
#### SAFE T RUBBER COAT IS IDEAL FOR ....

PATHWAYS - ALFRESCO AND PATIOS -WORKSHOPS - STAIRWAYS - WALKWAYS - BRIDGES -CHANGE ROOMS - OFFICE FLOORS - HOSPITALS -SHOPPING CENTRES - AQUATIC CENTRES - DECKING BRIDGES - INDUSTRIAL KITCHENS - BOARDWALKS -SPORTING FACILITIES - BICYCLE LANES - PARKLANDS **EQUINE CENTRES AND STABLE COMPLEXES** WATERPROOFING BALCONIES















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