199 Canterbury Road, Blackburn VIC 3130

Waste Management Plan

Commercial Childcare development
Prepared for: Ausco Group

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Summary

A private collection service is recommended to collect the 2 x 660L garbage bins and 1 x 660L recycling bins twice a week (or as often as required to maintain bins) from the kerbside.

Building Management is responsible for placing bins at the designated collection location on the night before collection. Bins are to be returned on the same day as collection occurs.

This Waste Management Plan has been proposed in consultation with City of Whitehorse's Waste Management Officer on 14/11/2016.

NOTE: the approved Waste Management Plan (WMP) will be the model for the adoption in this development and the design and as-built aspects need to account for what is approved in this WMP. Any revisions of the WMP or changes to the approved waste system of the development require Council approval and may require a re-submitted Waste Management Plan.

More detail is contained within this report.

Contents

Waste management

A waste management analysis has been undertaken based on the Sustainability Victoria Best Practice Guidelines for Waste Management in Multi-Unit developments and in consultation with City of Whitehorse's Waste Management Officer David Huff on 15/11/2016.

This purpose of this report is to document a Waste Management Plan for the above project, as required by Town Planning permit conditions. The report is based on TP02 Rev D supplied by the Architects

Waste management parameters

Commercial		
Space areas	Childcare rooms – 472m2 Offices – 110m2	
Childcare **Office** Waste generation rates based on City of Whitehorse allowances	Garbage: 100L/100m^2 floor area/day Garbage: 10L/100m^2 floor area/day	Recycling: 50L/100m^2 floor area/day Recycling: 25L/100m^2 floor area/day
Estimated waste generation per week (5 days)	(100 x 4.72 x 5) +)10 x 1.1 x 5) = 2,415L garbage per week	(50 x 4.72 x 5) + (25 x 1.1 x 5) = 1320L recycling per week
Number of bins required to cover generation rates	10 x 240L OR 4 x 660L garbage bins per week	6 x 240L OR 2 x 660L recycling bins per week
Proposed waste bin storage location(s)	▪ At basement level, inside the dedicated bin store.	
Issues / Constraints	▪ Every ratable tenement is liable to pay for municipal charges irrespective of the level of collection services provided by Council ▪ With approx. 36.5m street frontage (less crossover), a road side collection is currently a viable option with only 3 bins proposed collection at any one time. ▪ Utilizing the Council collection service is not possible in this instance for general waste/recycling, green waste or hard waste as council does not collect commercial waste of this volume. ▪ The private collection service is to occur on an alternate	

		day to the Council service so that the services are not confused. ▪ The ramp is a relatively moderate grade of 1:5 ▪ A mechanical tug will be required to take heavier bins up the ramp.
Proposed collection system	Garbage & recycling collections	▪ A private collection service is recommended to collect the 2 x 660L garbage and 1 x 660L recycling bins from the roadside twice a week (or as often as required to maintain bins). ▪ The Building Management is responsible for placing bins in the designated collection location. Bins are to be returned on the same day as collection occurs.
	Hard waste collection	▪ A private collection service arranged by building management will be engaged for hard waste items as required. Alternatively items can be taken to the local waste recovery centre.
	Green waste collection	▪ A private maintenance contractor will be responsible for removing any green waste from common areas and can also by arrangement, remove green waste from private spaces.

Refer to the attached plans for bin collection routes.

Allowance for different rates of waste generation

- The total waste capacity exceeds the required allowance calculation by 225L so there is built in capacity should waste levels increase beyond estimates.
- Should the garbage allowance be exceeded, the first action should be to encourage the staff to reduce their garbage and recycle more.
- Garbage volumes can also be reduced if food waste is directed to bokashi bins, compost bins or similar (see below).
- Should recycling be exceeded while garbage is not exceeded then, staff should be reminded to crush and flatten all cardboard boxes and plastic containers before placing these in the recycling bin(s). If this occurs effectively and there is still an issue it may be appropriate to swap a garbage bin for a recycling bin.
- Should recycling be exceeded then it may be appropriate to obtain an additional recycling bin.
- More space could readily be made available in the bin store for additional bin storage.
- More regular collections of garbage or recycling could occur.

Other considerations

- **Litter** spread is to be managed by ensuring garbage and recycling bins are not overloaded, and lids are always closed.
- Bins should not be left outside overnight, the possibility of vandals overturning bins is

removed.

- The private collection contractor's agreement should require their pickup of any waste that spills from the bins during emptying.
- **Traffic management** along Canterbury Road should not be an issue with the quick emptying times with waste from only 3 bins being collected at any one time. The collection zone is also an appropriate distance from the intersection.
- **Collection times** - **Noise management –**- bin collection shall be in accordance with EPA and Council requirements and shall be completed at times of least interference / inconvenience to the local amenity and traffic conditions. T
- **Odour** from waste primarily emanates from bin store areas. Control of odour must occur in the bin store area with the provision of suitable natural or mechanical ventilation. If installed the mechanical ventilation system for the bin storage area must not cause a public health nuisance (noise and odour generation) and comply with EPA requirements.
- As the bin store is open to the car park if there is good ventilation of the carpark then the bin store should be suitably ventilated.
- The bin store area should be monitored and cleaned on a regular basis to remove sources of smells.
- **Bin Store Design** – must include the following:
  - A layout that allows access to all of the bins with adequate size to allow easy movement/transfer of the required number of bins.
  - An area suitable for bin wash down is to be available in the development. If this is the bin store then the floor is to be graded to a waste outlet.
  - A water tap installed in or near the bin wash areas to facilitate regular wash down.
  - Adequate doorway width to allow the easy access of bins and larger hard waste
  - Bin stores must be vermin proof - particularly where food waste is included. (The bin store is in the basement which is a closed space and considered to be largely vermin proof).
  - A waterproof power point in or near the bin store.
  - Adequate lighting
  - Adequate ventilation
  - Space for a tug if required by the waste contractor(s)

  Meter boxes should not be included in bin stores due to the need to regularly wash bin stores out.
- **Internal Waste Management**
  - General / domestic garbage shall be placed in plastic bags before placement into bins
  - Recycling materials are not to be bagged and should be placed loosely into the recycling bins.
- **Screening of bins** – All bins are stored within the development in the basement.
- **Signage and education on use of services**: All education material will be in accordance with Council requirements or if this is not available, per signage on the following website: http://www.sustainability.vic.gov.au/services-and-advice/community/public-place-

recycling/signage-library.

- It will be the responsibility of the Building Management to ensure all staff have all of the material available to them and that they adhere to the required practices regarding waste management, sustainability and promoting waste minimization. All occupants are to operate and maintain safe practice in all aspects involving the waste management of the development.
- Signage should indicate which bin is for garbage and which is for recyclables (or food waste/organics) and also include what items can be included in garbage and recycling bins, and items that need to be disposed of via other services.
- The hard waste storage zone should also be signed.
- **A preliminary OHS risk assessment** has been included to identify potential OHS issues, however this risk assessment does not replace the need for the building management and collection contractors to complete their own OHS assessment for the bin collection process.
- If the building management or contractors OHS requirements demand it, a mechanical tug (details below) will be provided for shifting bins to the collection locations.

On-going management

The management and maintenance of the waste system will be a responsibility of building management. Items to be addressed in maintaining the system include:

- Allocation of responsibility for bringing bins from the basement bin storage location to the street collection location, and also for returning the emptied bins to the bin store on the day of collection.
- That bins and bins stores are monitored regularly to ensure areas are fully operational.
- Regular cleaning of the bins and bin store spaces and clean-up after collection if necessary
- Management and coordination of hard waste collection
- Provision of information to staff in relation to the requirements of using the system eg boxes to be flattened, containers for recycling washed, bagged recycling not permitted, bins to not be over-full etc
- Monitoring and feedback to occupants if the system is not working properly

Encouraging recycling

- Separation of garbage and recycling should initially occur in all work areas and then the bin stores. For this reason the development should include dual waste bins in each children's room and office spaces. Cleaners would then transfer waste from these bins to the bin storage area
- Recycling bins should be placed alongside garbage bins so as to ensure recycling is easy.
- Miscellaneous recycling container(s) – a container(s) with drawers or number of small stackable crates minimum footprint 500x500mm are recommended to be supplied for recyclables such as batteries, light globes, printer cartridges, e-waste and clothes. These items are to be recycled monthly or as arranged by the building management eg by the maintenance or gardening contractor.
- Local information regarding the disposal and recycling of common items can be found

at: http://www.whitehorse.vic.gov.au/Recycling-Household-Items.html

- E-waste or electronic waste including computers and accessories, televisions and occasionally printers can be recycled for free at select drop-off locations under the National Television and Computer Recycling Scheme (NTCRS). Locations and more information can be found at:
  http://www.recyclingnearyou.com.au/ewastescheme/
  http://recyclingnearyou.com.au/business/17063
  http://www.techcollect.com.au/

- Recycling contractors for different products can be found at the website http://recyclingnearyou.com.au/

Voluntary Organic separation

- Commercial collection of separated food and other organic wastes in typical waste "wheelie bins" is increasingly being undertaken in Melbourne. When organic matter decomposes in landfill it generates methane, a very potent greenhouse gas. It is preferable that organics are used to replenish our soils and gardens via compost and mulch, rather than to be lost to landfills where they contribute to climate change and global warming via this greenhouse gas generation. Waste or recycling bins could be substituted for organics collection bins. Contractors offering organic waste collection services include:

  - Sita http://www.sita.com.au/commercial-solutions/resource-recovery-recycling/organic-material/.
  - KS Environmental – use 120L bins only
    https://ksenvironmental.com.au/services/recycling-services/food-organics/

- On site food and organic waste treatment/pre-processing systems can also reduce waste collection frequency when food or organics waste can be diverted to these units. Closed Loop Organics units through heat and agitation reduce food scraps to 90% of their original volume in 24 hours, and the by product is a compost material. Other systems such as PulpMaster, EcoGuardians (Gaia system) or Biobin generally dehydrate or mash up food waste to reduce total volumes, although generally to a lesser extent than the Closed Loop Organics units. The above suppliers usually can provide Green-house gas cost v benefit assessments of their units.

  - A stand-out unit that may be appropriate for this site is the CLO'ey bin available from Closed Loop Organics. More information available at:
    http://www.closedloop.com.au/domestic-composter

- Surplus food re-use. There are organisations that collect surplus food for human consumption. Collectors that provide this service within the City of Melbourne include:

  - SecondBite - SecondBite redistributes surplus fresh food to community food programs around Australia. Food is donated by farmers, wholesalers, markets, supermarkets, caterers and events. This high quality surplus food is redistributed to community food programs that support people who are homeless, women and families in crisis, youth at risk, indigenous communities, asylum seekers and new arrivals. Contact: Emily Wild Community, Volunteer and Office Manager emily@secondbite.org

  - FareShare - FareShare, is a not-for-profit organisation, rescuing food to fight hunger. It collects quality food that would otherwise be wasted from Melbourne businesses such as food wholesalers, retailers and caterers. Volunteers in FareShare's kitchen use this food to prepare healthy, nutritious meals that they

distribute to over 100 charities providing emergency food relief for the hungry and homeless. Phone: 03 9428 0044 Email: kath.cotter@fareshare.net.au

- OzHarvest is the first perishable food rescue organisation in Australia collecting quality excess food from commercial outlets and delivering it, direct and free of charge, to 600 charities providing much needed assistance to vulnerable men, women and children. www.ozharvest.org, Ph: 03 9999 5070 melbourne.info@ozharvest.org

Mechanical tug details

Where mechanical tugs are recommended, the following details will assist.

Suppliers include www.electrodrive.com.au , http://www.mastermover.com.au, www.sitecraft,net.au, http://www.hercules.com.au/index.php?tug2.

Space required for tug storage:

4 wheel bins can be towed directly by the tug and require less space as only the tug is required to be stored, not a trailer. Towing brackets and directional wheel locks are available from Sulo www.sulo.com.au and can readily be retrofitted to 660-1100L bins for towing. Towing brackets and wheel locks do not project outside of the bin footprint area.

Mechanical tug systems will usually cost in the range of $10,000 - $15,000, with trailer possibly extra.

Sustainability initiatives

Occupants should be made aware of Sustainability Vic recommendations for waste reduction www.sustainability.vic.gov.au

Where possible they should practice the waste reduction hierarchy

1. Waste avoidance – e.g. avoid excess packaging – purchase from companies that avoid excess packaging.
2. Re-use / Recycle – if packaging is required, select recyclable packaging
3. Recover / Re-treat / Contain
4. Disposal

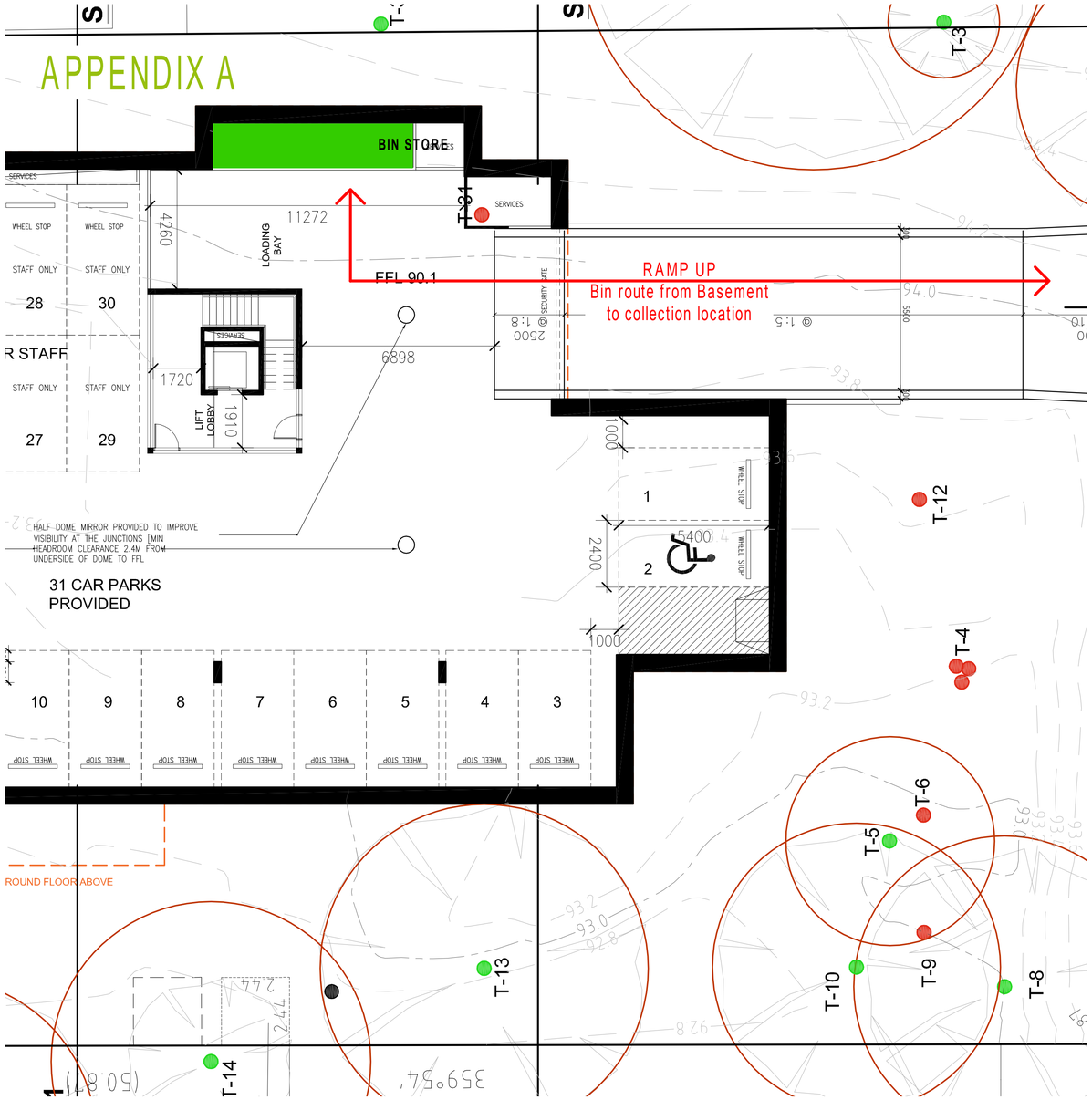
Links

City of Whitehorse Council website: http://www.whitehorse.vic.gov.au

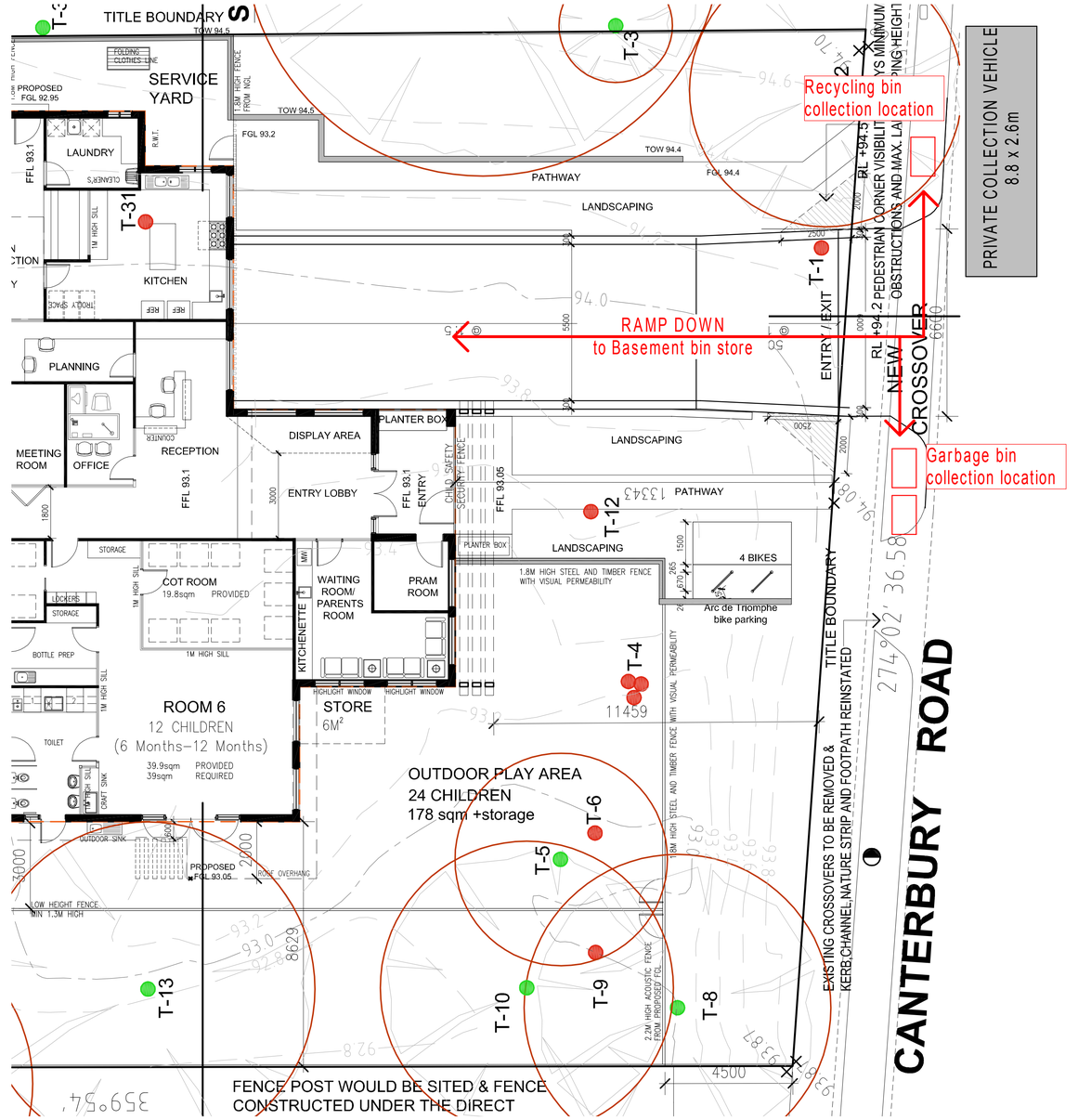
Waste collection companies (examples only):

- Waste Wise Environmental www.wastewise.com.au (complete basement collections)
- Kartaway http://www.kartaway.com.au/melbourne/index.html (incl basement collections)
- Citywide www.citywide.com.au
- JJ Richards & Sons www.jjrichards.com.au
- KS Environmental – www.ksenvironmental.com.au
- Sita – www.sita.com.au
- Thiess Services www.thiess-services.com.au
- Wastech www.wastech.com.au
- http://www.australianboxrecycling.com.au/recycling-bins.php

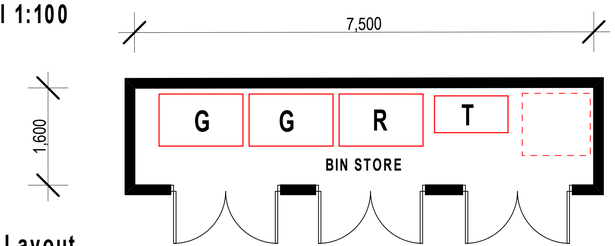
APPENDIX A



Bin Collection Location Plan
Basement Level 1:100



Bin Collection Location Plan
Street Level 1:100



Bin Store Layout
1:50

Private collection service to collect weekly:
R = 1No. 660L Recycling Bins
G = 2No. 660L Garbage Bins
T = Tug
1m2 Bulk Hard Rubbish (dashed)

High & low level vermin proof openings to allow for adequate ventilation or mechanically vented

Project
199 CANTERBURY ROAD
BLACKBURN VIC 3130

Drawing
Bin Collection Location Plan
Bin Store Layout

Date	Scale	Sheet Size
17/11/2016	1:100 / 1:50	@ A1
Reg No.	Drawn	Chk.
	LR	CH
Job No.	Drawing No.	Revision
	WP.01	a

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lid
cap your footprint

Appendix B
Risk Assessment – Waste Collection process
For proposed development at 199 Canterbury Road, Blackburn VIC 3130

Class 1 Risk = Potential to cause death or permanent injury.	**Class 2 Risk** = Potential to cause injury requiring medical attention.	**Class 3 Risk** = Potential to cause an injury treatable with first aid.

Activity	Steps involved in completing activity & risk	Risk level	Risk mitigating measures	Implementation responsibility
Moving of bins from bin store up the ramp to the collection zone	Distance bins to be moved approx 20m including up ramp of 5500mm wide – just enough width for sharing by pedestrian and cars in two way traffic. Risk of manual handling injuries if tug is not used and bins are fully laden with heavy waste. Risk of collision with cars on ramp, at restricted vision points at the top and bottom of the ramp, and shared roadway use in the lane.	 2 1	 Use max bin sizes of 240L or a mechanical bin tug to reduce manual handling injuries. Install curved mirrors at the top and potentially bottom of the ramp to ensure drivers can see around corners and be aware when bin transfer operation occurring. Signage reminding drivers to be aware that bin transfers take place and drivers to take care. Building Management take feedback from bin transfer person if drivers are entering or exiting too fast.	Building Designer / Building Management
Bin loading on street	Moving bins from temporary collection space to collection vehicle parked on street. Collection may occur at the rear of the truck. Risk of being struck by passing vehicles if	1	Bin collection operator's own safety measures incl training	Bin collection operator

	step outside the line of the width of the truck			
Note this assessment is for consideration during the design phase of the project. It is not to replace a risk assessment / Safe Work Method Statement being completed by the contractor and persons undertaking the waste removal process.				