Better Practice Guide for
Public Place Recycling

Department of
Environment and Conservation (NSW)

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Introduction

Recycling at home has been part of every day life for many years. In addition, recycling is now an accepted practice at work. People now also expect to be able to recycle in other places they visit, including public places. These Guidelines have been developed to assist in the establishment of standard recycling systems in public places.

These Guidelines provide advice and a minimum standard for installing recycling systems in public places such as parks, shopping centres, railway stations, etc.

Many organisations such as local councils and other land managers have already had experience with public place recycling. There has been mixed success of programs and trials. Confusion about how and what to recycle in the community has occurred because of differences in what could be recycled at home and in public and because of differences between the collection systems in neighbouring councils. As a result, the outcomes were often low amounts of recyclable materials collected, or high levels of contamination in the recycling bins.

Comments from local councils and other public place recycling managers have assisted the development of these Guidelines. By facilitating a consistent approach through these guidelines, the Department of Environment and Conservation (NSW) hopes to encourage improved systems and services that support recycling when away from home.

Public Place recycling as defined in these guidelines generally means permanent systems installed in places such as parks, shopping centres, beaches etc. However, recycling is increasingly being undertaken at temporary "special events" such as fetes, festivals and concerts. While these Guidelines provide information that is also relevant to special events, there are additional considerations that need to be taken when planning recycling at special events.

These Guidelines as well as other information on the Department of Environment and Conservation (NSW) waste avoidance and resource recovery programs including litter and illegal dumping are available on the Department's website, www.environment.nsw.gov.au.

Public place recycling is often thought of as an additional service to general waste collections, requested by the local community or users of a public area. If designed and managed well from the beginning, it can become a successful waste management tool, and highlight commitment to resource recovery. If designed and managed poorly it can become a constant challenge which is likely to fail. A small amount of forethought at the design stage of the waste and recycling service can save a great deal of difficulty, inconvenience and confusion for all involved.

These Guidelines encourage continuous improvement of waste management systems whereby they are reviewed, planned, implemented, monitored and communicated. Simply follow each of the steps in the Guidelines to introduce a successful public place recycling system.

STEP 1

Define the Situation

To understand what opportunities might be available to introduce a recycling system, gather information and data to gain an awareness of how waste is currently managed.

Investigate the existing waste collection service to identify:

- the collection frequency,
- the bin storage and emptying technique,
- the capability of expanding or adapting the service to include recycling, and
- the location of existing bins.

Talk to staff about their attitudes to recycling and work practices

Any changes to existing practices will need the support of both management and staff. This will also assist with overcoming occupational health and safety (OH&S) issues.

Undertake an audit of the waste to identify:

- the components in the waste,
- the typical daily or weekly volume of waste and recyclables,
- the typical daily or weekly weight of the waste and recyclables.

This will be important in deciding what materials to collect for recycling and the size and number of bins that might be needed. An example of a methodology for undertaking a simple waste audit has been prepared (see Appendix 1).

Look at waste and recycling systems in the surrounding area such as parks, railway stations or shopping precincts

- Can any lessons be learned from these systems?
- Can these systems be expanded or adapted to service your site?
- Will there be consistency between the various systems?

STEP 2

Develop the System

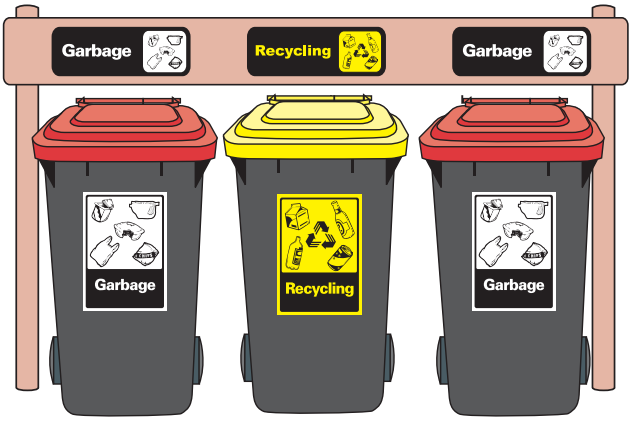
The biggest challenge in developing any waste management system is designing a system that will be easy to use, maintain and collect from. The more convenient the system the higher the participation rates and capture of recyclables, and the lower the contamination and litter.

Before developing your system you will need to think about what goals you want to achieve and when. Examples of useful goals may be to *maximise the capture of recyclable materials, limit contamination, and reduce litter*. Goals should be measurable and realistic.

Other important considerations when designing your system are bin size and shape, location, visibility, accessibility (both for use and collection), OH&S, signage, and education. Aesthetics and appearance are additional considerations to enhance the performance of the system.

2.1 Bins

The bins have a dual purpose: for the collection of waste and recyclables; and, also as a promotional tool to highlight a commitment to sustainable waste management and resource recovery. Therefore it is important that the system works well and is a positive reflection on your organisation.



Who will provide the bins?

Waste and recycling bins can be either designed and built by your own organisation or purchased from a manufacturer. Suggestion, look in the Yellow Pages® (website or books) under:

- Furniture – wholesalers and manufacturers,
- Furniture – outdoor,
- Plastics – products – wholesalers and manufacturers,
- Recycling equipment, or
- Waste reduction and disposal equipment.

Are the bins made with recycled materials?

When purchasing bins, specify that they must be made of recycled material where possible. It is important not only to collect recyclables but also to "close the loop" and buy products made from recycled materials.

Will the bins be easy to maintain?

Bins should be made of material that suits the environment in which they will be installed so that they are durable and easy to maintain. People are reluctant to use bins that are dirty or in disrepair. Issues to consider include:

- corrosion from rain, sunlight or sea spray,
- vermin such as rats, birds, feral cats and dogs, native fauna etc, and
- damage from vandals, food and drink spills, and cleaning techniques.

What are the occupational health and safety issues with moving, lifting, emptying or storing the bins?

The waste and recycling industry is increasingly using mobile bins. These are often called "wheelie bins" and they offer increased storage capacity and facilitate automated lifting. These features address many of the health and safety risks associated with lifting heavy bins and handling sharp objects.

What is the capacity of the bins?

Mobile bins come in a range of sizes from 80 to 360 litres in capacity. The most common bin size used for public place recycling is the 240-litre bin. Bin capacity should be determined by:

- the results of your waste audit,
- the frequency of collections,
- the amount of biodegradable (e.g. food) material
- the method of storing and emptying the bins, and
- space constraints.

Minimising damage and theft

It is recommended that bins be secured in public places by either enclosing them in a lockable surround or cabinet, or by attaching them to a post or frame. Bins and enclosures should be designed to consider fire risk and recent security threats such as explosive devices.

Appendix 2 contains information on Crime Prevention Through Environmental Design (CPTED). CPTED has three main strategies: natural access control, natural surveillance, and territoriality that take advantage of relationships which exist between people and their environments. Project planners and implementers should understand and adopt the CPTED strategies and concepts, to minimise the risk of damage and theft.

Openings

There are several important issues to consider when designing the size and shape of the openings in the bins:

- openings should prevent rain water from entering the bins,
- openings should be smooth and free of any sharp edges,
- the openings for garbage should be large enough to take the most common garbage item identified in your waste audit, but should be small enough to minimise dumping of bulky commercial and household garbage,
- the opening for the recycling should be smaller than the garbage opening, and of a different shape to differentiate it (e.g. round and the size of a soft drink bottle, or could include a flap or rosette),
- the openings should be positioned and configured to allow easy use by children and people with disabilities,[1]
- the openings need to restrict access to animals and pests in certain circumstances.

2.2 Configuration

Bin configuration is an integral part of the waste management system for public places. Experience has shown that if bins are together in a bank, people will use the garbage bins located closest to them regardless of their colour or signage.

Never position a recycling bin on its own

The recycling bin should always be positioned next to a garbage bin to give an option for waste disposal.

The Department of Environment and Conservation (NSW) is encouraging a 3-bin configuration that consists of two garbage bins either side of a central recycling bin or multiples using the same configuration. This configuration caters for the two types of people who use public place recycling bins. The first are those who will correctly separate their waste and recyclables into the right bins. The second are those who do not intend to separate their waste at all and place it into the first bin they come to. Refer to Appendix 3 for examples of this configuration.

In some cases it may not be possible to incorporate a 3-bin configuration due to space constraints. In this instance, a 2-bin configuration that consists of a recycling bin alongside a garbage bin may be an option.

Where possible a 2-bin configuration should have the garbage bin closest to the high traffic area. This will help in avoiding contamination of the recycling bin by those who do not intend to separate their waste.

In some areas, however, it may be unwise to include recycling stations where there is the possibility of high levels of contamination such as outside fast food outlets which do not sell recyclable containers. In these instances, it is better just to place a single (or more) waste bin in that area, and locate recycling stations in other strategic areas.

Choose the right recyclables to collect

It is recommended that recyclables be collected "co-mingled", that is altogether rather than in separate bins. Too many options may cause confusion to the public if they do not understand the purpose of each bin. The range of recyclables should reflect:

- the results of your waste audit,
- the ability of the collection contractor to handle and recycle the materials, and
- the compatibility with recycling collections in surrounding businesses, houses and public places.

The following list provides an example of the most commonly recycled food and liquid containers:

1. PET and HDPE plastic bottles (such as soft drink and juice bottles),
2. glass bottles,
3. liquid paperboard cartons, such as milk cartons, and
4. aluminium cans.

Foil and food trays, and steel and aerosol cans, are also collected in many residential recycling collections, however are unlikely to feature highly in public place recycling. It may be best to restrict public place collections to the above items numbered one to four.

In some locations it may be suitable to collect clean recyclable newspaper and cardboard, however this may be difficult in public places where the paper and cardboard is likely to be soiled with food. It is also important to consider other issues, for example, the potential for fire hazards.

Never place a garbage and recycling bin "back to back"

Unless both bins can be clearly accessed and serviced from both sides, never place a garbage and recycling bin back to back, otherwise a recycling bin may be hidden or obscured by a garbage bin or visa versa.

2.3 Litter

Litter behaviour is complex. In public places, some people may use a bin, litter and recycle all during one observation. For example, one lunchtime an office worker was seen to litter two cigarette butts, recycle her drink container in a recycling bin, pocket her plastic bag (presumably for reuse) and finally, to place her apple core in the rubbish bin with the other unwanted items from her lunch. In a Beverage Industry Environment Council survey[2], common reasons given by people found littering are:

- too lazy – 24%
- no ashtray – 23%
- no bin – 21%
- it's a habit or don't know – 12%.

Reduce litter

By simply placing garbage and recycling bins in the correct location and configuration with the proper signage, you can significantly reduce littering in public places.

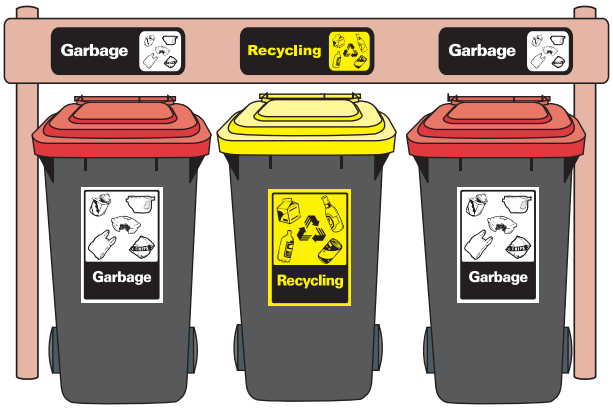
Allow for cigarette butts

If smoking is permitted on your premises, a cigarette butt bin as part of your garbage and recycling system will greatly reduce the amount of discarded butts. Suggestion: look in Yellow Pages® under – *Ash Trays and Bins.*

The cigarette butt is the most common litter item in Australia, with over 32 billion cigarette butts discarded each year.[3] Many smokers blame their littering behaviour on a lack of well-placed bins for cigarette butts. Over 80% of smokers say they would bin their butts if suitable bins were available.

Four key areas for cigarette butt disposal units are:

- alongside every litter bin,
- incorporated into the garbage and recycling bin design,
- entrances to large city buildings and non-smoking areas, and
- bus stops.



2.4 Signage

In the early 1990's, the Australian New Zealand Environment Conservation Council (ANZECC) adopted the colour coding developed by the NSW Government Recycling Advisory Unit as the national standard for the colour of recycling bins. In 1998 the NSW Waste Boards developed standard signs and symbols to support and reinforce the colour code.

In 2004 Standards Australia developed a draft standard for the manufacture of mobile bins. The draft standard reinforces the use of colours to distinguish garbage and recycling bins.

Types of materials	Body	Lid
Garbage	Dark Green/ Black	Red
Recyclables (co-mingled recycling	Dark Green/ Black	Yellow

In the past, recycling was sorted into individual material categories. We know now that public place recycling works best with "fully co-mingled collections". However, further separation of recyclable materials may be appropriate. In these instances, the following colour coding has been suggested in the draft Australian Standard.

Types of materials	Body	Lid
Paper/ cardboard	Dark Green/ Black	Blue
Plastics	Dark Green/ Black	Orange
Food Waste	Dark Green/ Black	Burgundy
Metal Cans	Dark Green/ Black	Light Grey
Clear Glass	Nature Green	White
Brown Glass	Nature Green	Brown
Green Glass	Nature Green	Nature Green

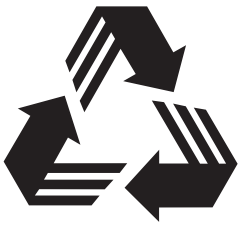
Use the standard colours and signs

Standard colours and clear signage are essential for running successful public place recycling collection services. The signs should communicate by colour, symbols and words. The use of standard signage in various locations will greatly assist the community in becoming familiar with public place recycling systems. Standard signs may be downloaded from the Department's website at www.environment.nsw.gov.au.[4]

Sample of standard signs

Use the recycling 'moebius' symbol

Signage should include the recycling "moebius loop" symbol as it is a universally accepted standard[5] for use in recycling systems.



Use overhead signs where appropriate

Overhead signage is another key element to public place recycling, particularly if the bins may become obscured in a crowd. If the bins are clearly seen then people are more likely to use them. Overhead signage should have either:

- the words "Recycling Station", "Recycle Here", or "Recycling", or
- the recycling "moebius loop" symbol, or
- signs indicating what materials should be placed in each bin.

The overhead signage should also:

- not be so big as to be intrusive,
- be able to be read from a distance appropriate for its location,
- not adversely impact on the heritage and streetscape of an area, and
- conform to relevant standards, as defined by environmental planning controls and relevant Australian Standards.[6]

Check colours

When ordering signs, vinyl stickers and paints, be aware that there are many shades available, particularly with the colour yellow. Check that colours are the correct PMS (refer to standard signage) and that different components match (the yellow recycling colour is PMS 108).

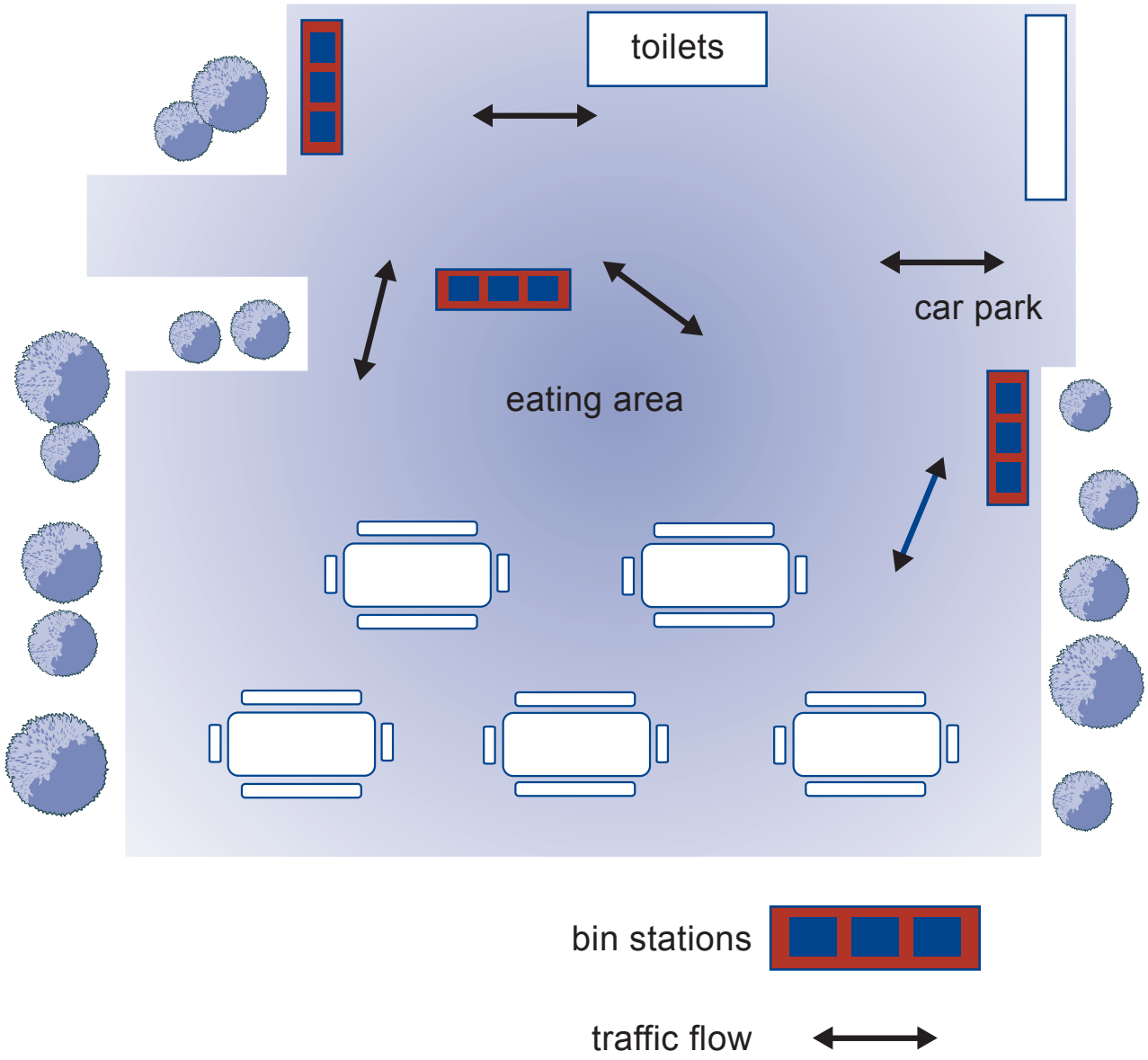
2.5 Location

The public place recycling system with supporting signage should ideally be placed where the maximum amount of waste and recyclable material can be captured. Some suggested locations include:

- near entrances and exits,
- near tables or picnic grounds, where food is consumed, not necessarily purchased,
- walkways and high traffic areas,
- near toilets or other utilities, and
- car parks.

Identify disposal points

Bins should be placed where people dispose of materials, but not necessarily where they buy them. This may be identified through observation, survey and through monitoring litter.



Access for the community

Bins need to be in areas that are easily accessed by the people that will use them. However the location must not interfere with the other activities and services such as fire exits and congested pedestrian areas.

Bins need to be placed in areas that the whole community can access, including people in wheelchairs and young children. This may require reference to appropriate standards.[7] This will also require consideration being given to the height of the bin and the height of the lid or opening.

Access for service providers

Bins need to be conveniently and effectively emptied and serviced, especially during peak periods.

Distance between bins

Research indicates that people will use bins that are conveniently located where they need them and that generally they will not walk more than 12 metres to dispose of their litter in a public place. These two issues need to be taken into consideration when choosing bin locations to maximise their use and minimise litter.[8]

STEP 3

Implement the System

3.1 Community education and promotion

Once you have decided what type of bins you need and where to put them, you must inform people about them; where they are and how they should be used. There are many ways to promote your system including:

- advertisements in newsletters, local newspapers and relevant magazines,
- issuing a media release and/or holding a launch,
- a temporary display in the foyer, information stand or notice board, and
- printing information on existing tickets or brochures distributed on the premises.

Ensure the message and the communication method are relevant

Involve relevant stakeholders in developing the message and the method. Also consider the special needs of the audience, such as the need to understand messages quickly in busy public places and the needs of people from non-English speaking backgrounds or with visual impairment.[9]

Findings from a series of focus group meetings[10] with eight language groups indicate that:

- clear line drawings which are not ambiguous are essential,
- yellow is understood and recognised by a great majority as the recycling bin colour,
- any slogan used should include the word ‘recycling’ and the recycling symbol,
- the plastic code numbers 1, 2 and R or RR are not clearly understood in the community,

- clear and exaggerated images of soft drink bottles with rocket bottom and milk bottles should be used with the words ‘soft drink’ and ‘milk’,
- the international ‘NO’ symbol (red circle with a slash across it) should be used if required,
- ticks and arrows are well understood, and
- all images must depict real items as closely as possible.

Recycle Here	
arabic	المواد المعاد تصنيعها ترمى هنا
chinese	請把循環回收物品放在這裡
greek	Ανακυκλώσιμα Εδώ
italian	Lasciare qui materiali da riciclo
korean	재활용은 여기에
macedonian	Овде ставајте ги отпадоците за рециклирање
spanish	Recicle Aquí
vietnamese	Hãy bỏ cać vật tái chế biến vaò đây

Education and promotion needs to be ongoing

Ongoing education and promotion is important as a reminder for people who may become complacent about the system as well as for inducting new staff and visitors to the system. It should also be used as a method of highlighting success and providing feedback to reinforce positive behaviour.

Utilise links to other initiatives

It is recommended that your public place recycling system be linked to similar initiatives and presented to the community as a package. For example:

- If your organisation is a local council, ensure that your public place recycling system is consistent with council’s waste strategy and management plan.
- If your organisation is a state government agency, ensure that your public place recycling system is consistent with the agency’s Waste Reduction and Purchasing Policy (WRAPP).
- If your organisation is in the private sector, you should include reference to other environmental initiatives such as integrated facilities management and Environmental Management Systems (EMS).

3.2 Staff and service provider responsibilities

Apart from the community, the most important people to consider when developing a new public place recycling system are staff, cleaners and service providers. This does not mean just the supervisors but the people who actually empty the bins and sweep the floors. How they interpret the operation of the collection system will provide valuable planning suggestions.

Under the NSW *Occupational Health and Safety (OH&S) Act*, any change to work practices must be subject to employee and contractor consultation. You need their co-operation if the system is to work.

Early consultation

The best way to get the co-operation of staff, cleaners and service providers is to involve them from the start and seek their input. They must understand the system you choose and, if possible, have some ownership of it. This will be important when overcoming any minor problem that you may encounter.

Consider undertaking a trial of a new recycling system on a smaller scale to iron-out any initial difficulties.

Training

All staff should be adequately trained in the operation and maintenance of the system. Training should be reinforced with clear written instructions. Training should focus on ensuring that:

- bins are emptied regularly to avoid overflow, congestion and contamination of the recyclables,
- recyclables are not mixed with garbage when emptied,
- bins are kept clean and in good condition,
- any nearby litter is promptly cleaned up to minimise more litter accumulating, and
- a routine is developed for bins to be conveniently removed to collection and/or storage areas when necessary.

Monitoring performance

Any new system will require careful monitoring to ensure that the system is running smoothly and any problem is identified and resolved early.

3.3 Data review

To monitor performance and assure quality, it is important to gather and review waste and recycling data. This process can be as simple as a regular visual inspection of bins supported by regular reports from cleaning staff and service providers. A waste audit should be conducted at least once a year, with the first one preferably after the first couple of months. These inspections, reports and audits will provide the necessary information to:

- identify problems or areas for improvement,
- support education, training and communication strategies, and
- provide positive feedback on recycling achievements.

APPENDIX 1

Waste Audit Methodology

This methodology is adapted from a successful audit of Parramatta Park, Sydney[11].

Project meeting

- Meet with stakeholders to discuss the audit process. Make sure the staff who normally collect the waste are present to become aware of changes to their schedules.
- Tour the target area to identify the most suitable auditing location.
- Agree on who is responsible for the organisation and logistics of the waste collection of the general waste stream from public place bins.
- Develop a plan to collect and transport waste to the audit location.
- Agree on who is responsible for the disposal of the audited waste following completion of the waste analysis.
- Agree on a wet weather plan.

Waste collection

- Confirm the waste collection period: times and days.
- Allow for daily, weekly and seasonal fluctuations in waste quantities.
- Collect general waste from bins around the audit area.
- Label and transport all general waste collected from the public place bins over the audit period under supervision of a nominated stakeholder.

Waste analysis

- Conduct a physical waste analysis on the public place general waste stream.
- Provide waste auditors with appropriate personal protective equipment (PPE) and brief them prior to the commencement of the waste audit on the procedures to be followed. All safety issues including the use of PPE must be addressed as part of this briefing. Due to the nature of public place waste, the issue of sharps must be highlighted as a potential hazard.
- Deposit general waste stream bags onto the sorting table and sort (per area) into the categories listed in Table 1 for each identified 'sub-area' if necessary.

Table 1 – Waste audit categories

Stream	Waste Category	Aust Waste Data Code
Recyclables	Cardboard/paper	A01
	Newsprint/glossy	A00
	PET	E011
	HDPE	E021
	Polypropylene	E051
	Liquid paper board	A06
	Glass	D01
	Aluminium cans	G011
	Steel cans	F011
General Waste	Food Waste	B01
	Soiled paper	A092
	Other plastics	E07
	General waste	X50

- Record the weight and volume of each waste category. It is important that both weight and volume measurements are recorded, as both are relevant.

  Weight is important in terms of processing systems and measuring landfill diversion.

  Volume is important to determine the logistics of waste management, transport, waste management systems, bin type, size and number, and collection frequency.
- Take photographs of both unsorted and sorted waste. Photographs give visual understanding of waste quantities, show the potential for recycling, and highlight unusual findings. Describe the purpose of the photograph on a small whiteboard and place in the foreground of the photo as an identifier.
- Analyse the waste (by both weight and volume) using the following breakdowns:
  - Total waste stream
  - Total waste stream by category
  - Total waste generation by audit area
  - Recyclables in the general waste.
- Graphically illustrate the results to assist understanding. A pie graph is most often used to show percentages of each category.

Equipment

The following is a list of the types of equipment commonly used during waste audits:[12]

Recording Equipment	
Forms	Different data sheets are required to record details of the waste categories, particular items found and weights and volumes. Also describe the site layout and key observations.
Pens	To record data and observations; marking pens are useful to identify different areas and wastes.
Camera	Photos of observations to illustrate findings and as a resource in education programs.
Spare batteries	For all battery powered equipment, including camera and scales.

Personal Protective Equipment	
Gloves	Gloves need to be suited to the actual materials being sorted. No audit should ever be considered to be 'safe' therefore heavy duty gloves are recommended at all times.
Safety glasses	Splashes can occur. Australian safety standard approved.[13]
Overalls	Should be water/moisture resistant. Long sleeved and long legged.
Gumboots/ safety boots	Essential to protect from spillage of fluid or sharp items on the ground.

Personal Protective Equipment	
Masks	To protect from inhalation of odours and splashes.
Sunscreen	An appropriate UV factor should be used.
Hat	Wide brimmed to protect from UV exposure.
Ear protection	Ear muffs and/or plugs should noise become an issue.
First aid kit	Industrial standard.[14]
Safety vests	Required in certain areas for extra visibility and safety, such as near a road.

Audit Equipment	
Table	For sorting wastes into categories.
Bins and liners	A variety of sizes are required to contain sorted waste. Include a sufficient quantity for each waste category.
Waste bags	To place the waste into at the end of the audit process.
Sharpes containers	To deposit any sharpes found during the waste analysis.
Scales	To measure the waste in each category, they should go to two decimal places.
Extension leads	If power is not nearby.
Tongs	To assist in the separation of waste.
Ground sheet	To protect the area from spills.
Bunding	May be necessary to prevent spills from entering stormwater drains or other sensitive areas.
Kitty litter	Or other absorbent material available to soak up spills.
Packing tape	To close bags and put signs on 240 litre bins.

Cleaning Equipment	
Disinfectant/ bleach	For cleaning purposes.
Soap/water/ toiletries	For cleaning of hands/face etc after completing the audit.
Handtowel/cloth	To ‘mop’ up fluid on the sorting tray.
Broom	To sweep up litter and other dry matter.
Mop and bucket	To clean up spills and waste analysis area.
Water	For cleaning purposes.

APPENDIX 2

Crime Prevention Through Environmental Design Information (CPTED)

What is CPTED?

Crime Prevention Through Environmental Design[15,16,17] or CPTED (pronounced septed) is a branch of situational crime prevention. Its premise is that the physical environment can be managed to produce behavioural effects that will reduce the incidence and fear of crime, thereby improving the quality of life, and enhancing profitability for business.

Like all situational crime prevention strategies, CPTED aims to reduce the opportunity for specific crimes to occur. It's principles can be, and are, used in a wide range of contexts, from social planning through to urban design; from community safety to specific security risk management applications.

CPTED Three D Concept

One way to involve CPTED principles in community areas is through a three-step review process.

1. Designation: What is the intended use of the area? What behaviour is allowed?
2. Definition: What are the physical limits of the area? What are the borders between this area and public spaces? Is it clear which activities are allowed where? What risks can be anticipated and planned for?
3. Design: Does the physical environment support the intended use safely and efficiently?

Using the "Three Ds" to assess a space may reveal a conflict between the "Ds" — a conflict that should result in a modification. If a space has no designated purpose, is poorly defined, or is not properly designed to support and control the intended function, that space may generate crime and fear unless modifications are made. Thus, the challenge is for example to design a parking deck or position public restrooms that are not only functional, but also maximise the personal safety of legitimate users.

CPTED Three Key Strategies

Once the three D's have been considered, the space is assessed according to how well it supports: natural access control, natural surveillance and territoriality.

Natural access control involves the use of symbolic and or actual barriers that restrict, encourage or channel the movement of people into, out of and/or within designated areas. These symbolic or actual barriers may take the form of changes in land elevation, gardens, ground markings, entrance ways etc, which clearly define borders and transitional zones from public to semi-private to private areas.

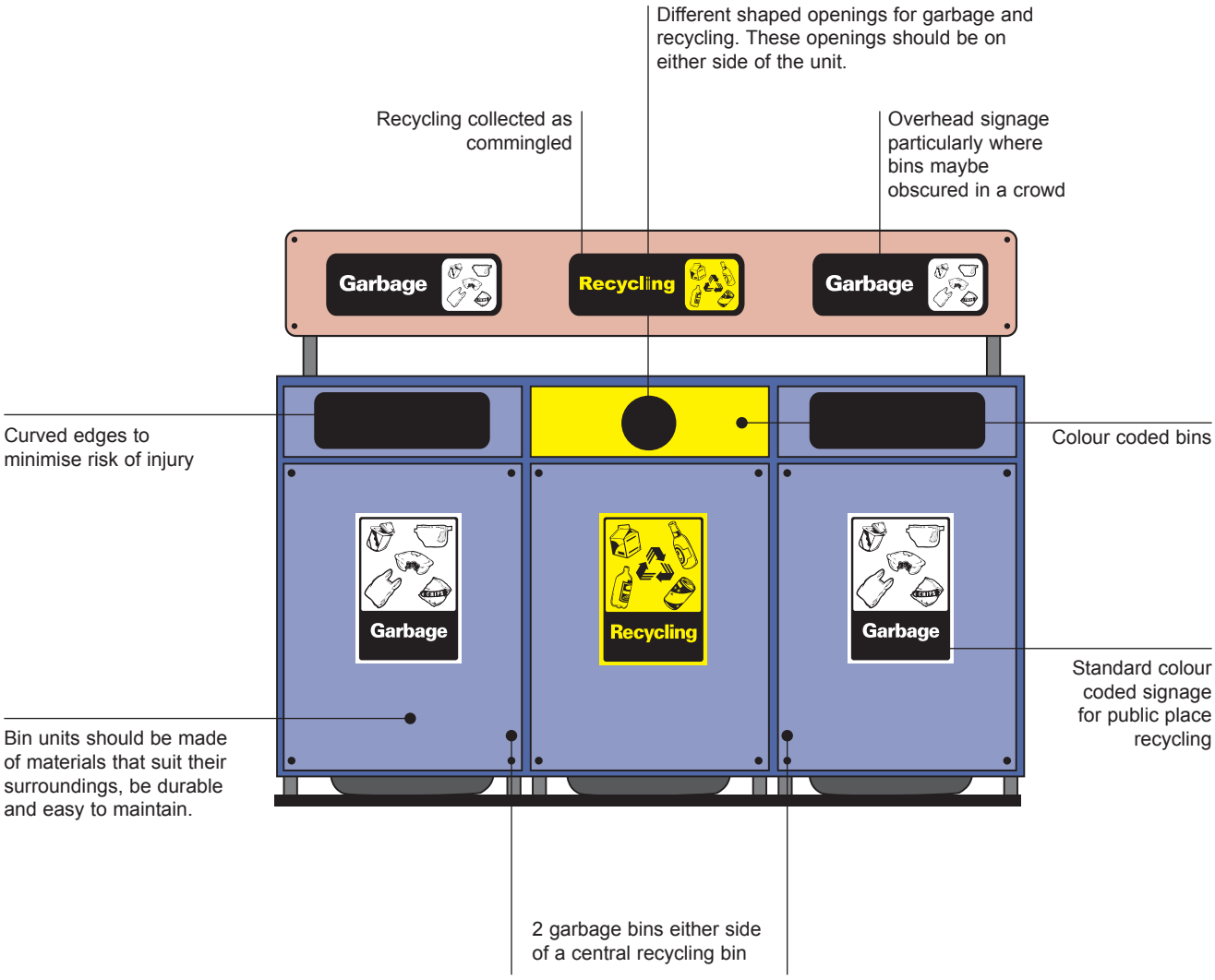
Natural surveillance consists of allowing those people who would normally be in a position to see or observe, the opportunity to see others. These people may be neighbours, users of the site or employees. Creating the opportunity to see may involve the provision of surveillance zones through trees and shrubs, increased and target directed lighting and building placement.

Territorial reinforcement is the maintenance of a sense of ownership of a given area by the community around it. Both 'natural access control' and 'natural surveillance' contribute to this. The area must look as though it is cared for and looked after. Territorial reinforcement may take the form of signs, celebrated entrances, rubbish removal and site maintenance. Increasing the use of the site by those groups in the community who then take on the role of voluntary custodians can also increase the sense of ownership of the site by the community.

APPENDIX 3

Examples of 3-Bin Configuration

Key Features in Public Place Recycling System



APPENDIX 4

Public Place Recycling Checklist

Have you done or considered all of the following?

Define the Situation

- ❑ Investigate the existing waste collection service
- ❑ Talk to staff about their attitudes to recycling and work practices
- ❑ Undertake an audit of the waste
- ❑ Look at surrounding waste and recycling systems

Develop the System

- ❑ Who will provide the bins?
- ❑ Will the bins be made of material with recycled content?
- ❑ Will the bins be easy to maintain?
- ❑ Address occupational health and safety (OH&S) features
- ❑ What capacity will the bins be?
- ❑ How will damage and/or theft be minimised?
- ❑ What will the bin openings be like?
- ❑ Position and configuration of garbage and recycling bins
- ❑ What materials will be collected?
- ❑ Does the system address littering?
- ❑ Will it include cigarette butt bins?
- ❑ Use standard bin colours
- ❑ Use appropriate signage colours and designs
- ❑ Include the ‘moebius’ recycling loop in graphics
- ❑ Incorporate overhead signage
- ❑ Identify waste disposal points
- ❑ Address community access
- ❑ Provide for service provider access
- ❑ Distance between bins

Implement the System

- ❑ Develop appropriate community education and promotion messages
- ❑ Ongoing education and positive feedback
- ❑ Utilise links to other environmental initiatives
- ❑ Consult with staff and service providers early
- ❑ Prepare and provide training to staff
- ❑ Monitor system performance
- ❑ Undertake follow up data collection through regular audits

Referencing and Notes

[1] in line with the Disability Services Act 1993

[2] BIEC, Measuring Environmentally Desirable Behaviour, June 2001

[3] www.environment.nsw.gov.au (search under “litter”)

[4] www.environment.nsw.gov.au (search under “signage”)

[5] AS/NZS ISO 14021:2000

[6] such as AS 2899 – Public information symbol signs and AS 2342 – Development, testing and implementation and safety symbols and symbolic signs. Also refer to SEPP 64 – Advertising and signage. This provides an improved and consistent approach to the management of outdoor advertising, where appropriate.

[7] such as AS 1428 Design for access and mobility.

[8] BIEC, Measuring Environmentally Desirable Behaviour, June 2001

[9] as recommended in the Disabilities Services Act, and Ethnic Affairs Policy Statement

[10] Review of Recycling Resources by NESB Groups (© Resource NSW September 2002)

[11] Parramatta Park Waste Audit. Prepared for Resource NSW by Waste Audit and Consultancy Services. March 2003 (unpublished).

[12] adapted from Introduction to Waste Auditing (Sustainable Learning Australasia 2000)

[13] Australian Standard 1337

[14] Refer to NSW Occupational Health and Safety Regulation 2001, Clause 20 for description of required first aid kit.

[15,16,17] www.cpted.com.au
www.cpted-watch.com
www.stpete.org/police/cpted.htm

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