



SCIENCE AND  
INDUSTRY  
ENDOWMENT  
FUND



# STEM Community Partnerships Program

## Canterbury Bankstown local scenario

### Waste management

Waste management is important for the health, safety, and wellbeing of residents and the environment. Over 2018-19, NSW households generated a total of 3.66 million tonnes of domestic waste, sending 1.94 million tonnes of residual waste to landfill, with the remaining 1.72 million tonnes being recycled.<sup>1</sup> Most of us are aware of how important it is to recycle and correctly dispose of rubbish to ensure reductions in landfill and to avoid contamination of our environment.

There are many programs designed to encourage us to dispose of waste thoughtfully and correctly – for example, the Return and Earn program is one such initiative. This program started out as a litter reduction initiative and by 2020, NSW had collected more than 4 billion containers in less than two years.

As part of City of Canterbury Bankstown's Smart CBCity project, Council has introduced the Closing the Loop on Waste initiative. This initiative introduces technology to help improve waste management and customer service by changing the way residents receive communication on waste management issues.

In the Canterbury Bankstown area, one of the most common waste issues reported to Council is overgrown properties, especially during the warmer months. Overgrown property can pose a risk of harbouring vermin, pests and pose a fire danger. These materials can also enter the stormwater drains and pollute the area's waterways.

Waste and pollution are not always tangible and during winter months in the area, excess smoke from the use of solid fuel heaters (wood fire heaters) is a common source of air pollution.<sup>2</sup> The use of these heaters has become more prevalent in recent years due to a rise in both energy costs and rise in popularity of these heaters.

How your Council tackles the complexity of this issue impacts you and your community, now and in the future.



City of Canterbury Bankstown– Air Pollution

### Your task

Your task is to use the information above and resources provided below as a start to identify a local problem and design a STEM-focussed solution.

(Question, Design, Explore, Communicate)

## Resources

### CSIRO research

- Circular Economy and Waste Management, CSIRO, December 2020 <https://www.csiro.au/en/Research/Environment/Circular-Economy>
- Circular economy roadmap for plastics, glass, paper and tyres [https://www.csiro.au/~media/News-releases/2021/circular-economy/20-00205\\_LW\\_CircularEconomySummary\\_WEB\\_210119.pdf](https://www.csiro.au/~media/News-releases/2021/circular-economy/20-00205_LW_CircularEconomySummary_WEB_210119.pdf)

### Reports

- Too Good To Waste, NSW EPA February 2019 <https://www.epa.nsw.gov.au/publications/recyclereuse/18p1061-too-good-to-waste-circular-economy-discussion-paper>
- EPA 2014b, NSW Waste Avoidance and Resource Recovery Strategy 2014–21, NSW Environment Protection Authority, Sydney [www.epa.nsw.gov.au/wastestrategy/warr.htm](http://www.epa.nsw.gov.au/wastestrategy/warr.htm)
- Closing the loop on waste, <https://www.infrastructure.gov.au/cities/smart-cities/collaboration-platform/Closing-The-Loop-on-Waste.aspx>
- Tunnel Air Quality M5 and M8 <https://www.linkt.com.au/sydney/using-toll-roads/about-sydney-toll-roads/westconnex-m8/tunnel-air-quality>
- Environment - Environmental health, Canterbury Bankstown Council <https://www.cbccity.nsw.gov.au/environment/environmental-health/air-pollution>

### Articles

- Eyes on Canterbury-Bankstown, Waste Management Review, October 2020 <https://wastemanagementreview.com.au/eyes-on-canterbury-bankstown/>
- Australian city lays the groundwork for national digital waste management system, SmartCitiesWorld, March 2019 <https://www.smartcitiesworld.net/news/news/australian-city-lays-the-groundwork-for-national-digital-waste-management-system-3905>
- Sydney council to use artificial intelligence to spy on dodgy recyclers, News.com.au, August 2021 <https://www.news.com.au/national/nsw-act/news/sydney-council-to-use-artificial-intelligence-to-spy-on-dodgy-recyclers/news-story/10a184c3d80fbe8f68c1d16f6d531f47>
- Meet the game-changing women fighting the war on waste, GovNews, March 2020 <https://www.govnews.com.au/meet-the-game-changing-women-fighting-the-war-on-waste/>