Let’s Put Litter in its Place

Guidelines for Best Practice

June 2018

Figure 1 4 way recycling and rubbish bins at Queenstown Lakes

Criteria for Selecting Location and Design of Bins

Base Line Data for consideration

Criteria	Details
Approach to waste collection: *The service may have a number of goals with regards to waste and litter, as well as highlighting a commitment to resource recovery.*	
What is the goal of the waste collection service	☐ Maximise capture of recyclable materials ☐ Reduce litter ☐ Limit contamination of recyclable materials ☐ Other _____
Do you think that bins are the best solution to your goals?	☐ Yes ☐ No
If bins are not the best solution, what other approaches have you used (e.g. encouraging people to take their waste home)	
What is the rough number of people that the bins serve?	
Do the bins have to deal with significant seasonal variation; if Yes how do you deal with higher seasonal user numbers (e.g. additional temporary bins)?	☐ No ☐ Yes – higher numbers are catered through: _____
What is the cost of purchasing and maintain the bins?	$ _____ per _____
What is the cost of the collection service?	$ _____ per _____

Current "Binfrastructure"

Type of Bin: Bins in New Zealand need to be able to withstand a range of extreme weather conditions, as well as considerable wear and tear. People are reluctant to use bins that are dirty or in disrepair.	
Do you use one standard type of bin? [If no please tick all that apply in subsequent sections]	☐ Yes ☐ No
What material is the bin constructed from?	☐ Steel ☐ Aluminium ☐ Wood ☐ Fibreglass ☐ Plastic ☐ Stainless Steel ☐ Other _____
Is the bin constructed from recycled material?	☐ Yes ☐ No ☐ Don't know
What is the type of bin?	☐ Tilt bin ☐ Dual Webber recycling/ waste bins ☐ Civic bin ☐ Esplanade bin ☐ Recycling pod ☐ Recycling centre ☐ Goliath bin ☐ Raglan bin ☐ Heritage recycling unit ☐ Bintainer ☐ Mayfair bin ☐ Eco-bin ☐ Recycling station

	☐ Event bin ☐ Don't know ☐ Other _____
How are the bins installed	☐ Fixed to the floor ☐ Mounted on a post
How often do bins need to be replaced?	☐ Less than two years ☐ Every three or four years ☐ After five years or more

Choice of Bin Design

Bin collection: Servicing bins can be time consuming and costly, particularly if the bin design and placement does not match the specific requirements of use and locality. The more convenient the system the higher the participation rates and capture of recyclables.	
What is the size of the bin?	☐ 60 litres or less ☐ 61 litres to 100 litres ☐ 101 litres to 120 litres ☐ 121 litres to 240 litres ☐ > 240 litres
Do you use smart bins that compact waste; if yes please provide details?	☐ No ☐ Yes – the following smart bins are used: _____
How frequently does the bin need to be emptied?	☐ Twice a day or more ☐ Daily ☐ Twice a week or more ☐ Weekly ☐ Less than weekly
How full are bins when they are emptied?	☐ Full ☐ 75% or more

	☐ 50 to 74% ☐ Less than 50%
How is the waste stored and emptied?	☐ Liner ☐ Removable inner bin section ☐ Wheelie bin ☐ Other _____
Are the bins secured using latches?	☐ Yes ☐ No
Do your bins suffer from any of the following?	☐ Corrosion from rain, sunlight or sea spray ☐ Damage from vandals ☐ Theft ☐ Issues with cleaning from food spills ☐ Animal pests
How many different compartment/ bins are there for different recyclable material types?	☐ General waste bin only ☐ General waste and separate commingled recyclable waste ☐ Separate recyclable materials ☐ Glass ☐ Paper ☐ Plastics
Do your bins allow for cigarette butts?	☐ Yes ☐ No
How is the collection service run?	☐ In conjunction with kerbside recycling service ☐ In conjunction with waste collection service ☐ Entirely separate collection service
How are the bins serviced?	☐ Routine servicing at specific times ☐ Regular checks to gauge how full bins are
Are the bins located in place that allows for vehicular access?	☐ Yes ☐ No ☐ Partially
What sort of areas are the bins located in?	☐ Communal area ☐ Tourism hotspot ☐ Nature area ☐ Near shops

	☐ Near toilets ☐ In car parks ☐ Outside schools ☐ Playground ☐ Close to bus stop ☐ Other _____
What is the ratio of recycling bins to waste bins?	☐ More than 1 recycling bin to 1 waste bin ☐ 1 recycling bin to 1 waste bin ☐ 1 recycling bin to 2 waste bins ☐ 1 recycling bin to 3 or more waste bins
What is the typical distance between bins?	☐ Less than 50 metres ☐ 50 metres to 99 metres ☐ 100 metres or more

Awareness & Behaviour Change

Awareness and behaviour change: *The bins can also act as promotional vehicles to achieve awareness*	
Do the bins use international colour codes for different material types?	☐ Yes ☐ No
Do the bins have clear text that states what materials can go in the bin?	☐ Yes ☐ No
Do the bins use simple pictures showing what can go in the bin?	☐ Yes ☐ No
Do the bins have any logos?	☐ Ronz symbols ☐ Standard recycling loop ☐ Love NZ ☐ Be a tidy Kiwi ☐ Council logo
Is there any additional information presented to people as to why they should recycle; If yes please provide details?	☐ No ☐ Yes – the following information is provided: _____
Do you use any other promotional media about recycling (e.g. website, newspapers)?	☐ No ☐ Yes – awareness raising is achieved through:

	_____
What are the contamination rates in the bins?	☐ ≤ 5% ☐ 6 to 10% ☐ ≥ 11%
What materials are the main contaminants?	
Do the bins have different aperture sizes to reduce contamination?	☐ Yes ☐ No

Basic Literature Review: Best practice bin design

Analysis conducted by Wellington based urban designer Michael Lowe on behalf of Wellington Council.

The Pilot Regions Project Team working on the design of the new "binfrastructure" incorporated five key principles from Basic Literature Review:

	Action Points	Literature Conclusions	Publication	Author
1	Use smaller openings on recycling bins than waste bins	People are more likely to throw rubbish in bins with largest lid hole / openings. The likelihood of contamination is reduced if recycling bin lids have smaller openings.	10 Tips for Designing Successful Public Space Recycling Programs November 2013	Keep America Beautiful
2	Locate recycling bins and waste bins together in clusters	Coupling waste and recycling bins immediately together (within arm's length not nearby) lowers risk of contamination as people will usually use the closest bin regardless of its label		
3	Maintain/service receptacles and surrounding public space areas more frequently so they appear free of litter. (NB waste bins should reach a point where they are overflowing.	People litter less when in environments where no litter is present. Maintaining areas to be free from litter decreases the likelihood someone will litter.	A Focus Theory of Normative Conduct. Recycling the Concept of Norms to Reduce Littering in Public Places 1990	Robert B Ciadini and Raymond R Reno (Arizona State University) ; Carl A Kallgren (Pennsylvania State University, Behrend College)
4	Strive for a 1.1 ratio of recycling bins to waste bins	Proximity to a recycling centre / bin positively affects recycling volumes	Who recycles and When? A review of personal and situational factors. Journal of Environmental Psychology 1995	Wesley Shultz, Stuart Oskamp and Tina Mainieri
5	Consider placing recycling bins in the middle of two rubbish	Book ending a recycling bin in between two rubbish bins may lead to less contamination as some people will put rubbish in the first bin they come to, regardless of signage.	Better practice Guide for Public Place Recycling May 2005	Department of Environment & Conservation NSW +A1:E10

Features:

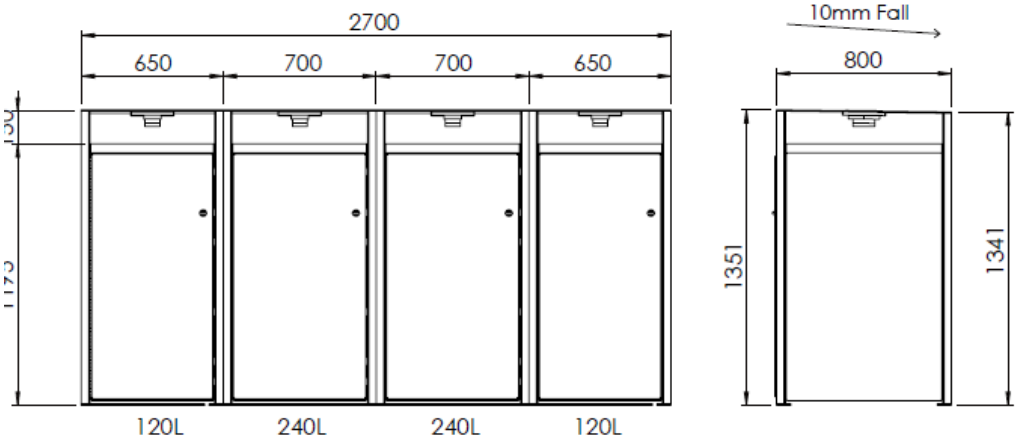
1. Different size opening for recycling bins
2. Locate recycling bins and rubbish bins together
3. Manage overflowing bins through introduction of eyefi smart technology to advise collector when bins are nearing fill level.
4. Ratio of recycling bins to rubbish bins
5. Bookend the rubbish bins around the recycling bins to reduce contamination.
6. Each bin houses a
7. Each bin houses a wheeelie bin for ease of collection.

Other features include:

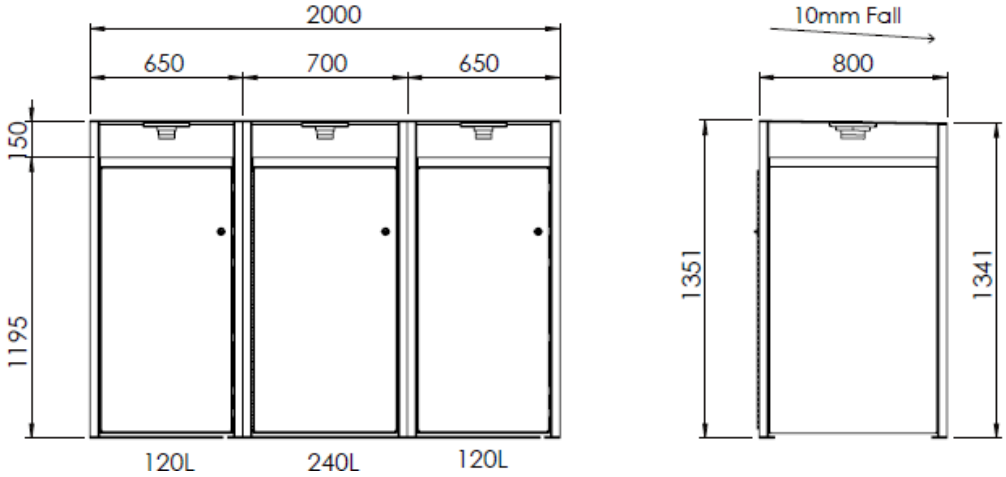
- Eyefi technology
- Cameras in recycling bins
- Signage in multiple languages
- Use of Waste Mins approved colours for bins
- Selection of bins i.e. use of glass only bins to match kerbside systems operated in region.
- Use of RONZ symbols on roof of bins

Optional Sizes for use with Let's Put Litter in its Place campaign

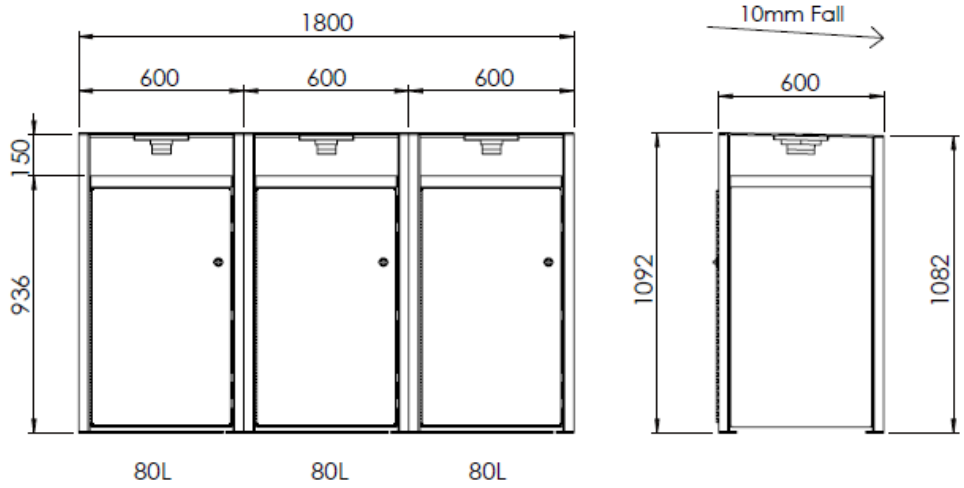
4 Way Bins: Waste; Glass; Recycling, Waste



3 Way Bins: Waste; Recycling, Waste



3 Way bins: Waste; recycling; waste – smaller size @ 80 litres. Also available as 4 way bin composition: Waste; Glass; Recycling; Waste



Additional Design Features 2018 Pilot Bins

1. Sloping roof to prevent people putting rubbish on top of bin
2. Removal of perspex from apertures as this has been found to be difficult to clean
3. Framework and panels to be powder coated in the colours for the bins (as opposed to a coloured shroud around the bins)
4. Cigarett Butt attachment to the waste bins.