

Southern Waste Strategy Authority



Litter Reduction Program

**Version 3.1
November 2005**

1. Introduction

The Southern Waste Strategy Authority (SWSA) is responsible for implementing a regional Waste Management Strategy in Southern Tasmania.

As part of this overall strategy a litter reduction program has been introduced, based on the latest research conducted on behalf of the Beverage Industry Environment Council (BIEC) by Community Change, and by other significant authorities on the matter. In accordance with the Authority's Strategy, the littering program focuses upon developing a littering awareness campaign that will target all age groups, as well as implementing infrastructure and enforcement measures.

2. Background

Curnow and others (Community Change) have conducted most of the recent littering research within Australia, as independent consultants for the Beverage Industry Environment Council. Although BIEC exists to further the interests of its industry members, it enjoys strong credibility by virtue of its experience and commitment to practical research and actions in the field of waste management. A number of additional sources have been consulted, to cross-check the key findings.

On a national level, disposal behaviour showed an improvement in 2004 for the first time since baseline in 1997. "Hobart demonstrated a marked improvement in 2004, as prior DBI levels were all below the national average" (Community Change, 2005).

For a litter reduction program to be effective in the long term, a combination of the following strategies is considered necessary:

- Education strategies.
- Antecedent strategies (preventative measures).
- Consequent Strategies (legislation and enforcement measures), with enforcement being more visible than is presently the case in Tasmania.

One of the most popular strategies favoured by authorities is education (Curnow, 1995). However little research has been undertaken on the degree to which these campaigns are in fact changing behaviour. The Litter Behaviour Study (LBS) 2 & 3 conducted for BIEC by Community Change, have many pointers to the components of a successful behaviour change campaign.

Legislation and enforcement have also played an important role in many programs. However, researchers have found that a number of respondents expressed a lack of concern about litter fines because they never seem to be enforced (Leigh, 1995; McGregor et al. 1994). The NSW EPA and EcoRecycle Victoria experience and research supports this proposition and they have ensured more visible law enforcement is a part of their campaigns. Word-of-mouth relays the fines to 20 persons for every one prosecution.

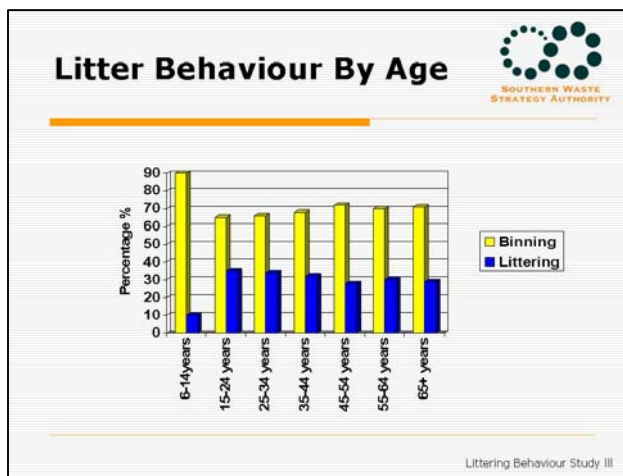
Generally, the development and implementation of preventative strategies has been found to be far more successful for addressing the litter problem.

Unfortunately, many programs developed to reduce litter, are introduced as a short-term solution to the problem, or for as long as funding allocations remain. These programs will have little chance of success if they are not developed with long-term objectives in mind.

Current research supports the development of littering programs that incorporate a combination of all three approaches. That principle was therefore embodied in the SWSA waste management strategy.

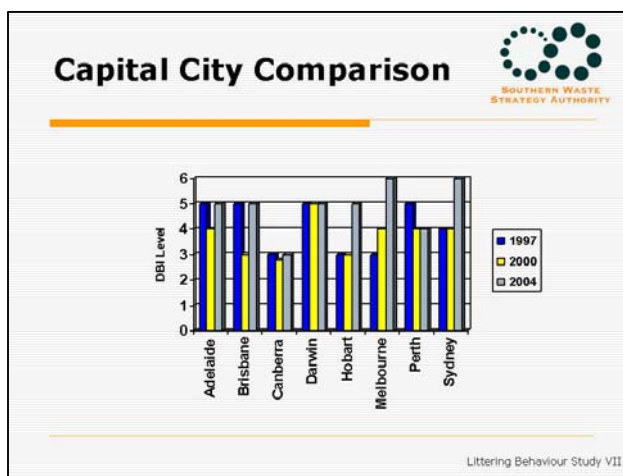
3. Who Litters?

- Australians of all ages are more likely to use bins than to litter. Overall, people are just over twice as likely to put objects into bins, as they are to litter them.
- There are no significant differences in littering behaviour between females and males (Cialdini, Reno & Kallgren, 1990; Finnie, 1973; Hawkins & Bone, 1996; Geller, 1980).
- The people least likely to litter are those aged below 15 years; all adults in all age groups litter more than this group (Community Change, 1997).
- People under 25 years are more likely to litter if they are in a group (Community Change, 1997).
- People over 25 are most likely to litter if they are alone (Community Change, 1997).



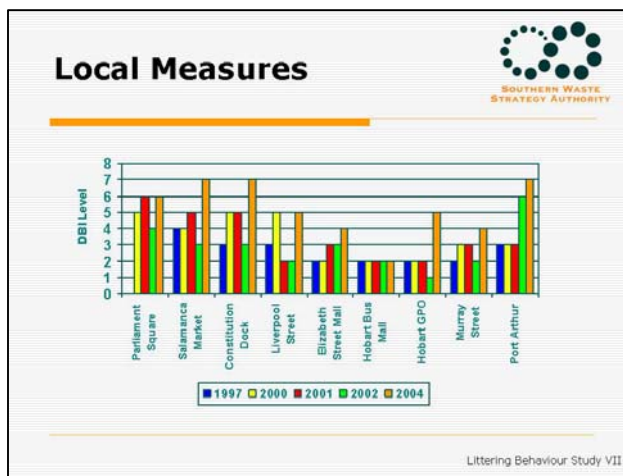
4. Where do they litter?

- 37% of all littering occurs at transition points - i.e. where people move from one activity to another, such as going from sitting on a bench to walking off, or making the transition from waiting for a bus, train, taxi or tram to actually getting into the vehicle (Community Change, 2001).
- Community Change has developed a measure of littering behaviour it calls the Disposal Behaviour Index, which ranges



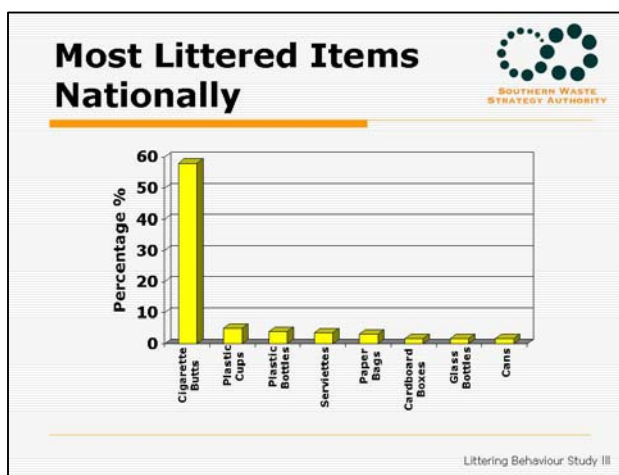
from 1 (bad) to 7 (good). Hobart has gone from being one of the worst capital cities as far as littering is concerned in 2002, to equal second best in 2004. (Community Change, 2004).

- A number of sites have been observed for littering behaviour in southern Tasmania since 1997 (Community Change). In many cases improvements are associated with improved litter infrastructure.



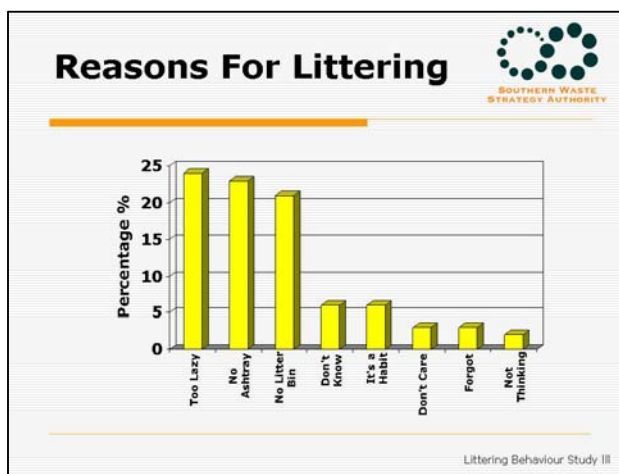
5. What do they litter?

- Nationally, cigarette butts are the most littered item, accounting for 58% of all littered items (Community Change, 2001).



6. Other Littering Observations

- Community Change interviewed members of the public, seeking reasons for littering. The responses are largely associated with apathy and a perceived lack of infrastructure.
- Bin use is most common between 11:00am and 2:00pm; littering is most common about 4:00pm.
- When waste receptacles are conveniently located, littering is reduced. As the distance to a bin increases, so does the likelihood that someone will litter (Community Change, 2001). However, simply providing more bins is not the entire solution.
- Signage and wording are associated with decreased littering but no concrete recommendations are available (Durdan, 1985.) LBS 2 identified a number of trends



with regard to people's disposal behaviour after anti-littering signs have been displayed (Community Change, 2001):

- Binning increases (people who litter, are less likely to toss litter on the ground).
 - Littering decreases (however, more disposal seems to involve hiding materials somewhere).
 - People pocketing objects increases.
 - Littering behaviour changes to become more surreptitious.
 - Installation of signs makes at least some people conscious of the way they dispose of items, and of their own behaviour and responsibilities.
- Littering, like vandalism is contagious, and the presence of litter in an area also encourages crime. Littering behaviour is more likely if the person is in an already littered environment and less likely if the subject is in an unlittered environment (Robinson & Frisch 1975, cited in Geller 1980: 263; Heberlein, 1971; Finnie, 1973; Geller et al., 1977; Krauss, 1978; Cialdini et al., 1990; Reiter & Samuel, 1980). Community Change have coined the term "clean = clean" to describe this (Community Change, 2001).
 - People watching a movie or attending a sports event may consider littering to be more acceptable because someone is paid to clean it up, whilst in a forest or beach setting, people may actually pick up litter left by others and walk further to a bin.
 - The most effective bin spacing also varies with the location, according to Community Change.

Site Type	Bin Distance (metres)
Transport Outdoor	5
Public Building	7
Mall	3
Shops	4
Market	3
Waterfront	6
Beach	21
Park	9
Indoor Centre	8
Event	6
Roadside	17
Tourist Spot	19
Transport Indoor	2
Festival	6

The Table indicates the distance from a person to a bin, required for consistent binning behaviour, rather than littering.

7. Objectives

The Authority aims to implement a comprehensive litter reduction program involving support for appropriate enforcement measures, improvements in infrastructure and services, and a public awareness campaign.

8. Strategies

The SWSA's strategy commits it to the following actions, in conjunction with BIEC and DPIWE:

"In conjunction with BIEC the Authority will establish a community awareness program to reduce the incidence of littering.

The Authority will work with Member Councils, DPIWE and BIEC to reduce litter by reinforcing current enforcement tools available through the Litter Act, develop consistent bin strategies with a focus upon design for Tasmanian conditions and needs, and develop a regional cleansing (street sweeping and litter avoidance and collection) policy.

In conjunction with BIEC and DPIWE, the Authority will develop material on the impact of littering on the environment."

9. Action Plan

The littering research, together with a review of member council policies regarding infrastructure and services, forms the basis of the Authority's action plan.

The Authority maintains that, as is the case with waste management in general, littering is a community problem; hence a 'whole of community' approach to the various solutions is required.

9.1 Policy Development

The Authority has been involved in consultations regarding the review of the Litter Act by DPIWE. The Authority believes that dedicated enforcement resources should be allocated by the state government, being the jurisdiction responsible for the legislation. An 'on-the-spot' fine system enforced by state litter wardens has been suggested.

DPIWE is believed to be considering the introduction of a Littering Hotline service.

9.2 Investigations

The Authority recommends BIEC's BInS Litter Infrastructure training program, aimed at providing a simple and rational process to evaluate and prioritise the demand for litter bin infrastructure. A simplified check-list guide has been provided to member councils, based on the BInS methodology.

9.3 Service Development

Actions will build upon the established knowledge of member councils, and the existing extensive litter reduction infrastructure and services.

The SWSA has incorporated the following into its Preferred Service Guidelines for waste management. These recommendations are designed to provide guidance to member councils regarding future service development, as determined by local priorities and resources.

Provision of Bins

There are an estimated 2,350 public garbage bins in southern Tasmania.

With the exception of some garbage bins in the Hobart CBD, facilities that cater specifically for cigarette butts are rare. Hobart also demonstrates stronger support for the provision of public place ashtrays, than any other capital city. (Community Change, 2002)

A number of SWSA member councils noted a requirement for more bins if resources were available. The Authority has investigated external funding for additional garbage bins and butt bins without success.

Bin Design

There is currently very little consistency with regard to garbage bin design. Variants include re-used 44 gallon drums, 25-60 litre drums (often pole mounted), MGB's and steel caged MGB's. Open-topped bins predominate and are often cited as a problem with regard to the dumping of household and commercial rubbish.

The Authority has had a prototype butt bin developed by a local manufacturer and 100 units have been distributed to member councils as a pilot program.

Bin Placement

SWSA has included the BIEC guidelines for bin placement in its Preferred Service Guidelines.

Signage

With the exception of Hobart City Council's "Christopher Clean" and Southern Midlands Council's "Drop it in the Litter Bin" signage, there are no policies on signage. Other councils have noted that better signage is required.

SWSA is installing new stick-on laminated Rubbish/ Recycling signs on public place bins throughout the region, with the assistance of BIEC.

Servicing

Servicing is generally undertaken by member council works staff, with the frequency ranging from twice daily to weekly, depending on seasonal factors and visitor numbers.

The approach is based on the accepted 'clean=clean' principle.

9.4 Public Awareness

The SWSA litter reduction campaign first commenced with a radio campaign in September 2002. In conjunction with BIEC, the Authority has since formed the Tasmanian Litter Reduction Taskforce, attracting additional sponsorship and support from Collex, WIN TV and Norske Skog Boyer. The Taskforce oversees an \$80,000 state-wide TV campaign using BIEC's 'Don't Waste Tasmania' theme.

This message is supported by information available on the SWSA and BIEC websites, through the Authority's schools program, and through the Authority's Public Place Recycling and Major Events Recycling programs. The 'Away from Home' recycling programs have a demonstrated effect on littering behaviour, in addition to their objectives with respect to public awareness and improved recycling yields.

In keeping with the DWA television-based promotion and other research findings (Durdan et al. 1985; Geller 1980), the campaign aims to positively reinforce good littering behaviour, rather than to present negative images. It is guided by the following key messages derived from behavioural research:

- Target age group is broad, and includes males and females.
- Teenagers in groups are the worst litterers, but no worse than others when alone (the problem is social, not educational).
- Children are less likely to litter, but continuing education is necessary to maintain this.
- Cigarette butts are the most littered item, followed by food and drink containers.
- Major reasons for littering are laziness/ indifference and the perceived lack of infrastructure.
- Key message is that littering is the responsibility of the individual.

9.5 Clean up Strategies

Clean up is the last resort - evidence that more litter reduction effort remains necessary. Dedicated council resources are limited to the heavy use areas such as metropolitan CBDs; otherwise member councils react to public complaints. Clean up is often by council staff, with contractors used for one-off tasks. Councils generally support and take advantage of additional community resources such as 'Work-for-the-Dole' and 'Clean up Australia'. Street sweepers are operated by eight of the twelve southern councils, covering all major urban and regional centres.

9.6 Performance Monitoring

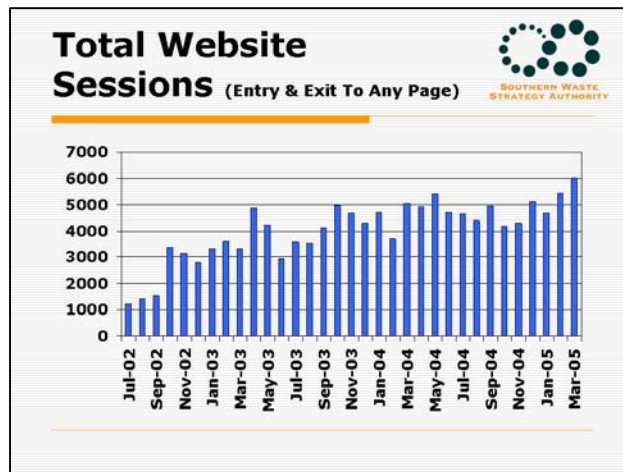
Improved performance monitoring has been identified as a need by a number of member councils.

Currently, member councils rely on community complaints and feedback from their own workforce, regarding litter hot-spots. The BInS infrastructure assessment tool

also provides useful guidelines regarding the factors that should be considered in assessing priorities for the siting of new infrastructure.

However the objective measurement of litter at specific locations can be a difficult and expensive process.

Community Change is expected to discontinue monitoring littering disposal behaviour for BIEC, but the National Packaging Covenant is undertaking more extensive monitoring.



9. References

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