



**BELIEVE
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SUSTAINABILITY**

SUSTAINABILITY

**annual progress report
2016/17**

toward zero

Toward Zero is the City of Port Phillip's sustainable environment strategy to 2020.

Toward Zero has nine challenges covering:

- greenhouse gas emissions
- sustainable urban design and development
- potable water use
- net loss of natural heritage
- waste
- sustainable purchasing and procurement
- contamination and pollution
- climate change.
- sustainable transport

Each challenge has targets to achieve the strategy by 2020. The Annual Report communicates Council's progress on these targets. It also provides an overview of pathways to achieve these targets by 2020.

Australia's climate is changing

Current projections for Melbourne for 2030 under a moderate greenhouse gas emissions scenario include temperature increases of 0.6° C, annual rainfall decrease of two per cent, sea level rise increase of 11 cm, and a notable increase in the number of days above 35° C. Under a high emissions scenario these projections increase significantly. Council is committed to contributing to the worldwide effort to reduce emissions and address climate change. Toward Zero aims to address this challenge and respond to emerging evidence that can assist Council to improve efforts to respond to a changing climate.

Source: CSIRO and Bureau of Meteorology, website at www.climatechangeinaustralia.gov.au

Major milestones in 2016/17

September 2016

- Completed installation of 172 kW solar panels at St Kilda Town Hall

November 2016

- Partnered with Public Transport Victoria and Yarra Trams to deliver an accessible tram terminus, streetscape upgrade, wider footpaths and new pedestrian plaza on Acland Street

February 2017

- Installed a GaiaRecycle machine at South Melbourne Market, which converts food waste into fertiliser that is sold as SoilFood™
- Received an LGPro Award for Excellence, in partnership with five other Councils, for the Environmentally Sustainable Design Policy - Planning Reform for a Sustainable Future

March 2017

- Facilitated an architecture and urban design exhibition, 'Swamped', which focused on the impact of climate change on the Elster Creek catchment

May 2017

- Called on the Victorian Government to ban the free distribution of single use plastic bags and pledged to join Zoos Victoria's campaign to avoid using balloons
- Implemented a Multi Unit Developments (MUDs) education campaign aimed at improving waste recycling rates and other amenity issues, including a Facebook posting forum aimed at body corporate coordinators

June 2017

- Completed construction of six raingardens
- Improved 13 intersections for bike riders and pedestrians and improved public lighting along the Port Melbourne light rail shared path
- Completed installation of 45 new on-street car share bays to reduce the need for car ownership
- Completed planting over 1,110 trees in streets and parks
- Commenced community consultation and data collection for the Toward Zero Community Action Plan
- Reviewed the Procurement Policy to increase the input of sustainability technical experts and to provide support for sustainable purchases
- Partnered with nine neighbouring Councils to develop and endorse the Bay Blueprint, a coastal adaptation planning framework
- Installed smart sensor solar powered litter bins along the St Kilda foreshore
- Notified of successful grant application for the EPA's, Officers for the Protection of the Local Environment pilot program which will assist in dumped waste investigation and building site waste issues
- Notified of successful application for the Australian City Partnerships Program, which commences in September 2017 and runs for two years. The program is aimed at supporting non-traditional sustainable urban development projects

Strategic review



When it was developed the Toward Zero Strategy was conceived as an aspirational strategy. Annual results and successes indicate that while the City of Port Phillip has made progress in the achievement of some adopted targets it has had less success in advancing others - in particular community targets, where our ability to influence is limited and efforts have focused largely on engagement programs and advocacy.

A strategic review undertaken in 2017 identified that:

- Toward Zero targets were set in 2007 when local government was less experienced in the development of environmental strategies
- minimal data was available when the targets were set leading to targets that were aspirational with unclear outcome trajectories
- a detailed, costed long term plan outlining initiatives required to achieve 2020 targets was not prepared

The Council Plan (2017-27) reaffirmed Council's commitment to sustainability and brought forward the development of a new environment strategy to replace Toward Zero by mid-2018.

This new strategy will be informed by the lessons learned from the strategic review described above and be supported by a second major project, **Baselining of Municipal Greenhouse Gas Emissions**, to ensure that there is a strong evidence base for future targets and pathways.

In the meantime, we will continue to invest in projects and programs that support improved environmental outcomes across the nine Toward Zero challenges.

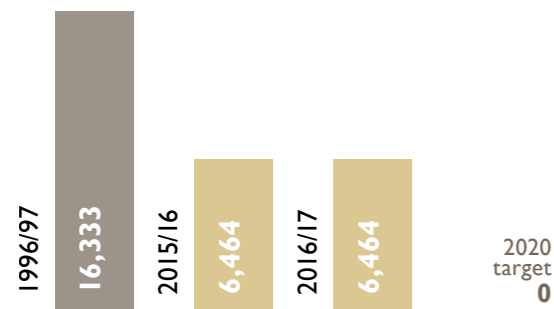


Our 2020 Challenges

greenhouse gas emissions

The City of Port Phillip is committed to achieving zero net greenhouse gas emissions in council operations and services by 2020.

Tonnes CO₂e



Notes on data

Council's 2016/17 net greenhouse gas emissions were 6,464 tonnes carbon dioxide equivalent (tCO₂e), including purchase of 4,490 carbon offsets. This is a 60 per cent reduction on baseline.

Emissions are attributed to gas and electricity use in Council facilities (51 per cent), electricity use in streetlights (38 per cent), vehicle use (10 per cent), and organic waste sent to landfill (1 per cent).

Council's actions in 2016/17 to reduce emissions

- Installed solar energy systems on three buildings, including the St Kilda Town Hall
- Completed energy efficiency works, including lighting and insulation upgrades, improved controls for lighting, heating and cooling systems and installed a new chiller at St Kilda Library
- Purchased 4,490 carbon offsets (National Carbon Offset Standard eligible)

What will Council do in the future to reduce emissions?

- Commence Energy Performance Contracting in 2017/18, which aims to reduce energy use in Council's largest buildings
- Continue investing in renewable energy and energy efficiency measures in Council buildings, including a solar energy system at South Melbourne Market
- Continue participating in a group purchasing model to drive investment in renewable energy

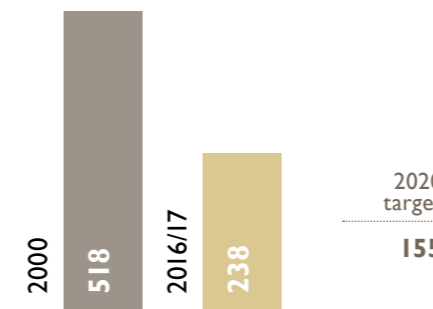
Further information

- Greenhouse Plan - Low Carbon City (2011).

potable water use

The City of Port Phillip is committed to minimising potable (drinking quality) water use to achieve and sustain a 70 per cent reduction in Council's potable water use by 2020 (based on 2000 levels of water use).

Megalitres (ML)



Notes on data

Total Council potable water use was approximately 238 ML in 2016/17. Use was down approximately 7.5 per cent on the previous year.

Park and open space irrigation made up approximately 118 ML of the total. The use of harvested stormwater from Elster Creek at Elwood Park helped reduce potable water consumption.

Council's actions in 2016/17 to reduce water use

- Increased use of stormwater harvested from Elster Creek for irrigation of Elwood Park
- Leak detection and repairs of irrigation assets
- Submetering at South Melbourne Market to better understand where water is being used

What will Council do in the future to reduce water use?

Implement stormwater harvesting and employ strategies to manage demand including:

- undertaking integrated water management planning, including partnering with Melbourne Water and others to review and implement relevant plans
- collaborating with the Cooperative Research Centre for Water Sensitive Cities to identify integrated water management opportunities
- building stormwater harvesting systems for open space irrigation
- implementing irrigation upgrades to key sports fields and parks to optimise water use.

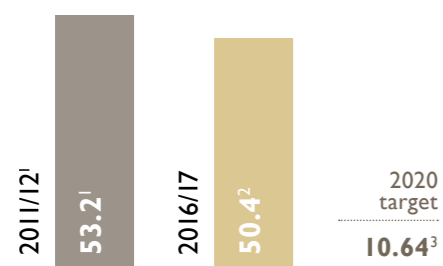
Further information

- Water Plan - Toward a Water Sensitive City (2010)
- Foreshore and Hinterland Vegetation Management Plan

waste

The City of Port Phillip is committed to minimising waste to achieve and sustain an 80 per cent reduction in Council's waste to landfill by 2020 (based on 1999 levels of waste).

Tonnes to landfill



Waste to landfill:

- ¹ 73 kg/FTE
- ² 61 kg/FTE
- ³ 10 kg/FTE

Notes on data

Council gathers data by conducting regular bin audits of Council facilities, and extrapolating data for the year. In 2016/17, the audit reported an average recycling rate across all Council sites of 43.2 per cent. This is an increased recycling rate by 14.4 per cent from the last audit in 2014. Food waste recycling and soft plastics have been introduced at a number of Council facilities which has assisted in the overall increase in recycling. Waste generated per full-time equivalent (FTE) staff member has significantly decreased by 9.3 per cent.

Council's actions in 2016/17 to reduce waste

- Introduced new role of the Project Director - Waste Futures, to develop a new Waste and Resource Recovery Plan, and drive waste innovation within Council
- Managed Council's worm farm system at St Kilda Town Hall, which processed 2.14 tonnes of organic waste throughout the year

What will Council do in the future to reduce waste?

- Complete the new Waste and Resource Recovery Strategy in 2018. This strategy will identify actions to reduce Council waste to landfill, including the management of organic waste.

contamination and pollution

The City of Port Phillip is committed to maintaining and increasing the health and quality of its natural assets.

Council reduces contamination and captures stormwater pollutants through installing Water Sensitive Urban Design (WSUD) systems, such as raingardens and stormwater harvesting. Stormwater pollutants such as sediment, nitrogen, pathogens and phosphorous are naturally filtered through plants in these systems and captured before they impact the health of Port Phillip Bay.

Council's Water Plan sets targets for stormwater pollutant reduction and is delivered through an annual WSUD program.

The projects delivered in 2016/17 collected 4.2 tonnes of total suspended solids, bringing the cumulative annual reduction potential to 44.1 tonnes per year. This is slightly under the 2016/17 target of 47.2 tonnes.

Council's actions in 2016/17 to reduce contamination and pollution

- Designed and installed six raingardens across the city in The Boulevard (Port Melbourne), Wright Street (Middle Park) and Byrne Avenue (Elwood)
- Worked with Parks Victoria, Melbourne Water and City of Melbourne on planning and feasibility for a stormwater harvesting scheme at Albert Park Lake

What will Council do in the future to reduce contamination and pollution?

- Design and implement stormwater harvesting projects throughout the city
- Continue to construct raingardens to reduce contaminants in water entering Port Phillip Bay
- Develop a Stormwater Asset Management Plan and continue to invest in drainage improvements
- Increase the permeability of ground surfaces across streets and public spaces

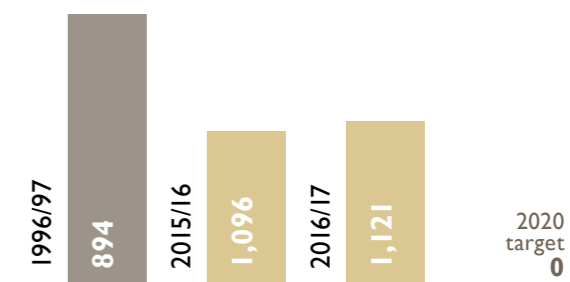
Further information

- Water Plan - Toward a Water Sensitive City (2010)

sustainable transport

The City of Port Phillip is committed to ensuring that it achieves a low emissions vehicle fleet.

Tonnes CO₂e



Notes on data

This year's figure represents 2.3 per cent increase in emissions over 2015/16 levels. The quantity of diesel purchased decreased by 2.4 per cent and the quantity of unleaded petrol purchased increased by 12.2 per cent. Increased emissions are attributable to an increase in frequency of street cleaning services and staff use of fleet cars.

Council's actions in 2016/17 to reduce fleet emissions

Council undertook a strategic assessment of the fleet policy to understand potential improvements in operational efficiency and fleet management.

What will Council do in the future to reduce fleet emissions?

- Undertake a comprehensive review of Council's Fleet Policy to include enhanced travel choices and lower emission technology
- Implement a fleet management database to better manage and report on use of fleet vehicles
- Offset vehicle emissions to deliver a zero emissions vehicle fleet

Further information

- Sustainable Transport Strategy (2011)

sustainable urban design and development

The City of Port Phillip is committed to ensuring that all Council buildings and facilities have minimal environmental impacts.

Council's actions in 2016/17 to improve sustainable urban design and development

- Established sustainable design performance benchmarks for projects in the design phase, including South Melbourne Life Saving Club, South Melbourne Community Centre, Liardet Street Community Centre, Peanut Farm Pavilion and JL Murphy Pavilion
- Prescribed a high-green standard requirement for the Stokehouse redevelopment. The project has achieved a 5 star Green Star certification under a 'design and as-built' rating

What will Council do in the future to improve sustainable urban design and development?

- Continue to strongly support the inclusion of sustainable design criteria in new building projects and major refurbishments. This will be done by revising and improving Council's Sustainable Design Strategy to ensure the standards align with, and exceed, best practice standards

Further information

- Sustainable Design Strategy (2013)

natural heritage

The City of Port Phillip is committed to maintaining and enhancing its natural heritage values, significant sites, and regional biodiversity and habitats (accepting that our environment does not end at our municipal boundaries).

Council's actions in 2016/17 to improve natural heritage

- Planted over 1,110 trees in streets and parks
- Completed replanting of 61,000 plants at Moran Reserve and Elwood Park
- Removed dead, dying and hazardous vegetation from Point Ormond Reserve and Tea Tree Reserve, Elwood during the second year of the Foreshore and Hinterland Vegetation Management Plan
- Planted indigenous trees on Turner Reserve Port Melbourne, Elwood Canal and Head Street Reserve
- Increased indigenous vegetated areas by 2,500 m²

What will Council do in the future to improve natural heritage?

- Continue to increase tree canopy cover based on canopy mapping
- Increase the number of trees in streets and parks
- Reduce impermeable surfaces through tree plots and garden beds
- Continue to implement the Foreshore and Hinterland Vegetation Management Plan priorities to improve biodiversity, plant quality and shade
- Complete an ecological biodiversity study, in partnership with the EcoCentre and local experts
- Become a Regional Catchment Strategy Partner with the Port Phillip and Western Port Catchment Management Authority

Further information

- Greening Port Phillip 2010-2015
- Foreshore and Hinterland Vegetation Management Plan

purchasing and procurement

The City of Port Phillip is committed to purchasing goods and services that have low environmental impact.

In 2016/17, 1.5 per cent of Council's purchases were recorded as sustainable. There are challenges in tracking the procurement of goods and services that have a positive environmental impact. We are in the process of reviewing our approach to tracking this information in order to gather more robust and accurate data.

Council's actions in 2016/17 to improve sustainable purchasing and procurement

- Reviewed the Procurement Policy to provide increased guidance and support for sustainable purchases and engaged sustainable procurement consultants to support the organisation to embed sustainability into procurement processes
- Reviewed the Investment Policy and Guidelines to prefer financial institutions that do not directly or indirectly support fossil fuel companies and limit investments in these institutions to the minimum required
- Became part of a consortium that won a grant to test the feasibility of the 'CO₂ Procurement Ladder'. The CO₂ procurement ladder is designed to leverage government's purchasing power to encourage suppliers of goods and services to reduce their CO₂ emissions

What will Council do in the future to improve sustainable purchasing and procurement?

Embed sustainability into Council's procurement, fleet and investment policies and practices through:

- considering sustainability in the design of specifications for all tenders over \$1 million
- requiring tenderers to include a Corporate Social Responsibility statement for tenders over \$1 million
- using external sustainable procurement specialists to improve sustainable purchasing outcomes
- enhancing reporting on procurement performance and compliance.

climate change

The City of Port Phillip recognises this critical global challenge and effort, and is committed to preventing further climate change and actively reducing regional greenhouse gas emissions.

Taking action on climate change also requires a commitment to creating assets that have the capacity to positively adapt to a changing climate, and to increasing our community's resilience to changing weather patterns.

Council's actions in 2016/17 to adapt to climate change

- Completed Bay Blueprint 2070, a guide to exploring regional coastal adaptation opportunities for Port Phillip Bay in response to climate change
- Continued involvement with the South East Council's Climate Change Alliance (SECCCA) and Inner Melbourne Climate Adaptation Network (IMCAN), and have been actively engaged in climate change themed events throughout the year
- Successfully advocated to Melbourne Water to establish the Elster Creek CEO forum to progress flood mitigation action across the Elster Creek Catchment

What will Council do in the future to adapt to climate change?

- Continue to advocate to the Victorian Government and key stakeholders for a Coastal Hazard Vulnerability Assessment
- Progress the partnership agreement with Victorian Government to formalise ongoing collaborative relationship on climate change
- Continue to collaborate with other councils and researchers to identify appropriate adaptation pathways to protect our coastal infrastructure, parks and buildings
- Develop a heat management plan to help 'cool the City'

Further information

- Climate Adaptation Plan - Climate Adept City (2010)



toward zero community targets

Council commenced the development of the Toward Zero Community Action Plan (now named the Sustainable City Community Action Plan), which will include an increased range of initiatives to support the community to take action on sustainability challenges from 2017/18 onwards.

We also commenced collecting data on community energy, waste and water usage which will be used to more accurately measure and report on community actions in future years.

Council supported 15 community and private Early Years Services to reduce water use and emissions and waste generation.

In May 2017 we partnered with the cities of Melbourne and Stonnington to deliver the 'High Life Expo', engaging and empowering apartment dwellers and owners to improve sustainability in their buildings.

Council invested \$237,000 to support the Port Phillip EcoCentre to deliver projects and programs that address a range of Toward Zero goals.

Greenhouse gas emissions

Council provided an information and advice service to the community that supported 103 residents and businesses to reduce their energy consumption.

We also delivered a solar panel and battery technology information night attended by 50 residents.

Water, contamination and pollution

Council developed a 'how-to' design guide for stormwater management in new developments. This will help the community improve stormwater quality, and to capture and reuse water within their properties.

In February 2017 Council provided a response to the Victorian Government's draft Port Phillip Bay Environmental Management Plan. We strongly support the development of an evidence based regional plan for the bay.

Waste

We updated our auditing practices for measuring community waste. This no longer includes waste dropped off at the transfer station. In 2016/17, kerbside bin waste diverted from landfill averaged 33 per cent. This compares to 34 per cent in 2015/16.

Council also worked closely with waste collection contractors to improve recycling of hard waste.

Seventy per cent of hard rubbish is now recycled compared to the state average of nine per cent.

To address the issue of recyclables being incorrectly placed in landfill bins, Council updated the recycling information guide and distributed this to all residents. We also developed a new waste information pack for owners corporations and building managers.

Council ran three waste education events focusing on food waste, with a combined attendance of 231 people, and provided advice and support to a further 133 community members about waste, worms and composting.

Advocacy activities included joining Zoos Victoria's campaign to avoid the use of balloons and calling on the Victorian Government to take action on plastic bags.

Council introduced a range of initiatives at South Melbourne Market to reduce waste to landfill from its stalls, including a worm farm, a new machine to recycle polystyrene, installation of water fountains and a GaiaRecycle machine, which converts food waste into fertiliser and water.

Sustainable transport

Council has made significant improvements to encourage sustainable travel and improve safety for pedestrians and bike riders including:

- improved 13 intersections across the City and improved public lighting along the Port Melbourne light rail shared path
- reduced speed limits from 50 km per hr to 40 km per hour on local roads in four new areas and from 60 km per hour to 50 km per hour on two major roads
- installed two kilometres of buffered on-road bike lanes, along with 31 new bike hoops
- endorsed a new Car Share Policy in July 2016 and installed 45 new on-street car share bays
- partnered with Public Transport Victoria and Yarra Trams to deliver combined accessible tram terminus, streetscape upgrade, wider footpaths and new pedestrian plaza on Acland Street
- supported nine primary schools to take part in Walk to School month, and thirteen schools to participate in Ride2School Day.

Sustainable urban design and development

In 2016/17, 75 per cent of eligible planning applications were assessed against Council's sustainable design requirements.

We commenced tracking of the Local Planning Policy (Environmentally Sustainable Development) to assess its impact on the environmental performance of new planning developments. This data, and data from other leading councils, is being reviewed by the Victorian Government with the potential for a future state-wide policy.

Council contributed to the Victorian Government's Better Apartments initiative, which provides for a state-wide standard to improve the liveability and sustainability of apartment living. These new standards have been incorporated into Council's planning scheme.

We also developed and distributed a fact sheet entitled 'Innovative Sustainable Design for Large-Scale Developments' to promote sustainable design to developers.

After receiving grant funding from Melbourne Water, Council commissioned an external review of the impact of key local planning policy aimed at improving stormwater management in new developments.

Climate change

We advocated to the City of Bayside to include flood mitigation and reduce pollution of the Elster Creek catchment as part of the Elsternwick Park North redevelopment. We will continue to strengthen the relationship with our neighbouring council and identify further opportunities to collaborate.

Council partnered with CLIMARTE to deliver a program of public art aimed at exploring our perceptions of what it is to be living during a time of significant changes to our environment. The artist team, Cave Urban created a bamboo, light and sound installation called Regenesi in Acland Plaza.

We facilitated an architecture and urban design exhibition, 'Swamped', which focused on the impact of climate change and urbanisation on the Elster Creek catchment. The exhibition explored possible futures for Elwood as sea levels rise, and storm surges and drought threaten to become more common.

Net loss of natural heritage

Council worked with community members to plant 25,000 indigenous plants across the city. We continue our partnership with the St Kilda Indigenous Nursery Cooperative to encourage residents to plant local indigenous species.

Sustainability in Fishermans Bend

Council supports the Victorian Government's commitment to achieving a 'Green Star - Communities' rating for Fishermans Bend. We provided feedback on the Fishermans Bend Draft Framework Plan including proposed planning controls. We will continue to advocate for innovative best-practice solutions to support delivery of the Fishermans Bend Vision of a 'thriving place that is a leading example for environmental sustainability, liveability, connectivity, diversity and innovation'.



Case studies

case studies



Waste at South Melbourne Market

Staff and stallholders at South Melbourne Market have been working hard to reduce the amount of waste going to landfill from its stalls and visitors.

Large-scale worm farms turn green and organic waste into garden fertiliser. In 2016/17, these worm farms turned 962 tonnes of waste into natural fertiliser, saving the equivalent of 1,827 tonnes of CO₂.

A 1,200 kg capacity GaiaRecycle machine was installed at the Market in February 2017. This machine processes food waste such as meat and fish products that can't be put into the worm farms. The machine dehydrates and sterilises the waste and produces a nutrient-rich product that can be used as fertiliser. It also produced clean grey water that can be used for cleaning, toilet flushing and irrigation. This machine processes approximately 8.4 tonnes of waste each week.

SecondBite collected almost 24 tonnes of fresh food from the Market in the last financial year and redistributed it to people in need. This mainly consisted of vegetables and fruit and equated to nearly 50,000 meals.



A polystyrene compressor converts polystyrene boxes into compacted blocks. These are then collected and processed into plastic products such as office supplies and coat hangers, or converted to hollow foam bricks and used as an insulating building material.

Council installed three solar powered compacting bins around the market. The bins compact the waste to a sixth of its original size, provide real time data and send a message to the collector when it is ready to empty. This reduces the collection of waste by approximately 75 per cent, saving time, money and transport emissions as well as reducing the volume of waste to landfill by nearly 85 per cent.

Approximately 10,800 litres of oil was collected from the Market in 16/17. The majority of this oil is used in biodiesel. Fifteen tonnes of glass was crushed ready to be recycled into new glass bottles or in road construction materials. New water stations were installed, which can be used to refill water bottles and saves visitors and workers from buying single use plastic water bottles.

These initiatives help to reduce Greenhouse Gas Emissions, pollutants leaching into soil and avoids emissions from transporting waste.

Acland Street Upgrade

Works to revitalise the Acland Street streetscape and upgrade the tram terminus were completed in October 2016. This included an upgraded, accessible tram stop and a dual track terminus, which improves the safety, comfort, capacity, reliability and accessibility of one of Melbourne's busiest tram routes.

The tram works provided Council with the opportunity to revitalise the streetscape of Acland Street, and include wider footpaths, improved pedestrian crossings and a new pedestrian plaza.

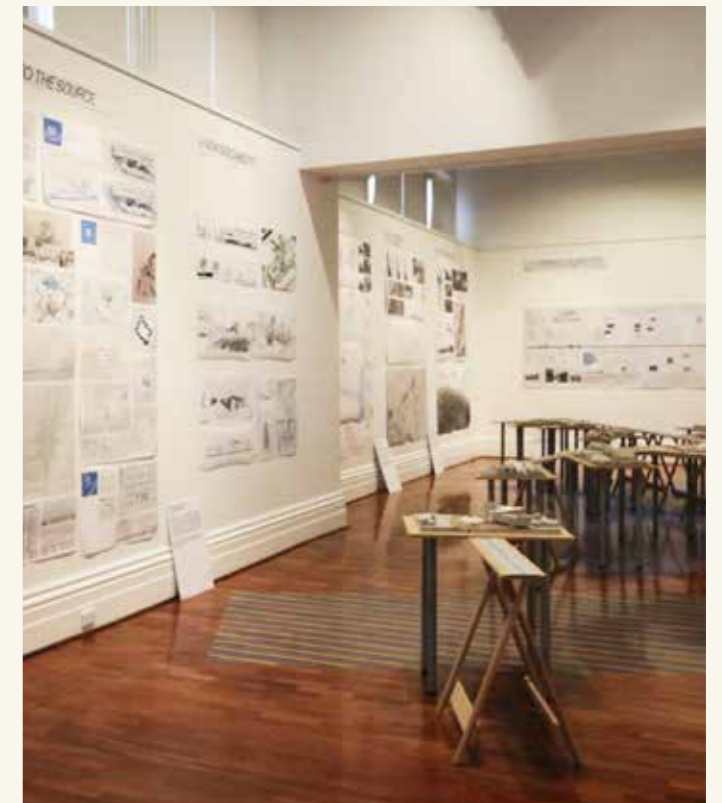
The works were delivered through a partnership between Public Transport Victoria, the City of Port Phillip and Yarra Trams.



Elster Creek Catchment

The heavily urbanised Elster Creek catchment runs through the cities of Kingston, Glen Eira and Bayside, before entering Port Phillip at Elwood. The catchment has many complex challenges and reducing flood impact requires collaboration and innovative thinking across multiple organisations including state authorities and researchers.

The Cooperative Research Centre for Water Sensitive Design and Monash Art, Design and Architecture students held the exhibition SWAMPED in the St Kilda Gallery during March 2017. The multi-disciplinary exhibition speculated on the impact climate change and rapid urbanisation may have on the Elwood area and what possible future could be conceived to ensure survival of the suburb in a non-traditional way.





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