



MERRI-BEK GLASS COLLECTION POINTS: MONITORING & EVALUATION

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Project Overview

Reground were engaged by Merri-bek City Council to facilitate the establishment of 29 glass collection points throughout the municipality. These points were installed across May and June of 2023 and have been collected weekly since the first week of July, 2023.

Following the establishment of each collection point, Reground were engaged to undertake regular monitoring and evaluation of each site in order to ensure that the collection points are meeting the needs of residents. Reground also undertook an additional survey of residents to better understand their needs and engagement with the newly established collection points.

This report contains a summary of the data captured through the program alongside quantitative and qualitative reporting on resident behaviours and attitudes.

Executive Summary

The data from ten weeks of monitoring each of the 29 glass collection points indicates that glass collection points are a feasible solution for properties that are deemed to lack space to store additional bins. Contamination rates were acceptably low and utilisation rates were high. Learnings are highlighted and recommendations given to improve both existing glass collection points and future ones.

Method

1. Visual Audits

The following data was collected via visual audits taking place over 10 weeks, commencing from July 10th.

The collection points that were serviced by Citywide (Nunan Village, Mill Place, Roberts Village, Blythe Street Village, Mannalack Street & Railway Place, Albert Village and Miller Street Village) were audited by the Reground team on the day before their collection.

The remaining collection points were photographed by their respective collection partner prior to being emptied. These photos were sent to Reground to be processed and the data input into an excel workbook specifically designed for this monitoring and evaluation report. The auditing frequency was weekly from weeks one to five and fortnightly from weeks six to ten.

The visual audits recorded the percentage fullness of each bin as well as any contamination present. Contamination levels were categorised into one of the following:

- **Not presented** - no contaminants were visible
- **Minimum** - one or two contamination items were present
- **Moderate** - three to five contamination items were present
- **Hazardous** - a majority of the items were contaminants

Image 2: Glass collection point at Ivory Way servicing Roberts Village



Image 3 (left) shows a bin without contamination; image 4 (right) shows moderate contamination.



2. Survey

At the end of August (five weeks after the first collection) Merri-bek City Council distributed an online survey to each property serviced by one of the glass collection points. This survey captured data on resident's usage of the collection points as well as public attitude towards them, alongside demographic data. This data helped comprise our recommendations.

Example question from survey:

Is the collection point in a good location for your household?

Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
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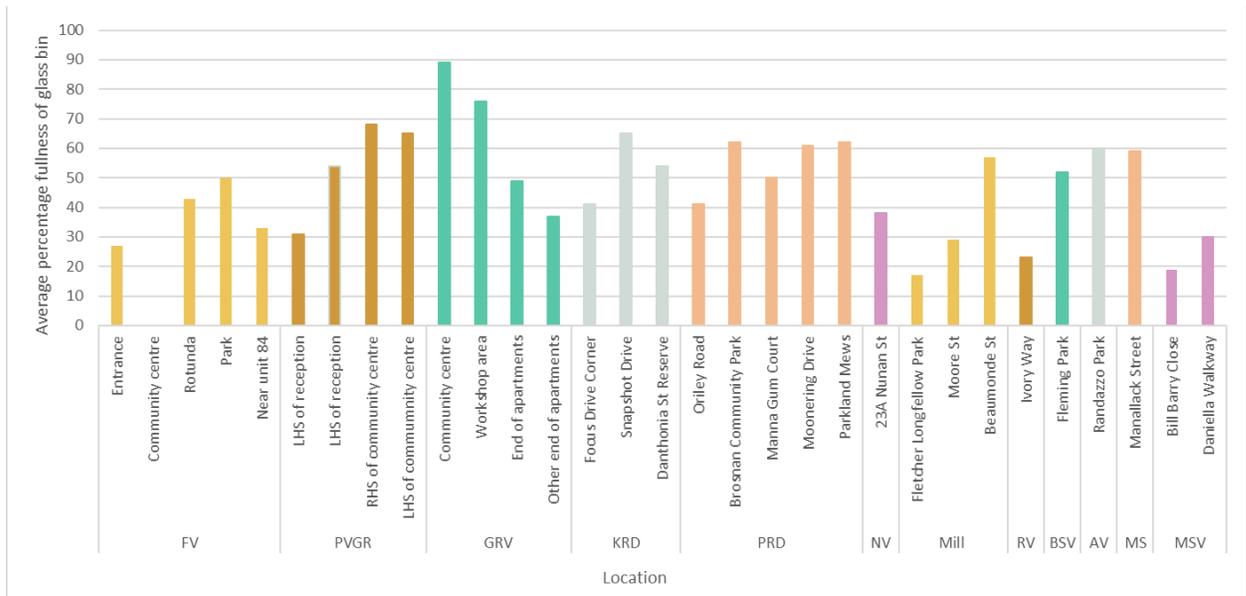
Data & Findings

1 Visual audit data

1.1 Utilisation rate (overall)

The following graph depicts the average percentage fullness (utilisation rate) of each collection point, calculated by combining the average fullness of each bin within each point across the ten weeks.

Figure 1: Average percentage fullness of each collection point across the ten weeks (see [Appendix: Table 1](#) for the full listing of collection areas and sites)



Note that data for the collection point at Federation Village (FV) community centre is unavailable as photos were not provided.

1.2 Changes in utilisation rates

The following graphs illustrate the change in utilisation from weeks 1-5 and weeks 6-10. Note that the large increase in utilisation of FV points (Rotunda, Park & Unit 84) is due to these points being introduced at the end of August.

Figure 2: Average percentage fullness of each collection point (weeks 1-5)

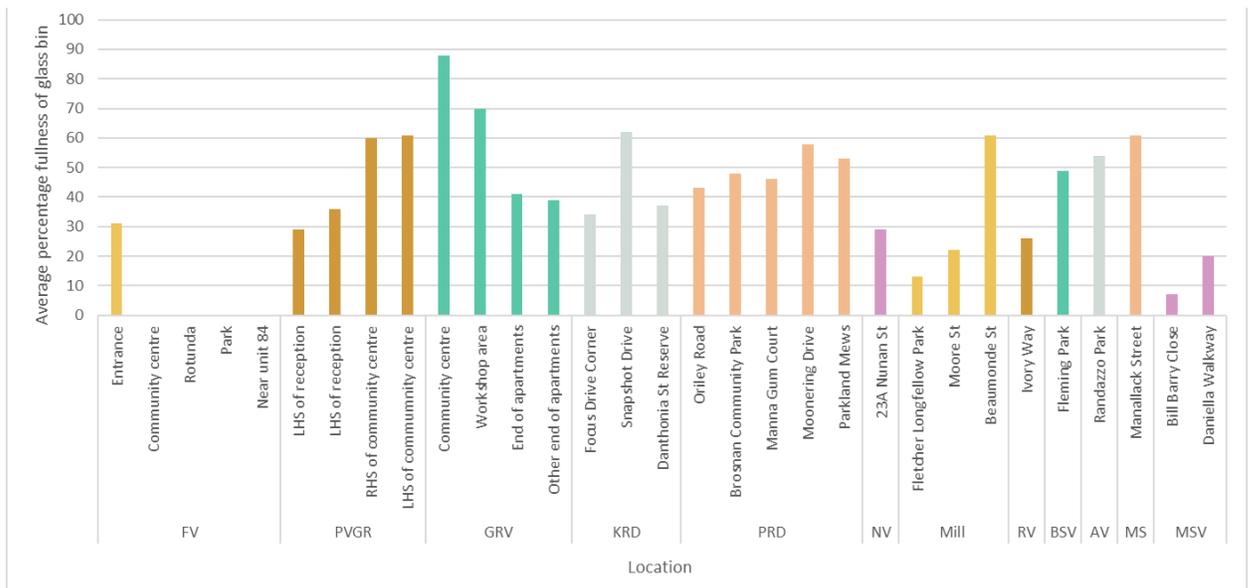
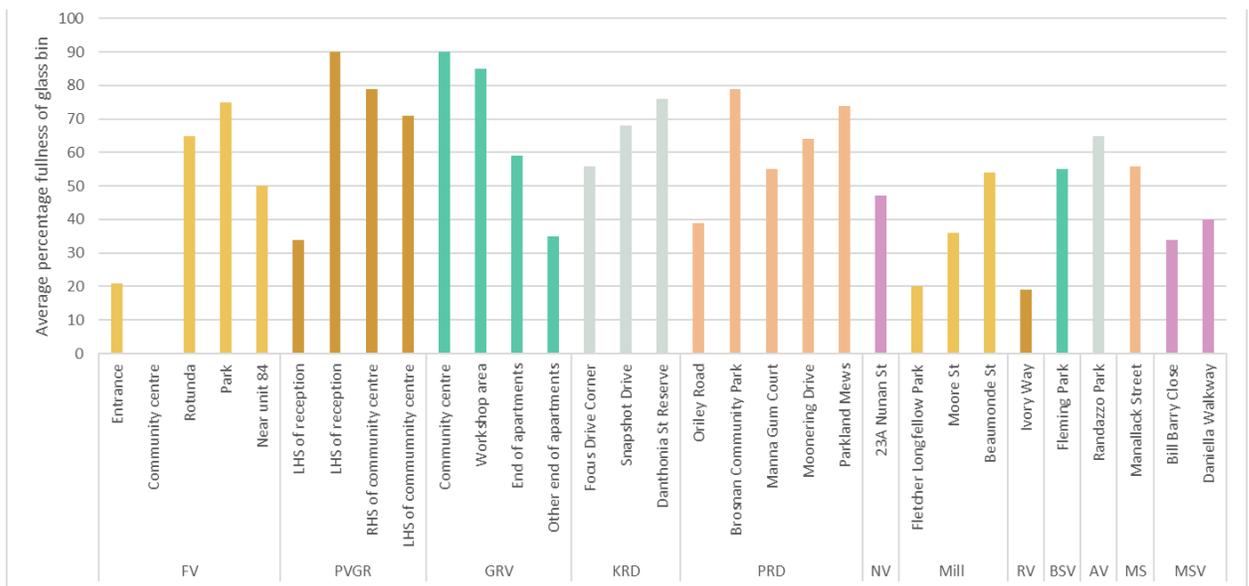
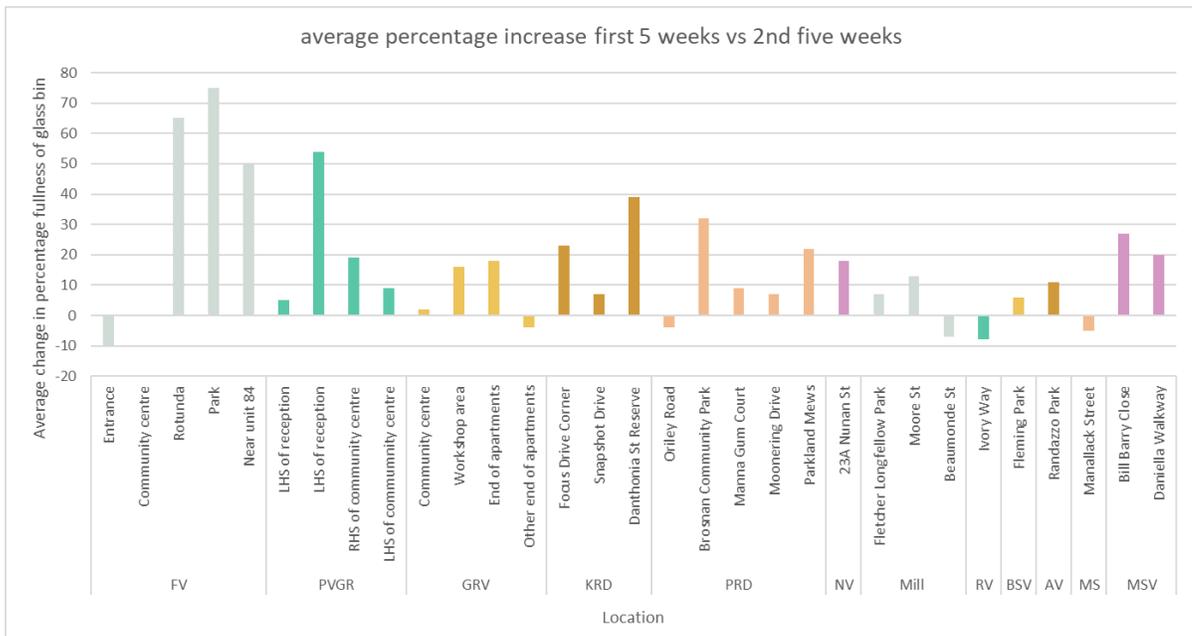


Figure 3: Average percentage fullness of each collection point (weeks 6-10)



1.3 Percentage increase in utilisation rates

Figure 4: Percentage change in utilisation rates from the first five weeks to the latter five weeks of monitoring.

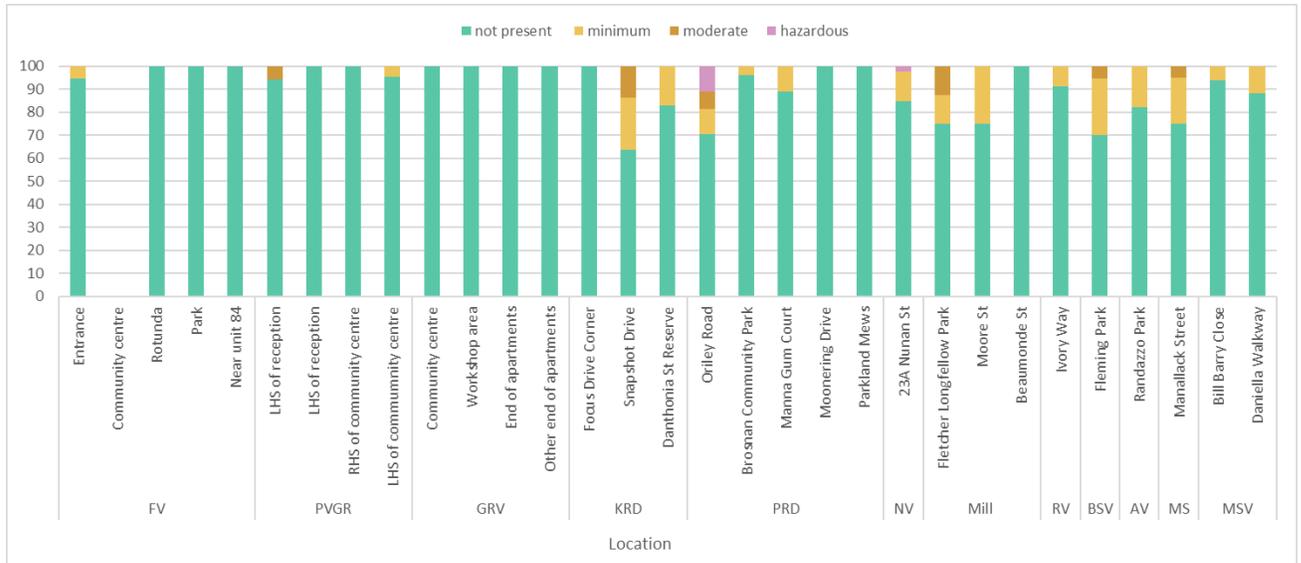


It was found that the majority of collection points increased in their utilisation rates, assessed by bin fullness at time of visual audit, across the ten week monitoring period. Figure 4 highlights how the difference was as large as 55% for some points such as Pascoe Vale Garden Retirement Village (PVGR).

1.4 Contamination rates

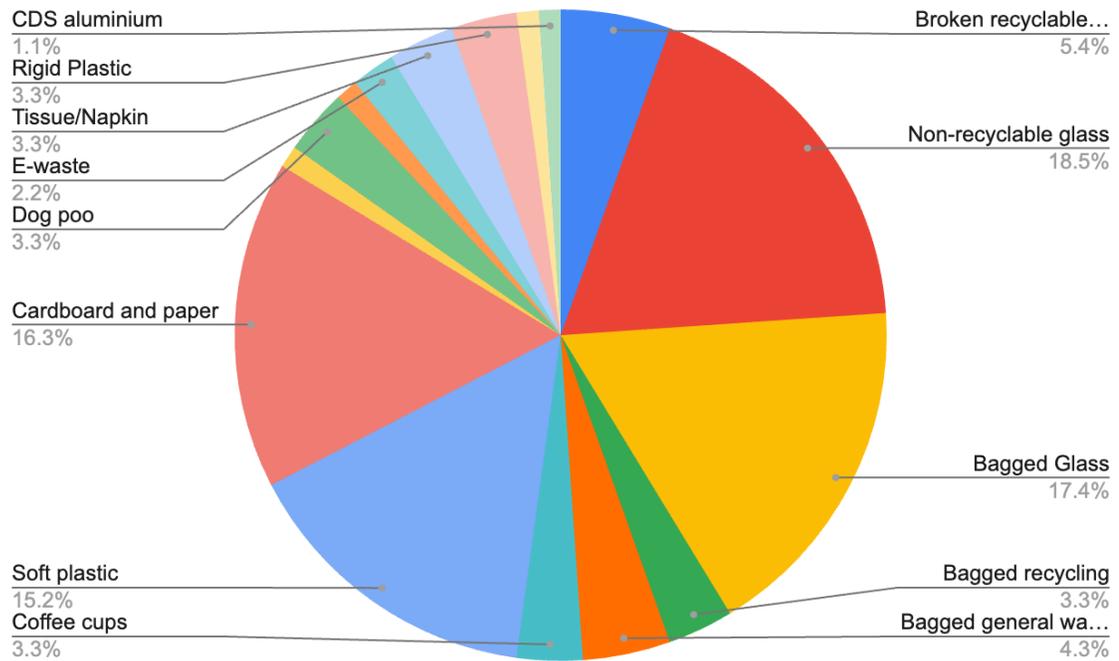
Figure 5: Percentage of contamination at each collection point across the ten weeks

Overall contamination rates were very low, with the outlying sites being Kodak Village: Snapshot Drive, Pentridge Village: Oriley Road, and Blythe Street Village: Fleming Park.



1.5 Breakdown of contaminants

Figure 6: Profile breakdown of contamination items.



The majority of contaminants were non-recyclable glass (as defined by Merri-bek City Council's guidelines on the types of glass that cannot be recycled) followed closely by bagged recyclable glass and then boxes of cardboard or paper. Soft plastic contaminants were often seen in the form of beer bottle wrappings.

2.0 Survey responses

Below are the results of just under 200 responses to a survey sent by Merri-bek City Council to each property being serviced by a newly established glass collection point.

Responses	196
Age	3 between 18-24 34 between 25-34 73 between 35-44 37 between 45-54 23 between 55-64 14 between 65-74 9 over 75
Type of dwelling	32 Single-Unit Dwellings (SUDs) 151 units or townhouses 9 apartments
Rent or own	145 owner-occupiers 47 renters
Number of people in household	30 live alone 82 live with 2 people 50 live with 3 people 41 live with 4 or more people

2.1 Utilisation of glass collection point

Figure 7: Percentage of respondents using the collection point (196 total responses)

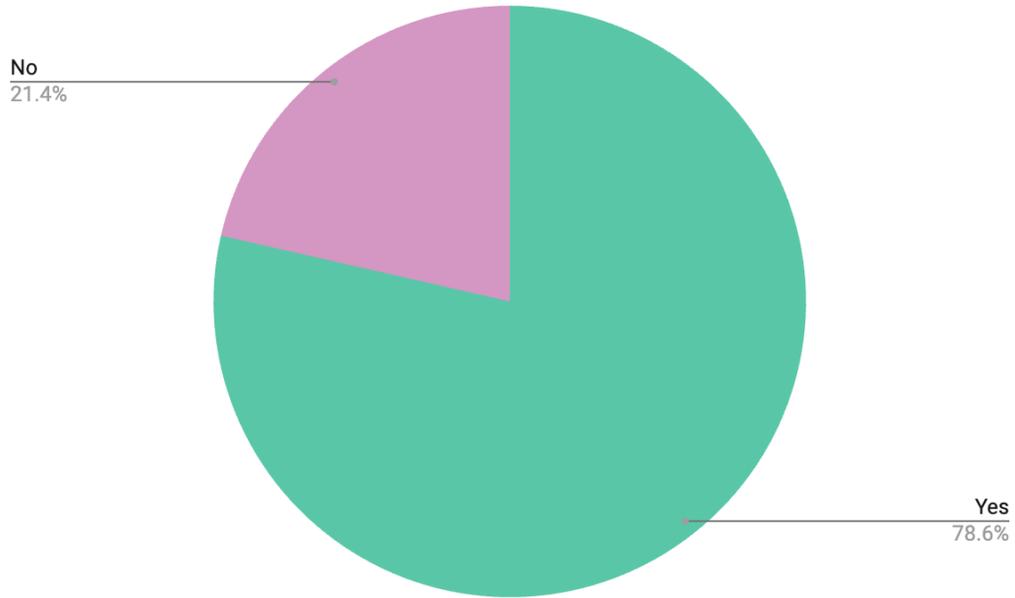


Figure 8: Reasons for not using collection point (42 total responses)

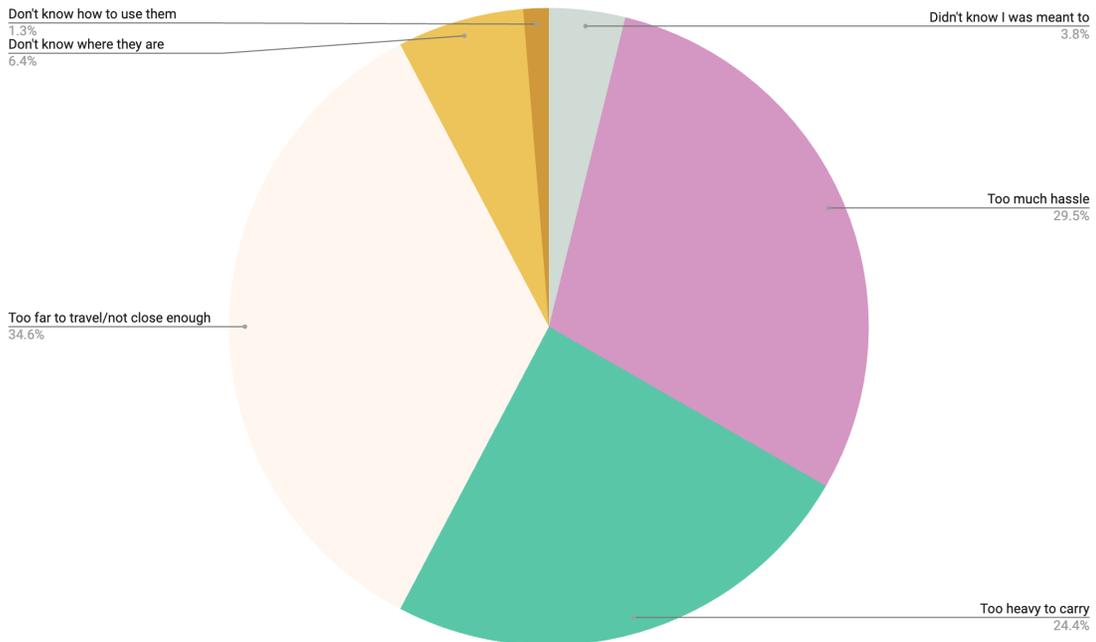
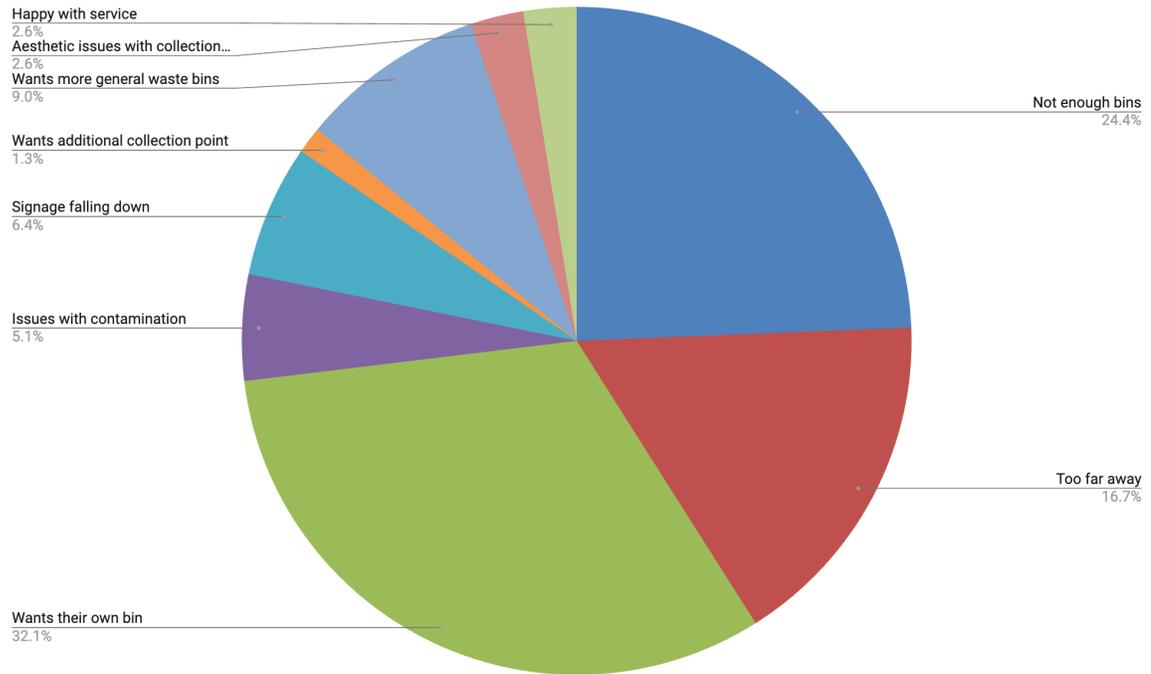


Figure 9: Reasons for respondents disagreeing with any of the questions presented in the survey (78 total responses)

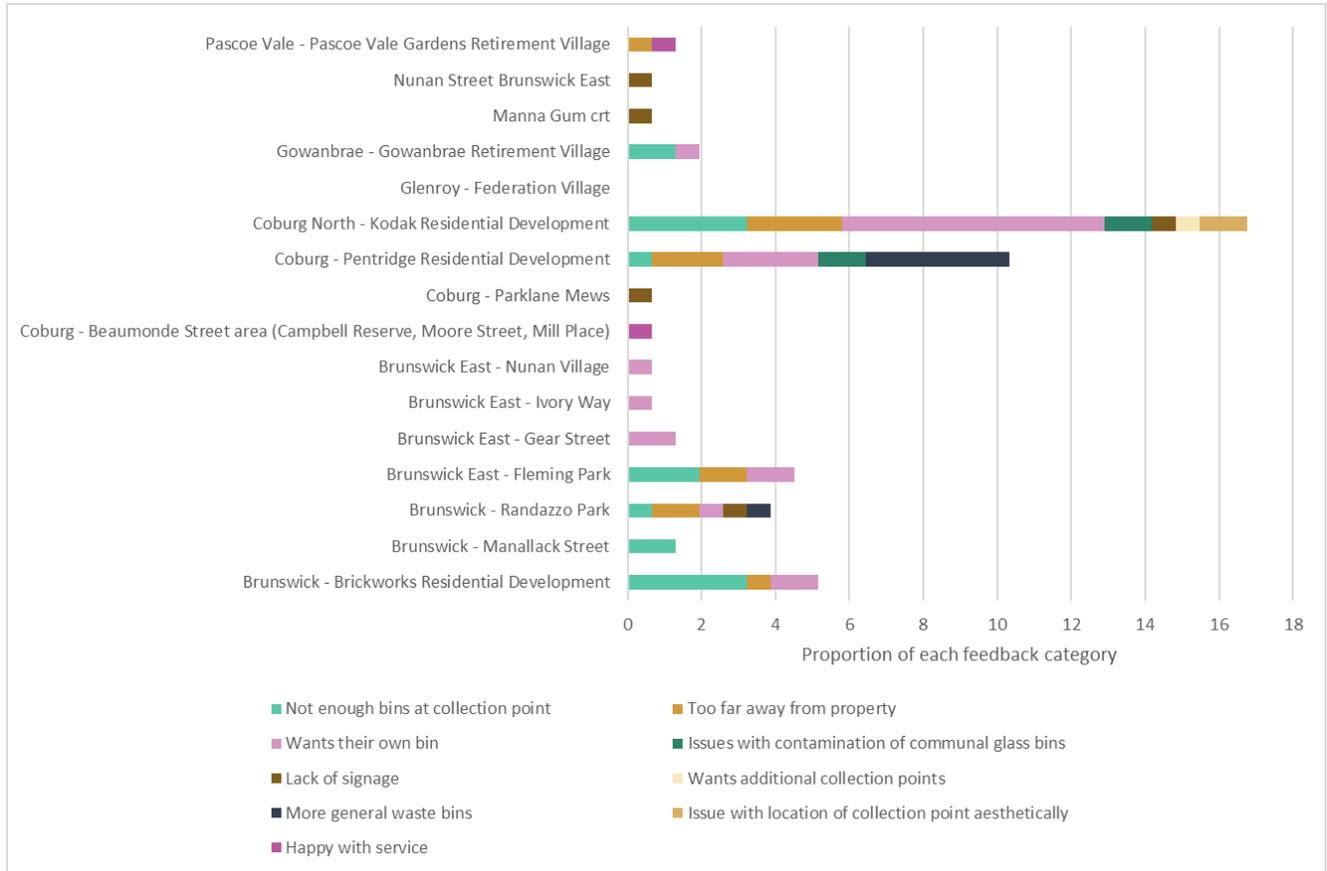


If the respondents selected disagree/strongly disagree to any of the questions they were presented with a free text box to explain why. These answers were then grouped together into overarching reasons for their current dissatisfaction with the glass collection points.

Wanting a personal glass bin was the most common reason for dissatisfaction. Of those respondents who reported a desire for a private bin, some expressed dissatisfaction with the selection process for shared vs private bins; some stated that they have ample space for a personal glass bin. Other complaints stated that the collection point did not have large enough capacity for the number of residents serviced (note that utilisation figures do not support this) or simply being too far away/inconvenient from their property.

Feedback presented within Merri-bek's 'Recycling Operations Response WIP' were consistent with these complaints.

Figure 10: Breakdown of reasons for complaints by collection point (78 total responses)



The majority of complaints originated from Kodak Residential Development (KRD) and Pentridge Residential Development (PRD.) At KRD, the majority of complaints were around residents wanting their own glass bin. In PRD the majority of respondents wanted additional general waste bins installed at the collection point, citing that the current bin was often at capacity.

Figure 11: Survey results: Are the bins a reasonable distance from the household (154 total responses)

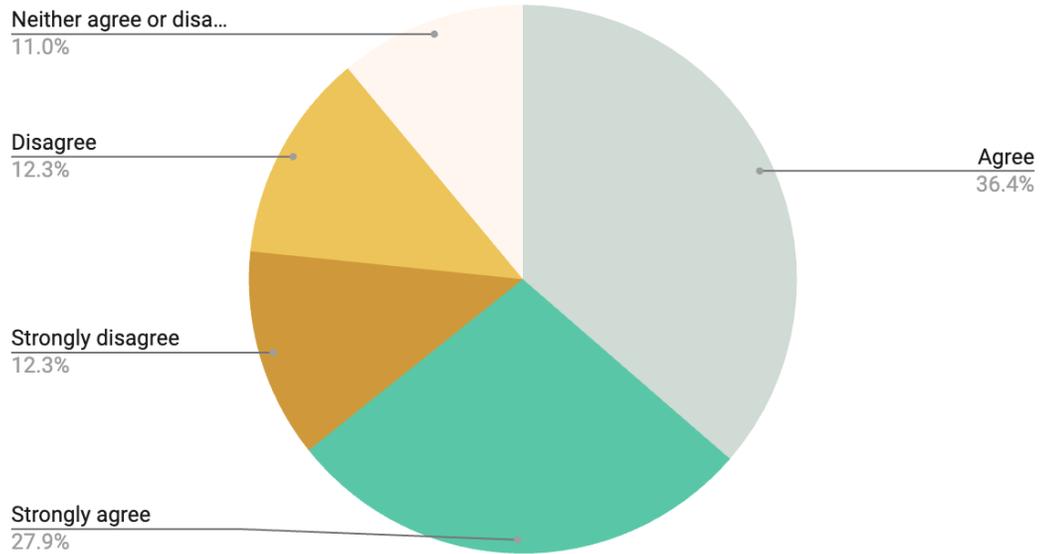


Figure 12: Survey results: Is the number of bins appropriate? (154 total responses)

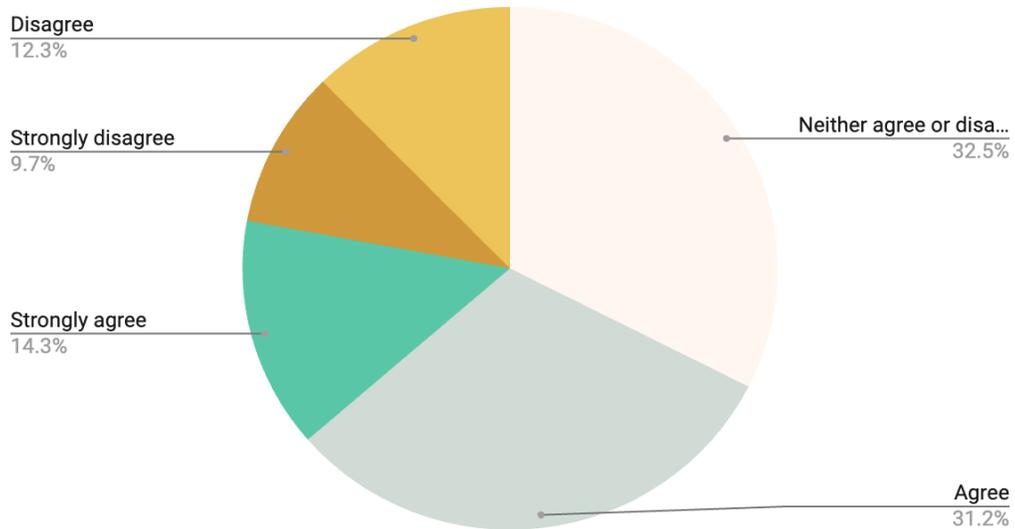


Figure 13: Survey results: Are signage and instructions clear? (154 total responses)

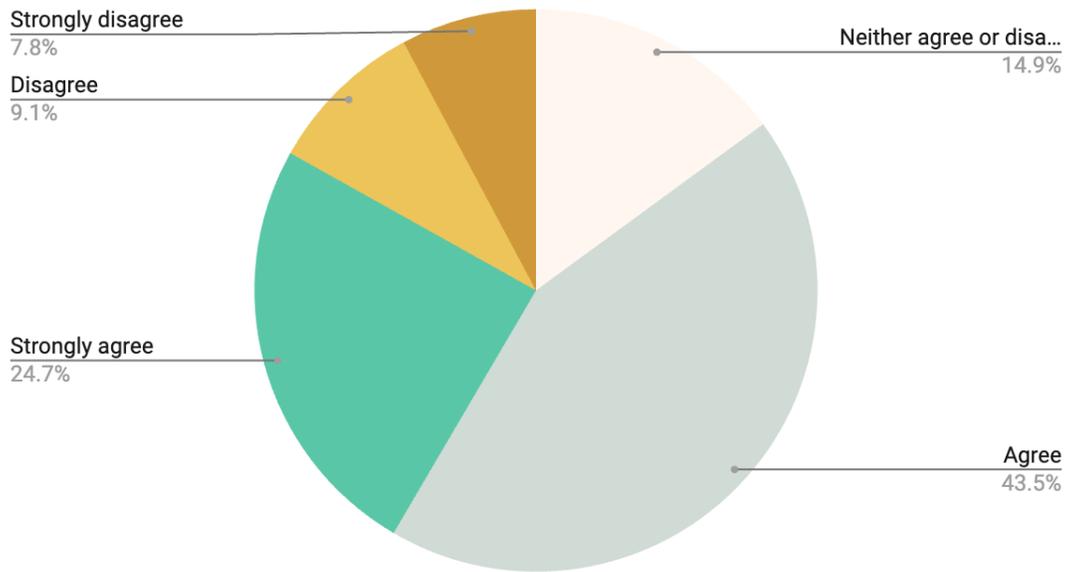


Figure 14: Survey results: Is the collection point a good location for my household? (154 total responses)

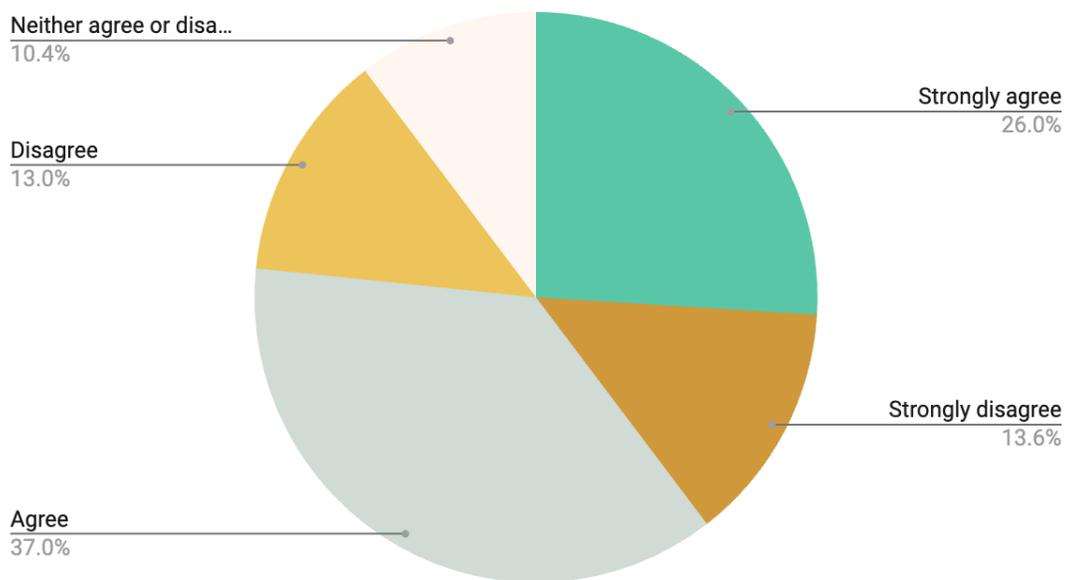


Figure 15: Survey results: Can the collection point easily be accessed from my household? (154 total responses)

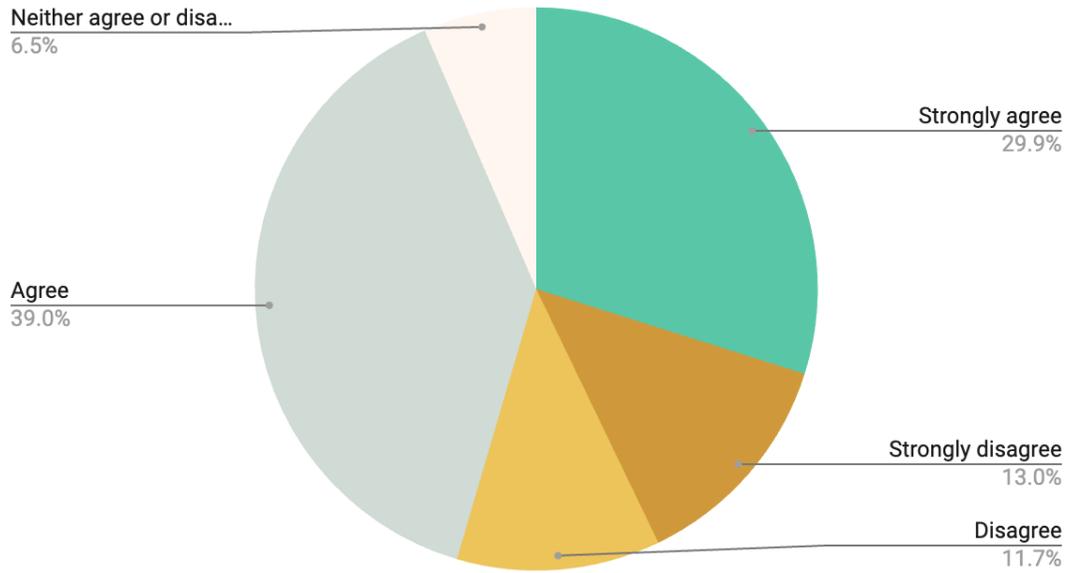
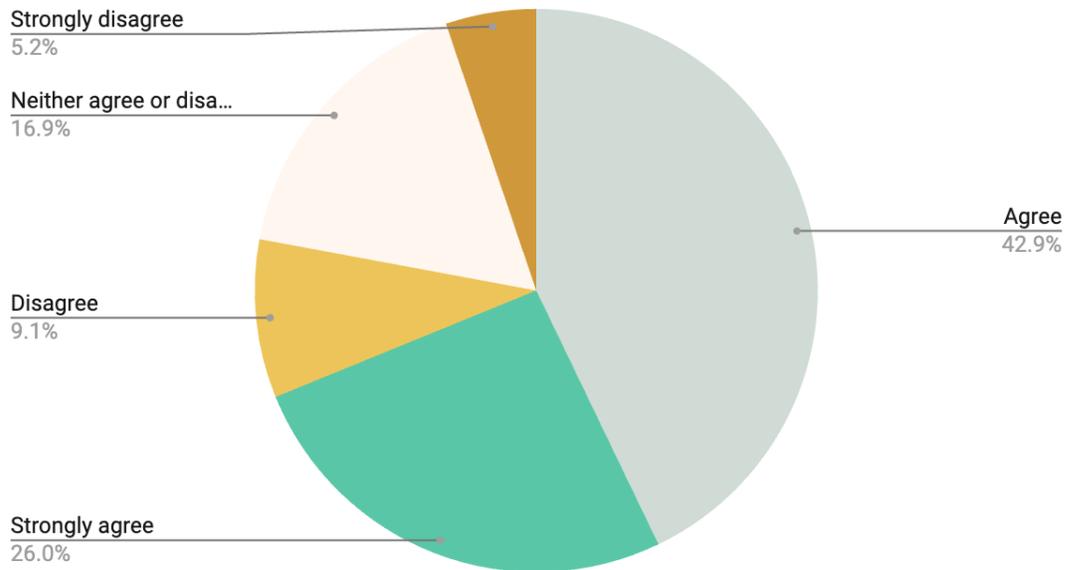


Figure 16: Survey results: Is the collection point clean and well maintained? (154 total responses)



Optimisation of collection points

During the 10 week monitoring period the following changes were made to account for the uptake in resident usage of the collection periods:

- Mill Place (corner of Beamond and Mill Place)
 - Added one additional glass bin.
- Federation Village
 - Added three additional collection points due to high uptake (Rotunda, Park and Unit 84)
 - Relocated existing collection points to more accessible collection areas.

Findings

Visual Audit Data

Overall, the visual audit data indicate that the glass collection points are operating well: across the majority of collection points contamination rates are low and utilisation rates are high. Utilisation rates were shown to increase over the ten week monitoring period, in line with anticipated rates of adaptation.

However, utilisation rates did not increase uniformly across each collection point. Retirement villages such as Pascoe Vale Gardens Retirement Village (PVGR) had a steeper increase in utilisation rates in the second five weeks of the monitoring period; this is also in line with expected rates of behaviour change for older age demographic groups.

The contamination profile of sites with higher levels of contamination, such as Kodak Residential Development, was consistent across the ten weeks. Unrecyclable glass, mixed recycling and bagged recyclable glass were the majority or contaminate items seen at these sites. Updated signage could significantly reduce contamination rates.

Survey

Over 75% of the respondents agreed that their glass collection point had enough bins and was in close proximity to their property.

Complaints that were raised within the survey mainly focused on respondents wanting their own glass bin. Other issues raised were around the capacity of the collection point being too low.

Signage

The signage used at each collection point proved not to be sturdy enough and often came undone or became damaged.

Recommendations

Signage

Based on the visual audit data, small steps to improve signage to further clarify correct bin usage could greatly reduce contamination rates. Signage should be updated to have images displaying common contaminate items, highlighting what cannot be placed in the bins. Examples of images to include: bagged glass recycling, commingled recycling, soft plastics (beer bottle wrapping) and broken glass. Could contain language encouraging to “put it in loose” or similar.

Current signage should be reinforced to prevent degradation over time. Consideration should be given for future collection points being constructed from permanent materials, such as the FOGO collection points being trialled by City of Stonnington. This would facilitate additional signage being installed with clearer instructions and images on the correct usage of the collection point.

Glass bin optimisation

To further reduce contamination levels, physically limiting what can be placed should be considered. One option would be to restrict how far the bin lid could open, similar to general waste bins in parklands. Alternatively, the lids could be locked shut and a hole/opening could be inserted in the top to allow glass bottles and jars to be inserted but preventing bagged glass from being put in the bin. Changes such as these would need to be monitored and evaluated to assess if they are achieving the desired behavioural outcome.

Glass bin utilisation

The data indicates the following sites had consistently low utilisation rates and could have one of their bins removed:

- Miller Street Place: Bill Barry Close
- Mill Place: Fletcher Longfellow Park
- Roberts Village: Ivory Way

Opt-in kerbside service

Certain collection points, such as Kodak Residential Development (KRD) and Pentridge Residential Development (PRD), had above average contamination levels and were responsible for the majority of complaints submitted through the survey. A solution could be for these properties to be proposed with an opt-in kerbside collection service for glass. This would allow properties who do not have space for a bin to continue using the collection point whilst allowing those who wish to have their own glass bin the opportunity to.

General Waste

Based on the survey results, some general waste bins were consistently at capacity for certain collection points. These bins were often full of bagged rubbish or hard waste. As we do not want to promote residents bringing residential general waste to these bins it is not advised to install another general waste bin; instead, a solution could be to restrict how far the lids can be opened to prevent bagged rubbish from being put in them. This recommendation applies to every general waste bin attached to a glass collection point.

Further monitoring and evaluation

The state wide container deposit scheme (CDS) commenced after the monitoring and evaluation period of this project. Further monitoring and evaluation should be undergone to assess if any behavioural changes occur due to this, impacting utilisation rates or contamination levels.

Appendix

Table 1: Every glass collection point with total number of properties serviced.

Area	Catchment area	Typology	Properties serviced	Collection point(s)	Glass bins
Federation Village (FV)	16-24 Box Forest Road	Retirement Village	183	Entrance Community centre	5
Pascoe Vale Gardens Retirement Village (PVGR)	1-175/146 Boundary Road, Pascoe Vale	Retirement Village	167	Bin corral LHS of reception Bin corral LHS of reception RHS of community centre LHS of community centre Community centre	10
Gowanbrae Retirement Village (GRV)	1 -339/1A Gowanbrae Driver, Gowanbrae	Retirement Village	191	Waste area near community centre Workshop area End of apartments Other end of apartments	8
Albert Village (AV)	Evans St, Albert St, Eva Close, Annie Close	Village	117	Randazzo Park	5
Blyth Street Village (BSV)	Victoria Street, Elsie Mews, Elesbury Avenue, Blyth Street	Village	85	Fleming Park (corner of Elesbury Ave & Victoria Street)	4
Nunan Village (NV)	Galada Way, Nunan Street, Harrison Street	Wall-to-walls	54	Small park near 23A Nunan Street	4
Roberts Village (RV)	Kingfisher Gardens, Stewart St, Ryan St, Roberts St, Ivory Way	Village	62	Ivory Way median strip (between 7 & 8 Ivory Way)	4
Miller Street Village (MSV)	Mary Moodie Way, Gear Street, Daniella Walkway, Lomandra Walkway, Bill Barry Close	Wall-to-walls & MUDs	117	Corner of Bill Barry Close & Mary Moodie Way Daniella Walkway (near Gear Street)	7



Table 1 (continued) Every glass collection point with total number of properties serviced.

Area	Catchment area	Typology	Properties serviced	Collection point(s)	Glass bins
Mill Place (Mill)	Beaumonde St, Berg Place, Glengyle St, Kirkby St, Mill Place, Moore St	Wall-to-wall	63	Front entrance (Beaumonde St)	8
				Side gate (Moore St)	
Kodak Residential Development (KRD)	Aperture St, Camera Walk, Cyan Walk, Danthonia Street, Focus Drive, Pixel Circuit, Portrait Way, Rouse St, Snapshot Drive, Spectrum Way, Red Box St	Village	321	Camera Walk (Focus Drive Corner)	10
				Camera Walk (Snapshot Drive)	
				Danthonia St Reserve	
Pentridge Residential Development (PRD)	Manna Gum Court, Tanderum Drive, Woiwuring Crescent, Tanderum Drive, Stockade Avenue, Parklane Mews, Urquhart St, Grassland Avenue, Watchtower Road	Village & MUD	259	Oriley Road, Jika Street & Grassland Ave	13
				Brosnan Community Park	
				Manna Gum Court (near MUD at 1 Manna Gum)	
				Corner of Moonering Drive & Stockade Avenue	
				Parkland Mews	
Mannalack Street & Railway Place (MS)	Manalack Street, Railway Place, Union Street	Streets	62	Next to 3 Manalack Street	2
				29	80